



**SHOP**<sub>20XIV</sub>  
LIGHT

Food // Fashion // Shop

# SALES-PROMOTING AND EFFICIENT LIGHTING

Optimum light quality for your products





- › Food
- › Fashion
- › Shop

# BRUMBERG



The BRUMBERG Management Team

# BRUMBERG - LIGHT FOR GENERATIONS

## About us

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As a family company we are amongst the leading suppliers in the sector of high quality lighting technology.

For five generations we have stood for the highest competence in terms of light, the Brumberg brand for ambition, competence, supremacy and innovation.

Continual further developments in the newest technologies and high quality materials form the basis of the extensive range of light solutions for the most diverse areas of use.

We pool our complete knowledge under one roof: from development to the finished product. Innovative light technologies which are combined only with the highest quality materials, form the basis of success. Due to the wide product range of lights, designs and matching accessories, we can offer the right solution for almost every lighting purpose.

Apart from classic lighting solutions such as low voltage and high voltage recessed spotlights, down lights, fibre technology solutions or outdoor lights, we are pioneers in the area of LED technology. We offer high performance LED solutions and new kinds of LED coloured light systems, like the autonomous RGBW lighting system vitaLED for vital and performance-boosting lighting.

We consistently offer our partners precise and flexible solutions. In addition, we stand out due to optimum service

and always comply with the wishes of our customers. Innovation, design, service and quality are very important to us as a traditional company. You react directly to the requirements of the constantly changing market.

We create new lights and designs again and again, competently and in a success-oriented manner. Therefore, the Brumberg family continues to invest in the area of development of innovative lighting solutions.

In order to be able to present the products to our customers even more clearly, we are taking new directions with presentation: in an unusual exhibition area, the LED competence centre, customers and interested parties have the opportunity to look at lights, light strengths, light colours and light scenarios with the accompanying control possibilities, in various theme areas.

With the modern lighting planning you can rely on professional support. From private households to internationally renowned large projects like the Moscow Kremlin or the Elbe Philharmonic Hall in Hamburg, they all rely on the products of the Sauerland lighting specialists.

As a professional lighting manufacturer, BRUMBERG now has a further focus on modern shop lighting and presents innovative solutions.

The BRUMBERG team

# BRUMBERG - LIGHT FOR GENERATIONS

## Competences

A well thought out lighting concept directs the gaze and has a positive influence on the customer behaviour. This means that goods and business premises can be specifically staged and give sales stimuli.

We use our longstanding knowledge for innovative developments on the basis of modern LED technology. The company focuses on the continual further development of new and innovative products.

We have been developing LED solutions for more than 15 years, and today we are amongst the leading suppliers in this sector.

So, innovation and efficiency are also reflected in our vitalLED® lighting system, the joint development with Professor Dr. Ulrich Kuipers and the University of South Westphalia in Hagen.

The vitalLED® controller for a RGBW light source with 4 LED chips instead of 3, can not only imitate all daylight colours, but also produce white light, alongside red, green and blue light. The RGB colour spectrum and the whole white light spectrum can be controlled continuously.

Rooms attain atmosphere through light colour and colour gradients. Primarily, the vitalLED® system offers the advantage of „vital“ light to help to bring the performance curve into harmony with the human biorhythm.

### Did you know?

Light influences hormone formation.

The emission of hormones in the brain is directly controlled by your own photo receptors in the eye. In particular this applies to hormones such as melatonin, adrenaline, cortisol and serotonin.

- Melatonin controls the day-night rhythm (less light > increasing melatonin level).
- Adrenaline increases heart rate and blood pressure. It causes a narrowing of the pupils and tension in the muscles.
- Cortisol regulates the blood sugar level. It increases motivation and concentration.
- Serotonin (also called the „happiness hormone“ in colloquial language) is produced in the opposite way to melatonin. It increases wellbeing, heart contraction and the core temperature. If the proportion of blue in light is increased, cravings for carbohydrates are reduced (serotonin is contained in foods such as chocolate, nuts, pralines, etc.).

The production of these hormones is controlled via the proportion of blue in light. Cold light has a very high proportion of blue, and therefore has an activating effect. The melatonin production is suppressed, and on the other hand serotonin is produced. Warm light has a low proportion of blue and a high proportion of red, it has a calming and relaxing effect.



► Arcaden, Erlangen

# SHOPLIGHT

with BRUMBERG

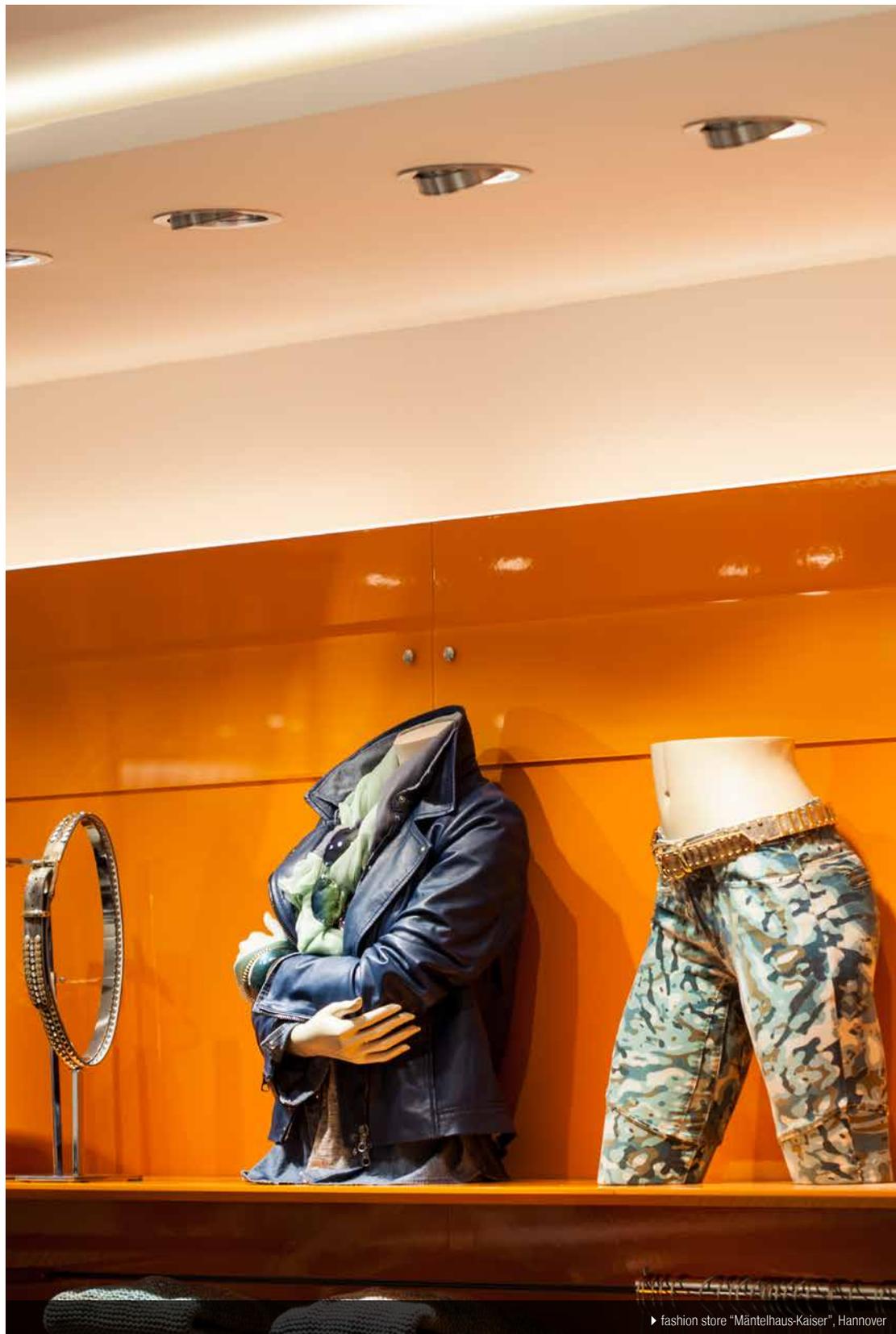
The shop and exhibition area requires complex light solutions to comply with the diverse requirements. In collaboration with architecture and furniture, needs can be awakened and brand identities created.

Light colour, brightness and light quality can have a positive influence on the perception and increase people's wellbeing. So for example, using light adapted to the course of the day, motivation can be increased, communication enhanced, or quiet zones for regeneration can be positively supported.

Living light scenarios allow shopping to become an experience. In addition, buying impulses can be intentionally created and sales can be promoted using a well thought out lighting concept.

Light serves as:

- Product presentation
- Brand staging (corporate lighting)
- Orientation
- Guidance
- Attention grabber



► fashion store "Mäntelhaus-Kaiser", Hannover

# SHOPLIGHT

from BRUMBERG

An optimum lighting concept in the shop is an important criterion for retail, as it has a crucial effect on the sales success, and accordingly must fulfil technical, biological and psychological requirements.

With targeted use of lights we can highlight your product quality, and thereby contribute to the optimum product presentation. From beginning to end of the shop cycle, we guarantee you an almost identical light performance with the BRUMBERG shop lighting.

From the general lighting of a shop to the display windows and display cabinets and special food lighting in the food area, right up to the facades and entrance areas, we create individual solutions especially adapted to your area of use.

The product portfolio offers solutions for accenting, room lighting and route guidance. Modular click and plug systems simplify the installation and quickly lead to your desired concept becoming a reality.

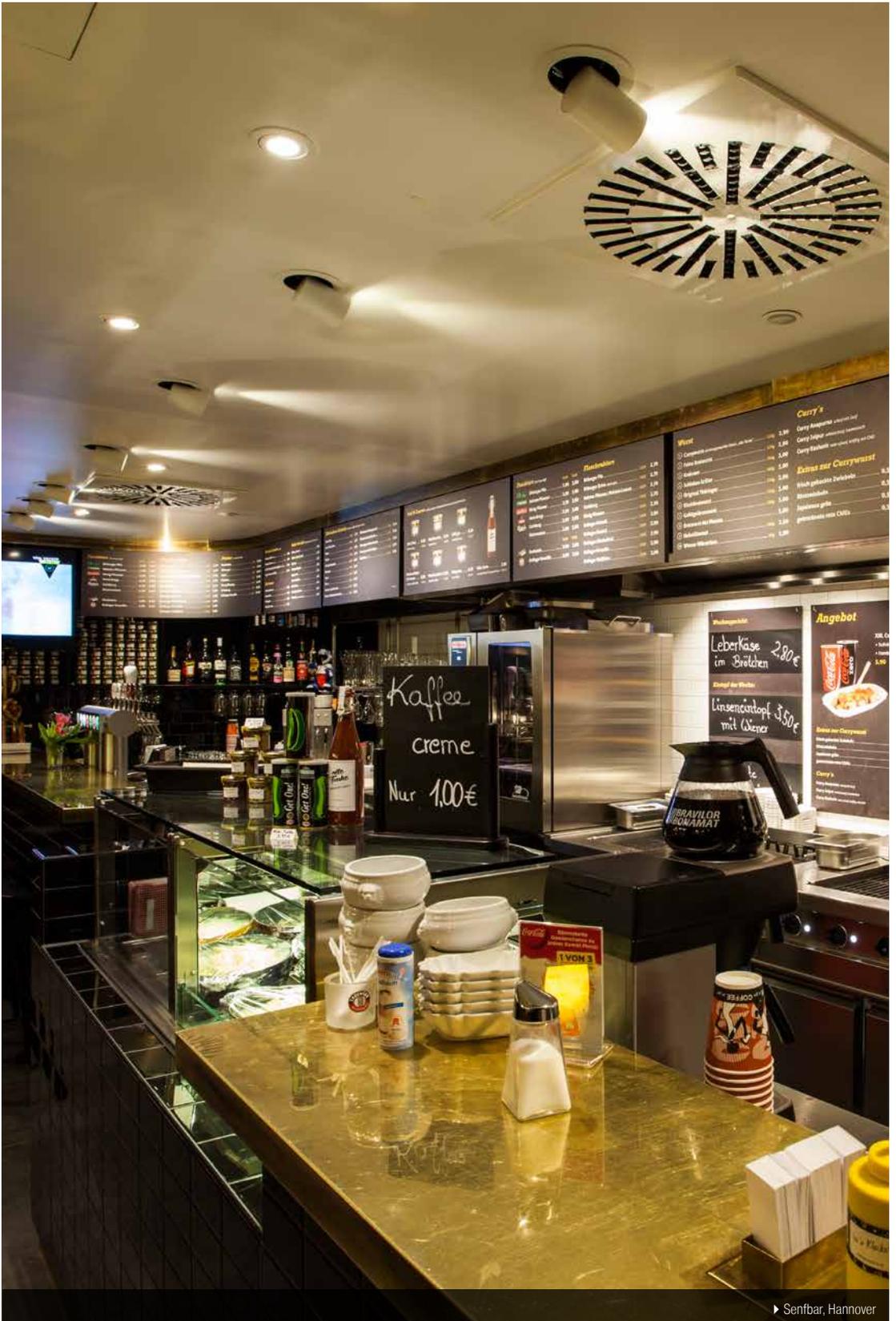
Apart from the long lifespan, the low energy usage and the high shock resistance, which is especially important for mobile shop solutions, our LED shop solutions offer further advantages. The above average light quality is as impressive as the excellent light image.

Technical quality and efficiency is crucial for good shop lighting.

## Did you know?

As the current energy cost percentage for lighting in the food sector is 27% according to the EHI Retail Institute e.V., and in the non-food sector it is 53%, 70% of retailers have now decided to change over to energy efficient LEDs by 2020.

Due to the low heat emission in the room, there is also a high energy-saving potential. Less heat means less energy for cooling. In this way for example the use of air conditioning units can be reduced leading to lower costs.



► Senfbar, Hannover

## Food, Fashion & Shop

With well thought out light concepts we support the existing atmosphere and bring sales areas to life.

The balanced aesthetic of our shop lighting and the reserved and yet still innovative light design do not distract, and direct the customer's gaze to the presented goods.

An excellent colour rendering allows products to appear in any desired look. Whether it is presentation of goods in the „natural look“ in daylight or the specific presentation of various intensive or artificial colours.

Various surfaces can for example be optimally staged in shiny or matt looks with our shop light products. Excellent light guidance ensures focussed illumination of the product without

blinding the customer or giving him the feeling of standing in shadow.

For the areas of food, fashion and shop we offer a selection of state-of-the-art lighting technology.

Impress your customers and stimulate their desire to buy.

With a well thought out lighting concept, contribute to the shopping experience becoming an unforgettable moment for your customers.

In order to comply with the completely different requirements, the areas require a different approach.





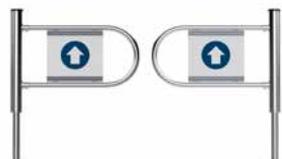
► Mäntelhaus Kaiser, Hannover

# Food - a feast for the eyes

For the food area we recommend efficient LED technology, to avoid unnecessary heat radiation. With an innovative lighting concept you also upgrade the quality of your food.

Below you will find starting points, using which your shop can become a unique attraction with the right lighting:

1



## Entrance area

Influence the decision of your customers and provide a relaxing atmosphere of wellbeing even in the entrance area.

- Creating a long distance effect awakens curiosity.
- A friendly appearance.
- High light strengths in the case of incident daylight.
- The light in the entrance area must be as close as possible to the daylight spectrum.

2



## Fruit and vegetables

Let fruit and vegetables look fresh and healthy using special lighting. At the same time you are highlighting the quality of your products.

Fresh colours

- Illumination of overhead decoration and advertising boards.
- Emphasising the colour of the goods creates freshness.
- Create a market place atmosphere.

3



## Baked goods

The colours of bread and baked goods are shown to their advantage with warm light.

- Accentuation of the different areas.
- Light technical division into serving counter and preparation areas.

4



## Meat counter

On meat counters it is particularly important to highlight the freshness of the product using light. For good planning thereby, the focus must be on choosing the right light spectrum.

- Optical division into serving counter and preparation areas.
- Due to the reduction of heat emission of the LED, an additional cooling service is avoided.

5



## Fish counter

On fish counters as with meat counters, light is particularly important to emphasise the fresh atmosphere.

- For a good light planning, the focus must hereby be on the choice of the right light spectrum.
- In terms of lighting technology, there must be a division between the serving counter and preparation areas.
- Fish is mostly cooled with ice, this symbolises freshness. This aura can be supported with the targeted use of light.



6

### Deep frozen goods



For lighting deep frozen goods on shelves, cold light colours are recommended. Cool colours emphasise the deep frozen products.

- For example in the area of the fish counter, cool light colours also emphasise the fresh atmosphere.
- Thereby, for a good light planning the focus must be on the choice of the right light spectrum.
- Due to the predominant existence of shelves in this area, linear light lines are recommended.

7

### Wine



Warm light colours combined with light accents create a comfortable wine cellar atmosphere.

- Heat radiation which could be problematic for the wine, is avoided using LED technology.

8

### Cosmetics



The lighting in your cosmetics department should radiate purity. Additional decorative lights can be used to create an atmosphere. You can achieve this through:

- Purity through cool light colours
- Even illumination of the sales zone

9

### Till zone



Make the area around the till as friendly as possible for the customers, and convey a pleasant and calming atmosphere.

- Emphasis of the impulse articles.
- Even lighting of the payment zones.
- Glare-free light for the cashier.

# Fashion - experience light

We provide unique possibilities for creative, accentuated and large scale lighting of your stores for your fashion area. Avoid unnecessary UV radiation, which makes colours fade and let the colourfastness and high quality surfaces of your textiles shine in excellent light. Set targeted accents and attract your customer's attention with unusual lighting concepts.

Below you will find starting points, using which your shop can become a unique attraction with the right lighting.

1

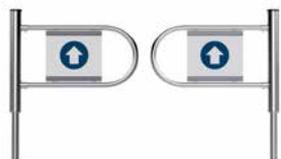


## Display window

A well thought out display window concept is excellently suited to getting the attention of the customer.

- Present the goods clearly and awaken emotions.
- Grab the attention of the customer.
- Awaken customer interest.
- Create something unusual.

2



## Entrance area

The first moments in your entrance area could influence the purchase decision of the customer. Do not leave the decision up to your customers.

- Create a long distance effect.
- The area should be inviting.
- An often mystical feel awakens excitement.
- High lighting strengths in the case of incident day light.
- The light in the entrance area must be close to the day light spectrum.

3



## Back wall

Sensible illumination of the back wall is the basis for a good shop design

- Depth effect.
- The illumination should at least be twice as intense as in the sales area - a depth effect emerges
- Diverse design of the illumination possible:
  - homogeneous and even lighting
  - set rhythmic focus points
  - object-related focus points

4



## Edge zones

Create a contrast to your sales area with well lit edge zones.

- Be aware of the decoration and/or logo level.

5



## Highlighting the sales area

In order to highlight very special sales areas with exclusive goods, you can make particular use of special effects.

- Here you can play with light and shadow to captivate the customers and guide their attention to the desired positions.

6



## Changing rooms

The target is very contrary:

- Illuminate clothing according to the intended use: e.g. sports clothing, evening dress, children's fashion, leisure clothing.
- Warm colours are chosen for light to get changed in, as they allow wrinkles and flecks to disappear.
- For the waiting area for companions, the focus should be on a calming atmosphere, as the companion helps to decide on the purchase.

7



## Till zone

Make the area around the till as pleasant as possible for your customers, and convey a pleasant and calming atmosphere.

- Emphasise the impulse articles.
- Even, clear lighting of payment zone.
- Glare-free light for the cashier.



► Antares pharmacy, Hamburg

### Did you know?

- The display window moves the customer to look at the shop for the first time.
- The depth effect leads to the customer going into the store.
- The highlights move the customer to try out the goods.
- The edge zone enables selection -> no decisions are being made here, only searching is being carried out.
- 80% of purchase decisions are made in the changing rooms.
- The till zone refutes the last doubts about the purchase.

The lighting concept must match the store concept.

- The lighting design should look as if it is integrated into the architecture and has been chosen to match the design language of the interior.
- The light design must match the customer clientele. For example older people need higher luminance intensities than younger people.

### What influences the perception

The perception can be influenced by various factors.

In this way, room sizes can influence the perception, and customers can feel safe or lost. The further the light source is from the object to be illuminated, the more „pressure“ and/or brilliance the light loses.

The colours of the furniture and floors also play an important role. Warm tones can have a positive influence on the perception, and radiate comfort. Due to shiny coverings and reflection, the light quantity appears higher and the room colder.

Equally, ceiling colours can also influence the perception.

Primarily, the location of the store and the clientele influence the light concept.

# Shop - good light concepts

Light competence creates balance which is reflected in the area of the shop. The complex requirements necessitate good light concepts for the different shop light areas, to comply with the various needs. In collaboration with architecture and furnishing, needs can be awakened, and brand identities can be created.

Below you will find starting points, using which your shop can become a unique attraction with the right lighting.

1



## Display window

A well thought out display window concept is excellently suited to getting the attention of the customer.

- Present the goods clearly and awaken emotions.
- Grab the attention of the customer.
- Awaken customer interest.
- Create something unusual.

2

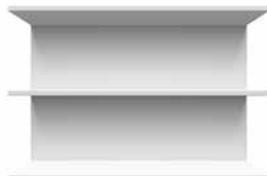


## Entrance area

The first moments in your entrance area can influence the purchase decision of the customers.

- Creating a long distance effect awakens curiosity.
- Present a friendly appearance.
- Influence the purchase decision.
- High light strengths in the case of incident daylight.
- The light in the entrance area must be as close as possible to the daylight spectrum.

3



## Back wall

Illumination of the back walls is part of the basic equipment of the shop lighting.

- The illumination should at least be twice as intense as in the sales area - a depth effect emerges
- Diverse design of the illumination possible:
  - homogeneous and even lighting
  - set rhythmic focus points
  - object-related focus points

4



## Sales areas, edge zones, highlights

With lighting, create a sales area where your customer's feel comfortable, make purchase decisions and have a good orientation.

- Emphasis of decoration zones and goods levels
- Create an atmosphere through the interaction of light and shadow

5



## Till zone

Design the area around the till to be as friendly as possible for the customer, and convey a pleasant and calming atmosphere

- Emphasis of impulse articles.
- Even, clear illumination of the payment zone.
- Glare-free, pleasant light for the cashier.



► Crepes Factory, Norderstedt

# LED in the shop

Efficient and innovative light

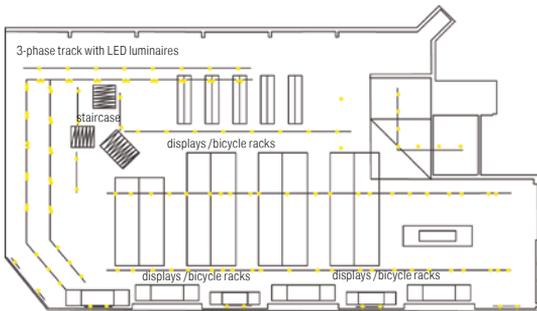
Conversion to an LED shop concept is a future-oriented investment which will quickly be profitable, and enriches your shop with unusual, efficient and impressive light at the same time.

The LED is not inferior to the normal HIT types in any way, in the area of shop lighting. This is reflected excellently in the amortisation statement. The low heat emissions of the LED is a factor which has a positive effect on the operating costs of air conditioning systems. Well thought out light planning has

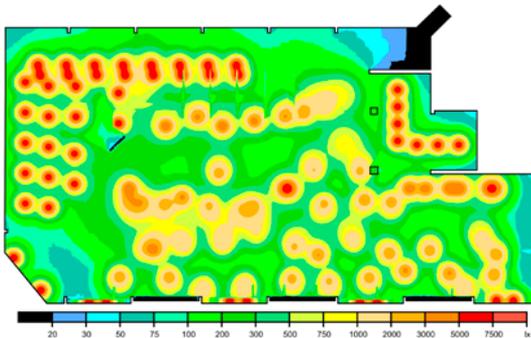
a significant influence on the amortisation period. Of course, it must be ensured that the light distribution corresponds to the requirements of the shop.

In the following diagrams we put together an example shop concept for you. The lighting strengths in Lux and the light planning as a rendering are easily recognisable here. In addition we have presented the most important points of the calculation of profitability for this project.

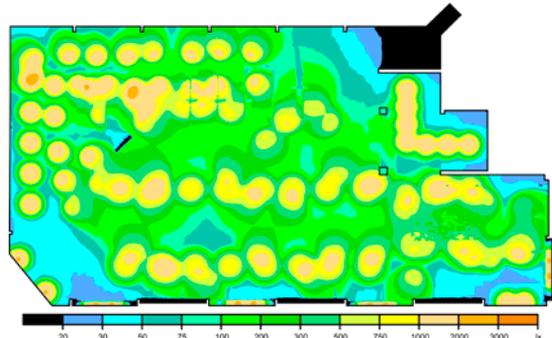
## footprint

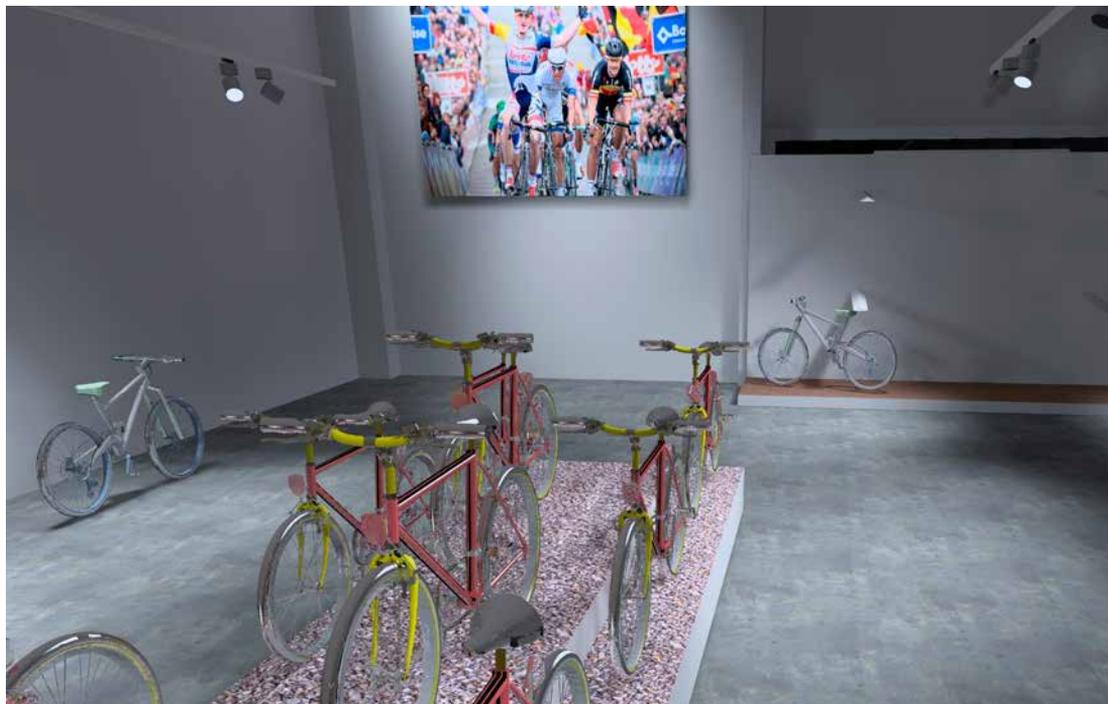


luminous intensity distribution of  
HIT luminaires



luminous intensity distribution of  
LED luminaires





## Amortisation statement

With the amortisation statement, you can see the period in which the investment and the ongoing operating costs pay off in a desired period of time.

The following information was used:

Calculation period: 6 years, 7 months  
 Usage duration per day: 14 hours  
 Usage duration per year: 270 days  
 Costs kWh per hour: €0.27

Calculation of profitability	HIT	LED
System capacity in watts	78	41
Total capacity in watts	10.764	5.658
System price (incl. lamps)	€ 13.116	€ 26.430
Costs of replacement lamps (incl. installation)	€ 85,00	-
System luminous flux per light	3675 lm	3133 lm
Number of lamps required in the calculation period	3	1
Price of energy costs (kW/h) per year	€ 10.986	€ 5.775
Total costs of calculation period	€ 120.325	€ 66.528
Costs for 1 year of the calculation period	€ 18.203	€ 9.762
<b>Amortisation period: 1 year, 7 months</b>	<b>1 year, 7 months</b>	
<b>Energy saving / year:</b>	<b>€ 5.211</b>	
<b>Saving of maintenance costs / year:</b>	<b>€ 5.324</b>	
<b>Total saving / year:</b>	<b>€ 10.535</b>	

# POWER-TRACK SPOTLIGHTS

They are the comfortable way to optimally illuminate shops. Modular click and plug systems make the installation simple and the realisation of every desired concept possible. Whether with energy efficient LED light sources or flexible HIT-TC or HIT

sockets for extensive equipment such as filters and illuminants, you will find the right solution for every application, from accentuation to room illumination right up to route guidance.



88311... p. 24



88331... p. 26



88307... / 88309... p. 28



88301... 88302... 88303... p. 29



1932... p. 31



8820... / 8821... p. 33



8822... p. 34



8823... p. 35



8824... p. 37



88311...  
LED-Power-track spotlights



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

88311...  
LED-Power-track spotlights

Specification

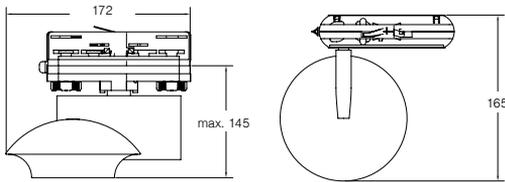
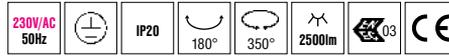
Material: aluminium, light source: LED, power: 26W, heat conduction: passive (without fan). Particularly compact design.

Luminaire incl. adapter for standard 3-phase track.

Including light source and operating device.

Lighting equipment corresponds to **energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Colour temperature	Colour rendering	Beam patterns	Price €
88311073	white	3000K	RA>80	MF	369.00
88311083	black	3000K	RA>80	MF	369.00
88311683	silver	3000K	RA>80	MF	369.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

Luminous intensity distribution curve and other colour temperatures available on request! For colour code see page 133 / size data in mm / all price details are non-binding price recommendations (NBP) in € without VAT; errors excepted / order occurs in accordance with our general conditions of sale printed on page 130.

88331...  
LED-Power-track spotlights



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

88331...  
LED-Power-track spotlights

Specification

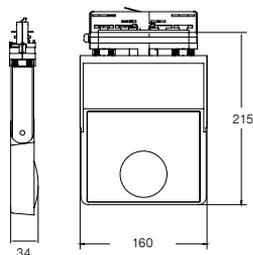
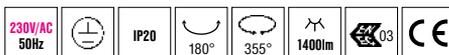
Material: aluminium, light source: LED, power: 12W, heat conduction: passive (without fan).

Luminaire incl. adapter for standard 3-phase track.

Including light source and operating device

Lighting equipment corresponds to **energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Colour temperature	Colour rendering	Beam patterns	Price €
88331073	white	3000K	RA>80	FL	269.00
88331083	black	3000K	RA>80	FL	269.00
88331683	silver	3000K	RA>80	FL	269.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

Luminous intensity distribution curve and other colour temperatures available on request! For colour code see page 133 / size data in mm / all price details are non-binding price recommendations (NBP) in € without VAT; errors excepted / order occurs in accordance with our general conditions of sale printed on page 130.

## 88307... / 88309... LED-Power-track spotlights



### Specification

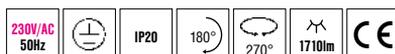
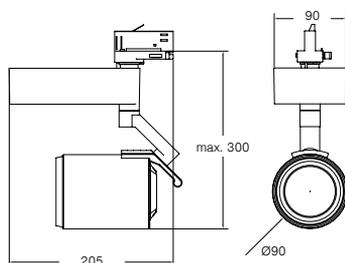
material: aluminium, light source: LED,  
power: 23W, heat conduction: passive  
(without fan)

Luminaire incl. adapter for standard  
3-phase track.

Including light source and operating device.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Colour temperature	Colour rendering	Beam patterns	Price €
88307073	white	3000K	RA>80	MF	299.00
88307083	black	3000K	RA>80	MF	299.00
88307683	silver	3000K	RA>80	MF	299.00
88309073	white	3000K	RA>80	FL	299.00
88309083	black	3000K	RA>80	FL	299.00
88309683	silver	3000K	RA>80	FL	299.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

88301... / 88302... / 88303...  
LED-Power-track spotlights



## Specification

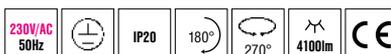
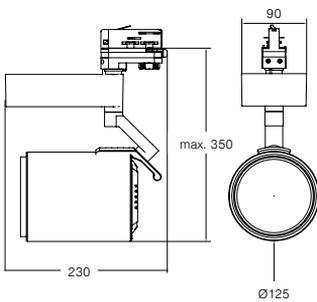
Material: aluminium, light source: LED, power: 38W, heat conduction: passive (without fan)

Luminaire incl. adapter for standard 3-phase track.

Including light source and operating device

Lighting equipment corresponds to **energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Colour temperature	Colour rendering	Beam patterns	Price €
88301073	white	3000K	RA>80	SP	399.00
88301083	black	3000K	RA>80	SP	399.00
88301683	silver	3000K	RA>80	SP	399.00
88302073	white	3000K	RA>80	MF	399.00
88302083	black	3000K	RA>80	MF	399.00
88302683	silver	3000K	RA>80	MF	399.00
88303073	white	3000K	RA>80	FL	399.00
88303083	black	3000K	RA>80	FL	399.00
88303683	silver	3000K	RA>80	FL	399.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

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► Juwelier am Schloss, Schwetzingen

1932...  
LED-Power-track spotlights

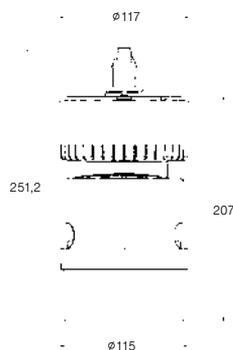


Specification

Material: aluminium / polycarbonate, colour: texture white, light source: High-Power LED, warm white, 3000K, power: 41W

Including light source and operating device.

Lighting equipment corresponds to energy efficiency class: **A++ to A**

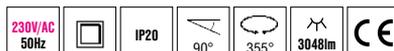


Article-no.	Colour of cabinet	Ambient colouring	Beam patterns	Dimming	Price €
19321073	texture white	amber ●	FL	1-10V	649.00
19322073	texture white	blue ●	FL	1-10V	649.00
19323073	texture white	white ○	FL	1-10V	649.00
19327073	texture white	without	FL	without	649.00
19324073	texture white	amber ●	WFL	1-10V	649.00
19325073	texture white	blue ●	WFL	1-10V	649.00
19326073	texture white	white ○	WFL	1-10V	649.00
19328073	texture white	without	WFL	without	649.00



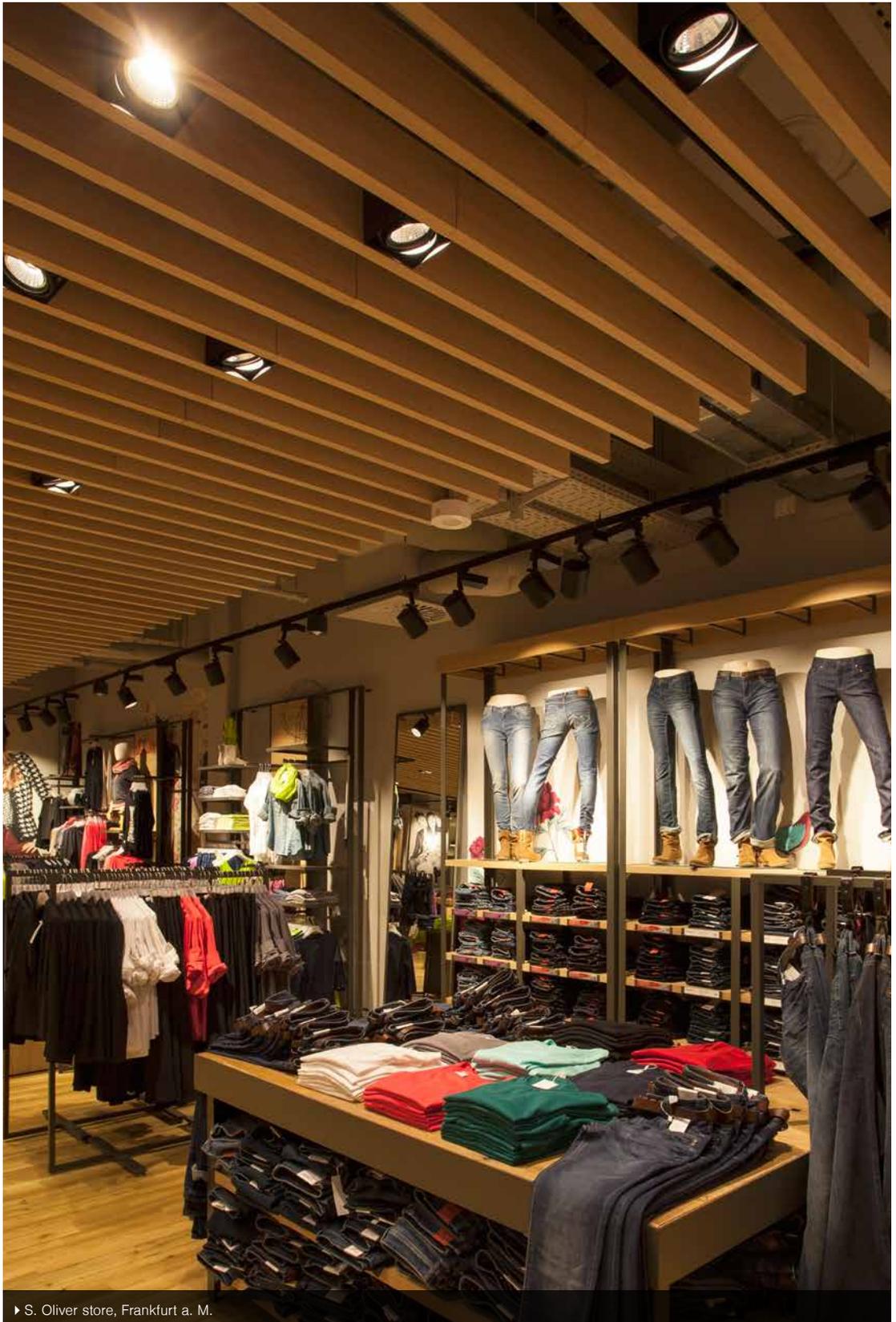
**Articles with 1-10V dimming:** A 3-phase track with 1-10V dimming configuration i.e. Global Track control (GNC7...) is required to either dim the luminaires main light source or to control the ambient ring.

**Articles without dimming:** Luminaire incl. adapter for standard 3-phase track.



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

Luminous intensity distribution curve and other colour temperatures available on request. For colour code see page 133 / size data in mm / all price details are non-binding price recommendations (NBP) in € without VAT; errors excepted / order occurs in accordance with our general conditions of sale printed on page 130.



► S. Oliver store, Frankfurt a. M.

8820... / 8821...  
**HIT-TC Track spot**



## Specification

Material: aluminium, socket: G8,5, fittings: for HIT-TC

Luminaire incl. adapter for standard 3-phase track.  
 Including operating device

Lighting equipment corresponds to **energy efficiency class: A+ to A**

### Accessory part

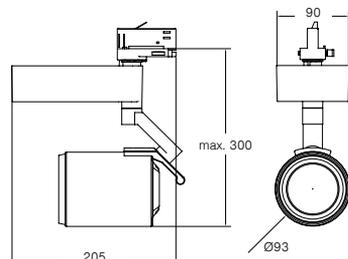
Filter disc



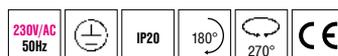
Art.-no.	Specification	Price €
88901000	UV-Filter disc	24.00
88902000	Fruits / Vegetables / Bakery products filter disc	45.00
88904000	Meat / Fish / filter disc	45.00

Lamps

Art.-no.	Specification	Price €
88921003	Master Colour Eilte CDM-TC 35W/930 G8.5	41.90
88921004	Master Colour Eilte CDM-TC 35W/942 G8.5	41.90
88922003	Master Colour Eilte CDM-TC 50W/930 G8.5	41.90
88922004	Master Colour Eilte CDM-TC 50W/942 G8.5	41.90
88923003	Master Colour Eilte CDM-TC 70W/930 G8.5	41.90
88923004	Master Colour Eilte CDM-TC 70W/942 G8.5	41.90



Article-no.	Colour of cabinet	Power	Beam patterns	Price €
88204070	white	35W	SP	169.00
88204080	black	35W	SP	169.00
88204680	silver	35W	SP	169.00
88205070	white	35W	MF	169.00
88205080	black	35W	MF	169.00
88205680	silver	35W	MF	169.00
88206070	white	35W	FL	169.00
88206080	black	35W	FL	169.00
88206680	silver	35W	FL	169.00
88207070	white	50W	SP	169.00
88207080	black	50W	SP	169.00
88207680	silver	50W	SP	169.00
88208070	white	50W	MF	169.00
88208080	black	50W	MF	169.00
88208680	silver	50W	MF	169.00
88209070	white	50W	FL	169.00
88209080	black	50W	FL	169.00
88209680	silver	50W	FL	169.00
88210070	white	70W	SP	169.00
88210080	black	70W	SP	169.00
88210680	silver	70W	SP	169.00
88211070	white	70W	MF	169.00
88211080	black	70W	MF	169.00
88211680	silver	70W	MF	169.00
88212070	white	70W	FL	169.00
88212080	black	70W	FL	169.00
88212680	silver	70W	FL	169.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

Luminous intensity distribution curve and other colour temperatures available on request! For colour code see page 133 / size data in mm / all price details are non-binding price recommendations (NBP) in € without VAT; errors excepted / order occurs in accordance with our general conditions of sale printed on page 130.

## 8822... HIT-TC Track spot



### Specification

Material: aluminium, socket: G8,5, fittings: for HIT-TC

Luminaire incl. adapter for standard 3-phase track.  
Including operating device

Lighting equipment corresponds to **energy efficiency class: A+ to A**

#### Accessory part

Filter disc

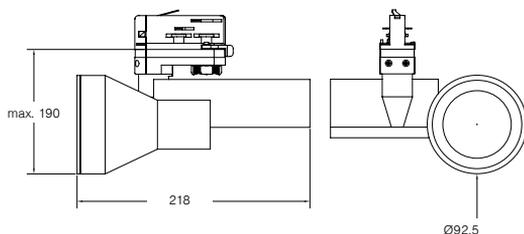


art.-no.	Specification	Price €
88901000	UV-Filter disc	24.00
88902000	Fruits / Vegetables / Baked goods filter disc	45.00
88904000	Meat / Fish / filter disc	45.00

Lamps

art.-no.	Specification	Price €
88921003	Master Colour Elite CDM-TC 35W/930 G8.5	41.90
88921004	Master Colour Elite CDM-TC 35W/942 G8.5	41.90
88923003	Master Colour Elite CDM-TC 70W/930 G8.5	41.90
88923004	Master Colour Elite CDM-TC 70W/942 G8.5	41.90

Article-no.	Colour of cabinet	Power	Beam patterns	Price €
88221070	white	35W	SP	199.00
88221080	black	35W	SP	199.00
88221680	silver	35W	SP	199.00
88222070	white	35W	MF	199.00
88222080	black	35W	MF	199.00
88222680	silver	35W	MF	199.00
88223070	white	35W	FL	199.00
88223080	black	35W	FL	199.00
88223680	silver	35W	FL	199.00
88224070	white	70W	SP	199.00
88224080	black	70W	SP	199.00
88224680	silver	70W	SP	199.00
88225070	white	70W	MF	199.00
88225080	black	70W	MF	199.00
88225680	silver	70W	MF	199.00
88226070	white	70W	FL	199.00
88226080	black	70W	FL	199.00
88226680	silver	70W	FL	199.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

8823...  
HIT Track spot



## Specification

Material: aluminium, socket: G12, fittings: for HIT

Luminaire incl. adapter for standard 3-phase track.  
Including operating device

Lighting equipment corresponds to **energy efficiency class: A+ to A**

### Accessory part

Filter disc

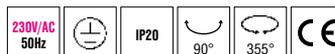
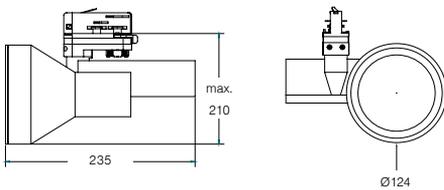


Art.-no.	Specification	Price €
88906000	UV-Filter disc	35.00
88907000	Fruits / Vegetables / Baked goods filter disc	72.00
88909000	Meat / Fish / filter disc	72.00

Lamps

Art.-no.	Specification	Price €
88926003	Master Colour Elite CDM-T 35W/930 G12	41.90
88926004	Master Colour Elite CDM-T 35W/942 G12	41.90
88928003	Master Colour Elite CDM-T 70W/930 G12	41.90
88928004	Master Colour Elite CDM-T 70W/942 G12	41.90

Article-no.	Colour of cabinet	Power	Beam patterns	Price €
88231070	white	35W	SP	199.00
88231080	black	35W	SP	199.00
88231680	silver	35W	SP	199.00
88232070	white	35W	MF	199.00
88232080	black	35W	MF	199.00
88232680	silver	35W	MF	199.00
88233070	white	35W	FL	199.00
88233080	black	35W	FL	199.00
88233680	silver	35W	FL	199.00
88234070	white	70W	SP	199.00
88234080	black	70W	SP	199.00
88234680	silver	70W	SP	199.00
88235070	white	70W	MF	199.00
88235080	black	70W	MF	199.00
88235680	silver	70W	MF	199.00
88236070	white	70W	FL	199.00
88236080	black	70W	FL	199.00
88236680	silver	70W	FL	199.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

Luminous intensity distribution curve and other colour temperatures available on request! For colour code see page 133 / size data in mm / all price details are non-binding price recommendations (NBP) in € without VAT; errors excepted / order occurs in accordance with our general conditions of sale printed on page 130.

8824...  
HIT Track spot



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

## Specification

Material: steel, aluminium, socket: G12, fittings: for HIT

Luminaire incl. adapter for standard 3-phase track.  
Including operating device

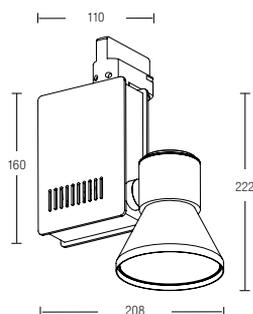
Lighting equipment corresponds to **energy efficiency class: A+ to A**  
Special colours on request.

### Accessory part

Lamps

Art.-no.	Specification	Price €
88926003	Master Colour Eilte CDM-T 35W/930 G12	41.90
88926004	Master Colour Eilte CDM-T 35W/942 G12	41.90
88928003	Master Colour Eilte CDM-T 70W/930 G12	41.90
88928004	Master Colour Eilte CDM-T 70W/940 G12	41.90

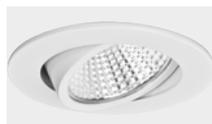
Article-no.	Colour of cabinet	Power	Beam patterns	Price €
88241710	grey / white	35W	SP	229.00
88242710	grey / white	35W	MF	229.00
88243710	grey / white	35W	FL	229.00
88244710	grey / white	70W	SP	229.00
88245710	grey / white	70W	MF	229.00
88246710	grey / white	70W	FL	229.00



# RECESSED SPOTS

The lights in this range have been especially developed for functional and diverse uses. For the most diverse lighting services and areas of use, many basic models are available for low voltage or LED lamps or as high voltage for retrofit lamps

completely individually, according to your wishes. Recessed spots create discreet and elegant lighting in your shop.



Extremely compact p. 40, 51



Top-Seller aluminium p. 41



Spots from A-Z p. 42 - 44



Anti-glare-Spots p. 46



Enhanced IP ratings p. 47



Decoration-spotlights p. 49 - 50



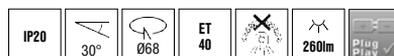
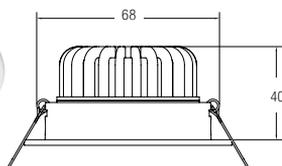
Universal design spot p. 52 - 55





► Landgasthof Schwögl, Bad Abbach

## 12251073 / 33251073 LED recessed spot



*Consumption of only 3 watts*

(in terms of lighting technology comparable to 20 watt low-voltage Halogen)

**Extremely compact design - installation depth 40mm**

### Base model LED 350mA

Material: aluminium, light source: 1x LED, power: 3W, beam angle: 38°, rotatable, dimension luminaire: Ø 82 mm

**Energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Colour temperature	Price €
12251073	white	2700K	37.10

Dimmable driver on request.



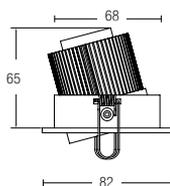
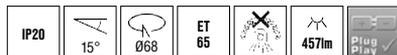
### LED-driver inclusive

Incl. driver for 230V connection, not dimmable, dimension driver: length 58 x breadth 35 x height 21mm

Article-no.	Colour of cabinet	Colour temperature	Price €
33251073	white	2700K	60.80



12263253 / 33263253  
LED recessed spot



**Base model LED 350mA**

Material: aluminium, light source: LED, power: about 6.6W, beam angle: 38°, rotatable, dimension luminaire: Ø 82 mm

Energy efficiency class: **A++ to A**

Article-no.	Colour of cabinet	Colour temperature		Price €
12263253	aluminium	3000K	●	50.50

Dimmable driver on request.



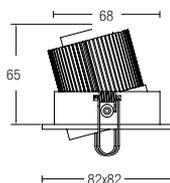
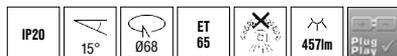
**LED-driver inclusive**

Incl. driver for 230V connection, not dimmable, dimension driver: length 58 x breadth 35 x height 21mm, installation into suspended ceilings by spring fixation

Article-no.	Colour of cabinet	Colour temperature		Price €
33263253	aluminium	3000K	●	74.20



12265253 / 33265253  
LED recessed spot



**Base model LED 350mA**

Material: aluminium, light source: LED, power: about 6.6W, beam angle: 38°, rotatable, dimension luminaire: 82x82mm

Energy efficiency class: **A++ to A**

Article-no.	Colour of cabinet	Colour temperature		Price €
12265253	aluminium	3000K	●	52.50

Dimmable driver on request.

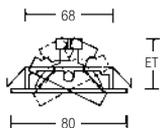


**LED-driver inclusive**

Incl. driver for 230V connection, not dimmable, dimension driver: length 58 x breadth 35 x height 21mm, installation into suspended ceilings by spring fixation

Article-no.	Colour of cabinet	Colour temperature		Price €
33265253	aluminium	3000K	●	76.20



1925...  
Recessed spots

## Base model LV

For low volt lamp: 1x GX5,3 QRCBC51,  
power: max. 50W, material: steel

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
1925.02	chrome	19.00
1925.05	gold	21.70
1925.07	white	17.80
1925.15	nickel satin	24.50
1925.20	stainl. steel clear coating	39.20
1925.22	stainless steel	35.80
1925.27	stainl. steel white coating	39.20

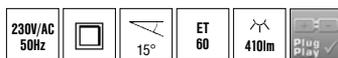


## LED

Light source: 1x LED, power: 6.6W, material: steel,  
beam angle: 38°, incl. driver for 230V connection, not dimmable,  
dimension driver: length 58 x breadth 35 x height 21 mm

**Energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Colour temperature	Price €
33145023	chrome	2700K	89.00
33145053	gold	2700K	91.80
33145073	white	2700K	87.90
33145153	nickel satin	2700K	94.60
33145203	stainl. steel clear coating	2700K	110.00
33145223	stainless steel	2700K	106.00
33145273	stainl. steel white coating	2700K	110.00

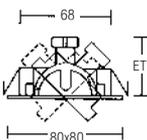


## High-voltage spots for retrofit

For lamp: 1x GU10 QPAR51,  
power: max. 50W, material: steel,  
HV-clamp included

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
36145020	chrome	27.90
36145050	gold	30.60
36145070	white	26.70
36145150	nickel satin	33.40
36145200	stainl. steel clear coating	48.10
36145220	stainless steel	44.70
36145270	stainl. steel white coating	48.10

1936...  
Recessed spots

## Base model LV

For low volt lamp: 1x GX5,3 QRCBC51,  
power: max. 50W, material: steel

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
1936.02	chrome	23.20
1936.05	gold	26.50
1936.07	white	20.70
1936.26	steel satin	26.90



## LED

Light source: 1x LED, power: 6.6W, material: steel,  
beam angle: 38°, incl. driver for 230V connection, not dimmable,  
dimension driver: length 58 x breadth 35 x height 21 mm

**Energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Colour temperature	Price €
33146023	chrome	2700 K	93.20
33146053	gold	2700 K	96.50
33146073	white	2700 K	90.70
33146263	steel satin	2700 K	96.90



## High-voltage spots for retrofit

For lamp: 1x GU10 QPAR51,  
power: max. 50W, material: steel,  
HV-clamp included

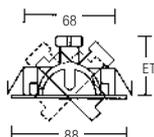
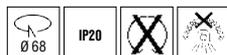
**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
36146020	chrome	32.10
36146050	gold	35.40
36146070	white	29.60
36146260	steel satin	35.80



1963...

Recessed spots



**Base model LV**

For low volt lamp: 1x GX5,3 QRCBC51, power: max. 50W, material: cast

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
1963.02	chrome	17.10
1963.03	chrome satin	21.40
1963.05	gold	19.30
1963.07	white	14.90
1963.15	nickel satin	21.40

**LED**

Light source: 1x LED, power: 6.6W, material: cast, beam angle: 38°, incl. driver for 230V connection, not dimmable, dimension driver: length 58 x breadth 35 x height 21 mm

**Energy efficiency class: A++ to A**

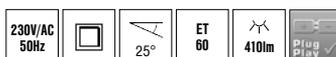
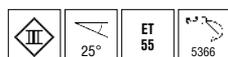
Article-no.	Colour of cabinet	Colour temperature	Price €
33141023	chrome	2700 K	87.10
33141033	chrome satin	2700 K	91.50
33141053	gold	2700 K	89.30
33141073	white	2700 K	85.00
33141153	nickel satin	2700 K	91.50

**High-voltage spots for retrofit**

For lamp: 1x GU10 QPAR51, power: max. 50W, material: cast, HV-clamp included

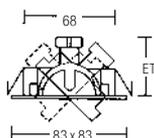
**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
36141020	chrome	26.00
36141030	chrome satin	30.30
36141050	gold	28.20
36141070	white	23.80
36141150	nickel satin	30.30



1964...

Recessed spots



**Base model LV**

for low volt lamp: 1x GX5,3 QRCBC51, power: max. 50W, material: cast

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
1964.02	chrome	19.80
1964.03	chrome satin	24.10
1964.05	gold	21.90
1964.07	white	17.10
1964.15	nickel satin	24.10

**LED**

Light source: 1x LED, power: 6.6W, material: cast, beam angle: 38°, incl. driver for 230V connection, not dimmable, dimension driver: length 58 x breadth 35 x height 21 mm

**Energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Colour temperature	Price €
33142023	chrome	2700 K	89.80
33142033	chrome satin	2700 K	94.10
33142053	gold	2700 K	92.00
33142073	white	2700 K	87.10
33142153	nickel satin	2700 K	94.10

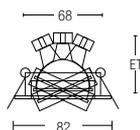
**High-voltage spots for retrofit**

for lamp: 1x GU10 QPAR51, power: max. 50W, material: cast, HV-clamp included

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
36142020	chrome	28.70
36142030	chrome satin	33.00
36142050	gold	30.80
36142070	white	26.00
36142150	nickel satin	33.00



0063...  
Recessed spots

## Base model LV

For low volt lamp: 1x GX5,3 QRCBC51,  
power: max. 50W, material: aluminium

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
0063.07	white	16.20
0063.25	alu satin	16.20

## LED

Light source: 1x LED, power: 6.6W, material: aluminium,  
beam angle: 38°, incl. driver for 230V connection, not dimmable,  
dimension driver: length 58 x breadth 35 x height 21 mm

**Energy efficiency class: A++ to A**

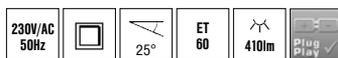
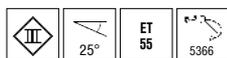
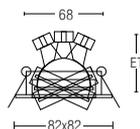
Article-no.	Colour of cabinet	Colour temperature	Price €
33143073	white	2700 K	86.20
33143253	alu satin	2700 K	85.40

## High-voltage spots for retrofit

For lamp: 1x GU10 QPAR51,  
power: max. 50W, material: aluminium,  
HV-clamp included

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
36143070	white	25.10
36143250	alu satin	25.10

0065...  
Recessed spots

## Base model LV

For low volt lamp: 1x GX5,3 QRCBC51,  
power: max. 50W, material: aluminium

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
0065.07	white	18.20
0065.25	alu satin	18.20

## LED

Light source: 1x LED, power: 6.6W, material: aluminium,  
beam angle: 38°, incl. driver for 230V connection, not dimmable,  
dimension driver: length 58 x breadth 35 x height 21 mm

**Energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Colour temperature	Price €
33144073	white	2700 K	88.30
33144253	alu satin	2700 K	87.40

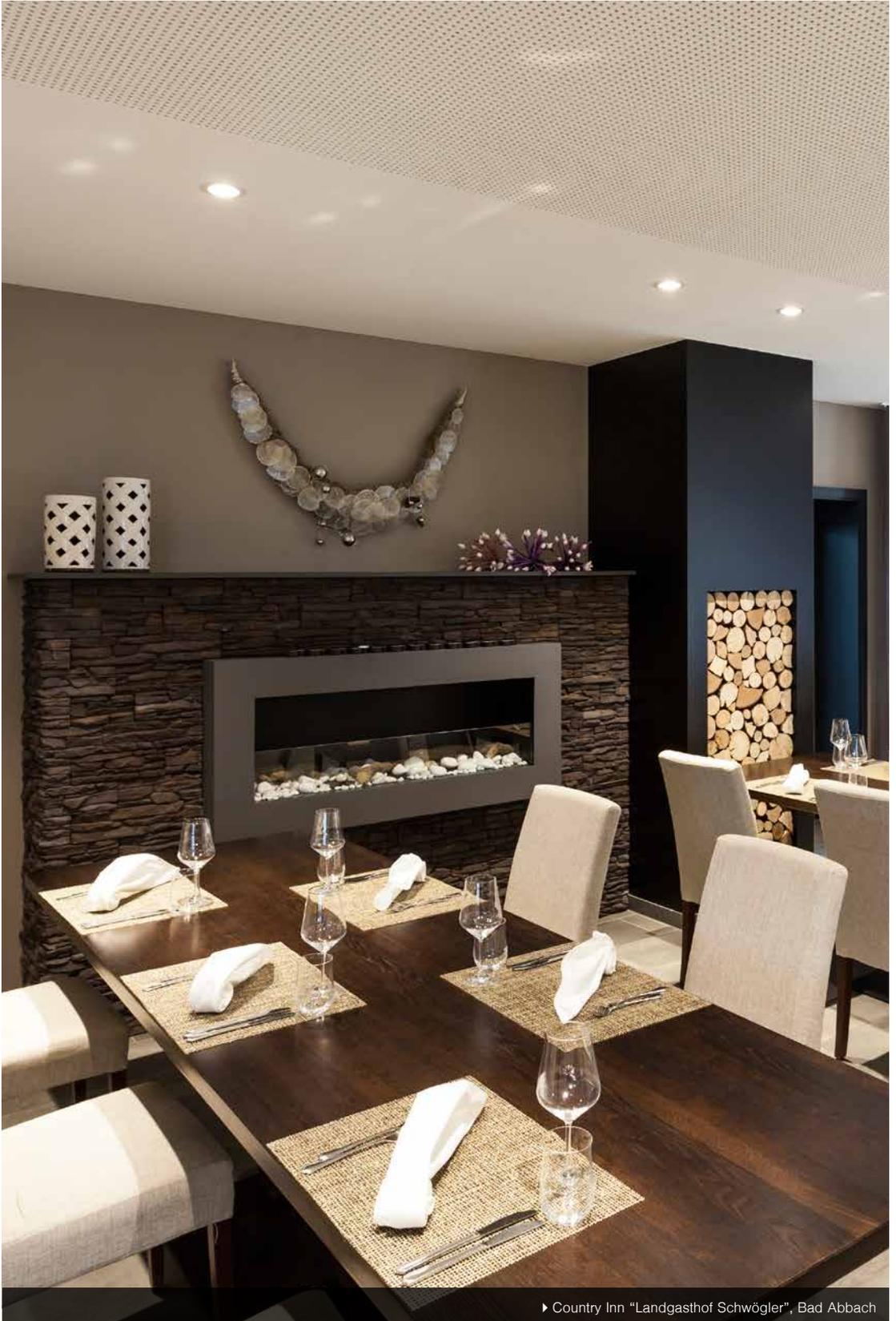
## High-voltage spots for retrofit

For lamp: 1x GU10 QPAR51,  
power: max. 50W, material: aluminium,  
HV-clamp included

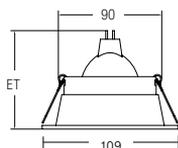
**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
36144070	white	27.10
36144250	alu satin	27.10





► Country Inn "Landgasthof Schwögler", Bad Abbach

20012...  
Recessed spots

## Base model LV

For low volt lamp: 1x GX5,3 QRCBC51,  
power: max. 50W, material: aluminium

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
20012020	chrome	65.10
20012070	white	44.10
20012250	alu satin	46.20

## LED

Light source: 1x LED, power: 6.6W, material: aluminium,  
beam angle: 38°, incl. driver for 230V connection, not dimmable,  
dimension driver: length 58 x breadth 35 x height 21 mm

**Energy efficiency class: A++ to A**

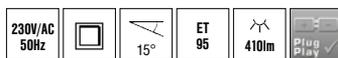
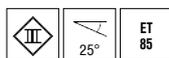
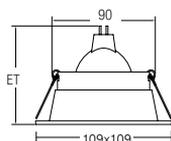
Article-no.	Colour of cabinet	Colour temperature	Price €
33307023	chrome	2700K	134.10
33307073	white	2700K	113.10
33307253	alu satin	2700K	115.20

## High-voltage spots for retrofit

for lamp: 1x GU10 QPAR51,  
power: max. 50W, material: steel,  
HV-clamp included

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
36307020	chrome	74.00
36307070	white	53.00
36307250	alu satin	55.10

20013...  
Recessed spots

## Base model LV

For low volt lamp: 1x GX5,3 QRCBC51,  
power: max. 50W, material: aluminium

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
20013020	chrome	65.10
20013070	white	44.10
20013250	alu satin	46.20

## LED

Light source: 1x LED, power: 6.6W, material: aluminium,  
beam angle: 38°, incl. driver for 230V connection, not dimmable,  
dimension driver: length 58 x breadth 35 x height 21 mm

**Energy efficiency class: A++ to A**

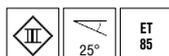
Article-no.	Colour of cabinet	Colour temperature	Price €
33308023	chrome	2700K	134.10
33308073	white	2700K	113.10
33308253	alu satin	2700K	115.20

## High-voltage spots for retrofit

for lamp: 1x GU10 QPARC51,  
power: max. 50W, material: aluminium,  
HV-clamp included

**Energy efficiency class: A++ to E**

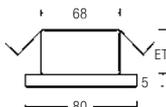
Article-no.	Colour of cabinet	Price €
36308020	chrome	74.00
36308070	white	53.00
36308250	alu satin	55.10



2062...  
Recessed spots



Jet waterproof  
IP65 - for installation in  
closed ceilings



Base model LV

For low voltage lamp: 1x GX5,3 QRCBC51,  
power: max. 50W, material: cast / glass

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
2062.02	chrome	26.20
2062.07	white	23.60
2062.25	alu satin	25.10

LED

Light source: 1x LED, power: 6.6W, material: cast / glass,  
beam angle: 38°, incl. driver for 230V connection, not dimmable,  
dimension driver: length 58 x breadth 35 x height 21 mm

**Energy efficiency class: A++ to A**

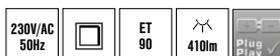
Article-no.	Colour of cabinet	Colour temperature	Price €
33149023	chrome	2700K	96.20
33149073	white	2700K	93.60
33149253	alu satin	2700K	95.20

High-voltage spots for retrofit

For lamp: 1x GU10 QPAR51,  
power: max. 50W, material: cast / glass,  
HV-clamp included

**Energy efficiency class: A++ to E**

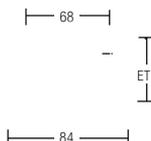
Article-no.	Colour of cabinet	Price €
36149020	chrome	35.10
36149070	white	32.50
36149250	alu satin	34.00



2339...  
Recessed spots



Jet waterproof  
IP65 - for installation in closed  
ceilings



Base model LV

For low voltage lamp: 1x GX5,3 QRCBC51, power:  
max. 50W, material: stainless steel V4A / glass satin

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
2339.42	stainless steel	52.30

LED

Light source: 1x LED, power: 6.6W, material: stainless steel V4A /  
glass satin, beam angle: 38°, incl. driver for 230V connection, not  
dimmable, dimension driver: length 58 x breadth 35 x height 21 mm

**Energy efficiency class: A++ to A**

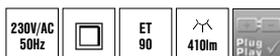
Article-no.	Colour of cabinet	Colour temperature	Price €
33306423	stainless steel	2700K	121.30

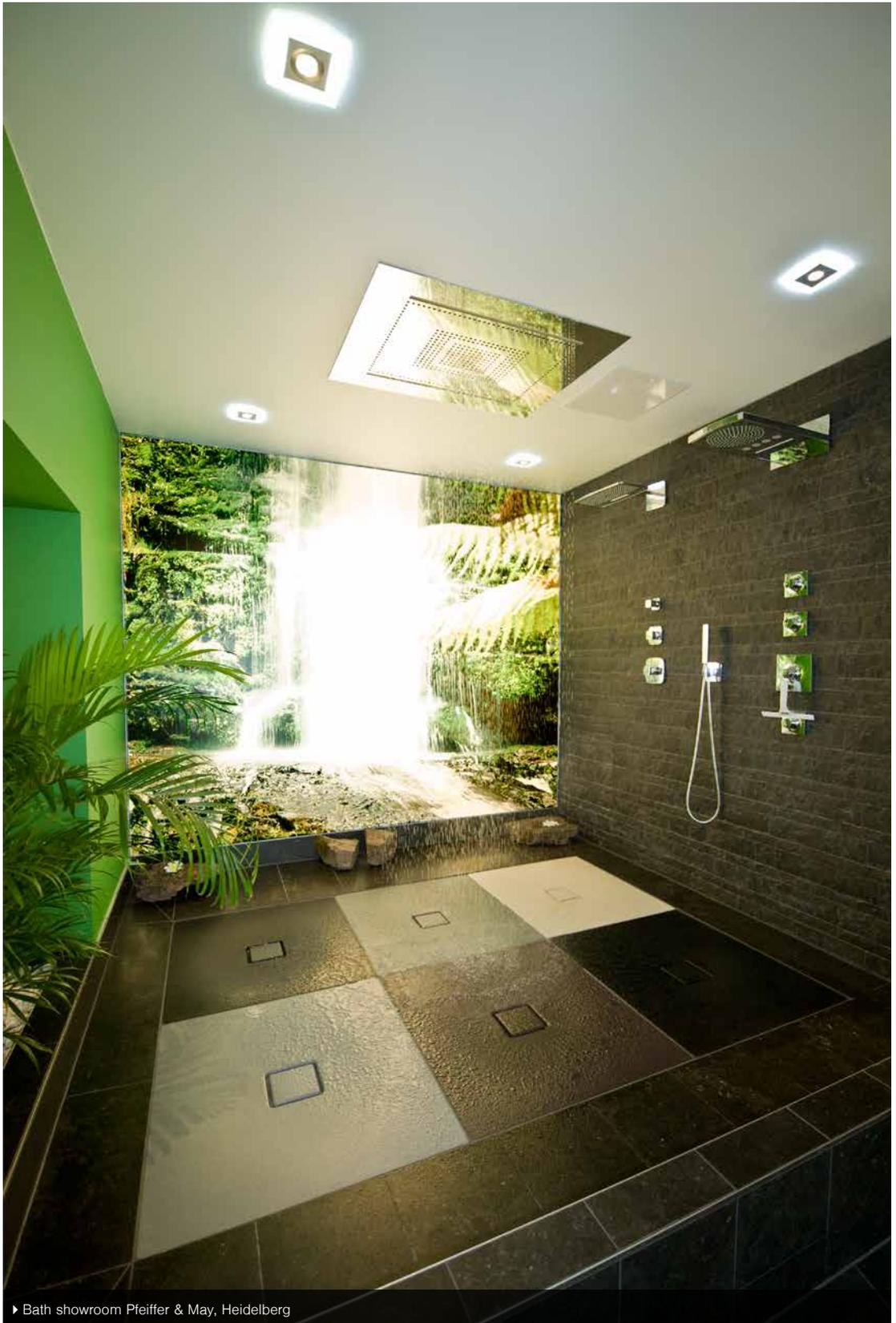
High-voltage spots for retrofit

For lamp: 1x GU10 QPAR51,  
power: max. 50W, material: stainless steel V4A /  
glass satin, HV-clamp included

**Energy efficiency class: A++ to E**

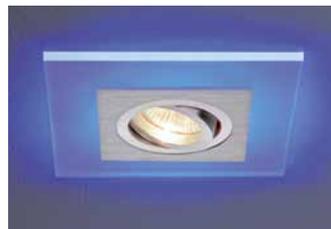
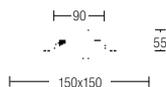
Article-no.	Colour of cabinet	Price €
36306420	stainless steel	61.20





► Bath showroom Pfeiffer & May, Heidelberg

## 2218... Recessed spots with squared LED deco-light



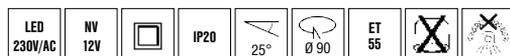
### Base model LV

For lamp: 1x GX5,3 QRCBC51, power: max. 35W and LED-Platine, power: 2.4W, material: aluminium / glass

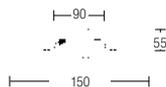
Delivery with LED-driver (not dimmable). The transformer for low voltage bulb is not included. For separately switchable control two 230V/AC circuits needed (circuit 1 -> transformer / circuit 2 -> LED driver)

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
2218.25B	● alu satin	149.00
2218.25W	○ alu satin	149.00



## 2219... Recessed spots with radial LED deco-light



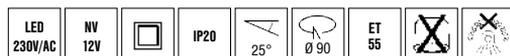
### Base model LV

For lamp: 1x GX5,3 QRCBC51, power: max. 35W and LED-Platine, power: 2.4W, material: aluminium / glass

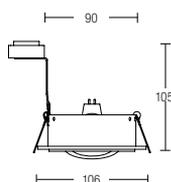
Delivery with LED-driver (not dimmable). The transformer for low voltage bulb is not included. For separately switchable control two 230V/AC circuits needed (circuit 1 -> transformer / circuit 2 -> LED driver)

**Energy efficiency class: A++ to E**

Article-no.	Colour of cabinet	Price €
2219.25B	● alu satin	141.00
2219.25W	○ alu satin	141.00



## 2220... Recessed spots with radial LED deco-light



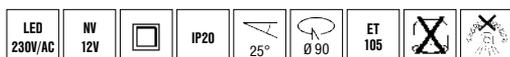
### Base model LV

For lamp: 1x GX5,3 QRCBC51, power: max. 35W and LED-Platine, power: 2.4W, material: aluminium / glass

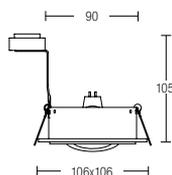
Delivery with LED-driver (not dimmable). The transformer for low voltage bulb is not included. For separately switchable control two 230V/AC circuits needed (circuit 1 -> transformer / circuit 2 -> LED driver)

#### Energy efficiency class: A++ to E

Article-no.	Colour of cabinet	Price €
2220.25B	● alu satin	92.60
2220.25WW	● alu satin	92.60



## 2221... Recessed spots with radial LED deco-light



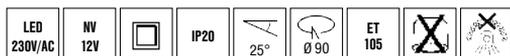
### Base model LV

For lamp: 1x GX5,3 QRCBC51, power: max. 35W and LED-Platine, power: 2.4W, material: aluminium / glass

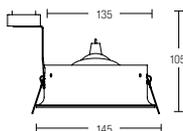
Delivery with LED-driver (not dimmable). The transformer for low voltage bulb is not included. For separately switchable control two 230V/AC circuits needed (circuit 1 -> transformer / circuit 2 -> LED driver)

#### Energy efficiency class: A++ to E

Article-no.	Colour of cabinet	Price €
2221.25B	● alu satin	96.00
2221.25WW	● alu satin	96.00



2225...  
Recessed spots with radial LED deco-light



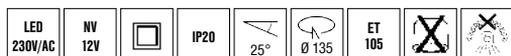
Base model LV

For lamp: 1x GX5,3 QRCBC51, power: max. 35W and LED-Platine, power: 3.4W, material: aluminium / glass

Delivery with LED-driver (not dimmable). The transformer for low voltage bulb is not included. For separately switchable control two 230V/AC circuits needed (circuit 1 -> transformer / circuit 2 -> LED driver)

Energy efficiency class: A++ to E

Article-no.	Colour of cabinet	Price €
2225.25B	● alu satin	115.00
2225.25WW	● alu satin	115.00



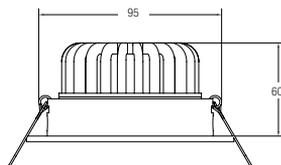
12271073 / 33271073  
Recessed LED spot



Consumption of only 14 watts

(in terms of lighting technology comparable to 50 watt low-voltage Halogen)

Extremely compact design - installation depth 60mm



Base model LED 700mA

LED driver inclusive

Material: aluminium, light source: 1x LED, power: 14W, beam angle: 38°, dimension luminaire: Ø 110 mm

Incl. driver for 230V connection, not dimmable, dimension driver: length 140 x breadth 44 x height 30 mm

Energy efficiency class: A++ to A

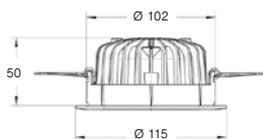
Article-no.	Colour of cabinet	Colour temperature	Price €
12271073	white	2700K ●	102.00

Article-no.	Colour of cabinet	Colour temperature	Price €
33271073	white	2700K ●	153.00

Dimmable driver on request.



## SL501WW4 / SL505WW4 / SL507WW4 / SL509WW4 8W UNIVERSAL DESIGN / SPOT



### Base model LED

Material: aluminium / polycarbonate, colour of cabinet: texture white, light source: LED, CRI: > 85, system power: 8W, beam angle: 40°

Ambient ring inside for creating a dim room light

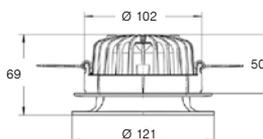
driver (SL3517 or SL3818)  
see page 122

Article-no.	Flux	Colour temperature	Ambient colouring	Price €
SL501WW4	365lm	2900K	amber 	185.00
SL505WW4	365lm	2900K	blue 	185.00
SL507WW4	365lm	2900K	white 	185.00
SL509WW4	365lm	2900K	green 	185.00

Energy efficiency class: A++ to A



## SL503WW4 / SL506WW4 / SL508WW4 / SL510WW4 8W UNIVERSAL DESIGN / SPOT



### Base model LED

Material: aluminium / polycarbonate, colour of cabinet: texture white, light source: LED, colour temperature: 2900K, CRI: > 85, system power: 8W, beam angle: 40°

Ambient ring outside for creating a dim room light

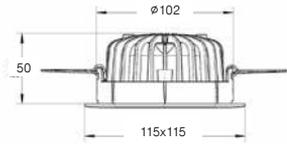
driver (SL3517 or SL3818)  
see page 122

Article-no.	Flux	Colour temperature	Ambient colouring	Price €
SL503WW4	365lm	2900K	amber 	195.00
SL506WW4	365lm	2900K	blue 	195.00
SL508WW4	365lm	2900K	white 	195.00
SL510WW4	365lm	2900K	green 	195.00

Energy efficiency class: A++ to A



**SL521WW4 / SL525WW4 / SL527WW4**  
**8W UNIVERSAL DESIGN / SPOT**



**Base model LED**

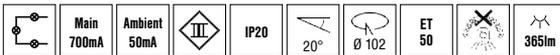
Material: aluminium / polycarbonate, colour of cabinet: texture white, light source: LED, CRI: > 85, system power: 8W, beam angle: 40°

Ambient ring inside for creating a dim room light

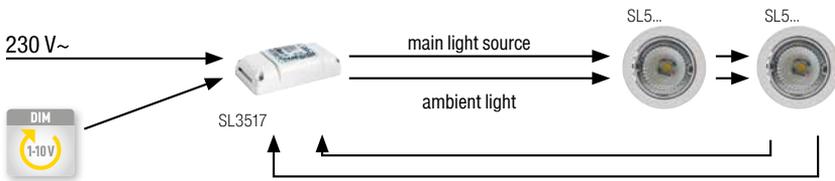
driver (SL3517 or SL3818)  
see page 122

Article-no.	Flux	Colour temperature	Ambient colouring	Price €
SL521WW4	365lm	2900K	amber	195.00
SL525WW4	365lm	2900K	blue	195.00
SL527WW4	365lm	2900K	white	195.00
SL529WW4	365lm	2900K	green	195.00

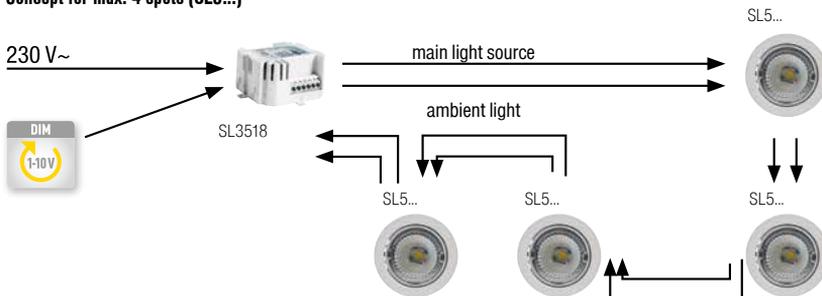
**Energy efficiency class: A++ to A**



**Concept for max. 2 spots (SL5...)**



**Concept for max. 4 spots (SL5...)**

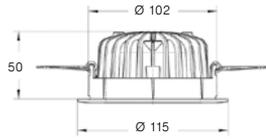


The lights on this double page can be dimmed using a 1-10V dimmer: if the light is dimmed below 2V, the ambient light automatically switches on. When using a series switch, the ambient light automatically switches off as soon as the main light is switched on.



► Sales counter Eiscafé Capri, Sonnefeld

**SL600...**  
15W UNIVERSAL DESIGN / SPOT



**Base model LED**

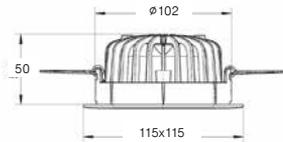
Material: aluminium / polycarbonate, colour of cabinet: texture white, light source: LED, CRI: >85, system power: 15W, beam angle: 40°

Article-no.	Flux	Colour temperature	Ambient colouring	Price €
SL600WW4	640lm	3000K	without	205.00
SL600NW4	720lm	4000K	without	205.00

driver (SL3517 or SL3518) see page 122, **Energy efficiency class: A++ to A**



**SL620...**  
15W UNIVERSAL DESIGN / SPOT



**Base model LED**

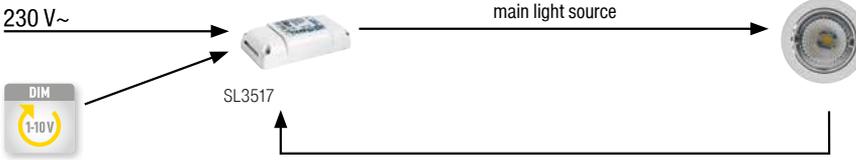
Material: aluminium / polycarbonate, colour of cabinet: texture white, light source: LED, CRI: >85, system power: 15W, beam angle: 40°

Article-no.	Flux	Colour temperature	Ambient colouring	Price €
SL620WW4	640lm	3000K	without	216.00

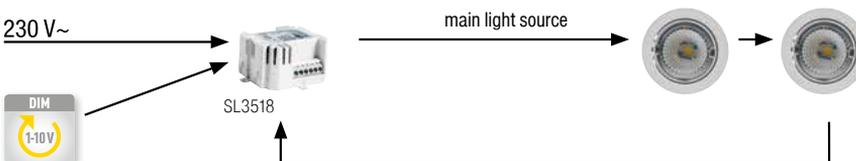
driver (SL3517 or SL3518) see page 122, **Energy efficiency class: A++ to A**



**Concept for max. 1 spot (SL6...)**



**Concept for max. 2 spots (SL6...)**



# RECESSED LIGHTS / SURFACE MOUNTED LIGHTS

For professional use in your shop area.

Choose from a multitude of rigid, pivotable or cardanic-mounted luminaire models. Well thought out systems combined with application-oriented accessories such as filters, various radiation characteristics and light sources help you to implement sales-promoting shop concepts.



LED recessed lights  
p. 58 - 64



LED lights, height adjustable  
p. 64



LED-Panels  
p. 66 - 69



LED-Wallwasher  
p. 71



Cardanic LED recessed lights  
p. 73 - 75



Cardanic HIT recessed lights  
p. 76



LED-Wallwasher  
p. 77



Cardanic LED surface mounted  
lights  
p. 78 - 79



LED surface mounted light with  
ambient ring  
p. 80



LED surface mounted lights  
p. 82 - 83



LED surface-mounted wall light  
p. 83



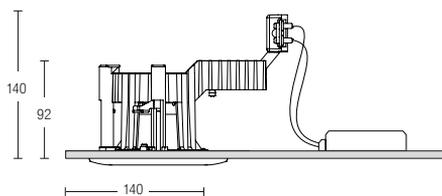
LED surface mounted lights  
p. 84 - 85



Cardanic HIT surface mounted lights  
p. 87



## 88405... Recessed LED downlight



### Specification

Material: aluminium, light source: LED

Including light source and separate operating device.

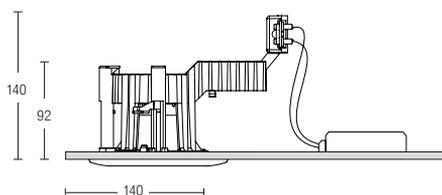
Not applicable for through-wiring.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88405073	white	12W	3000K	WFL	208.00
88405683	silver	12W	3000K	WFL	208.00



## 88406... Recessed LED downlight



### Specification

Material: aluminium, light source: LED

Including light source and separate operating device.

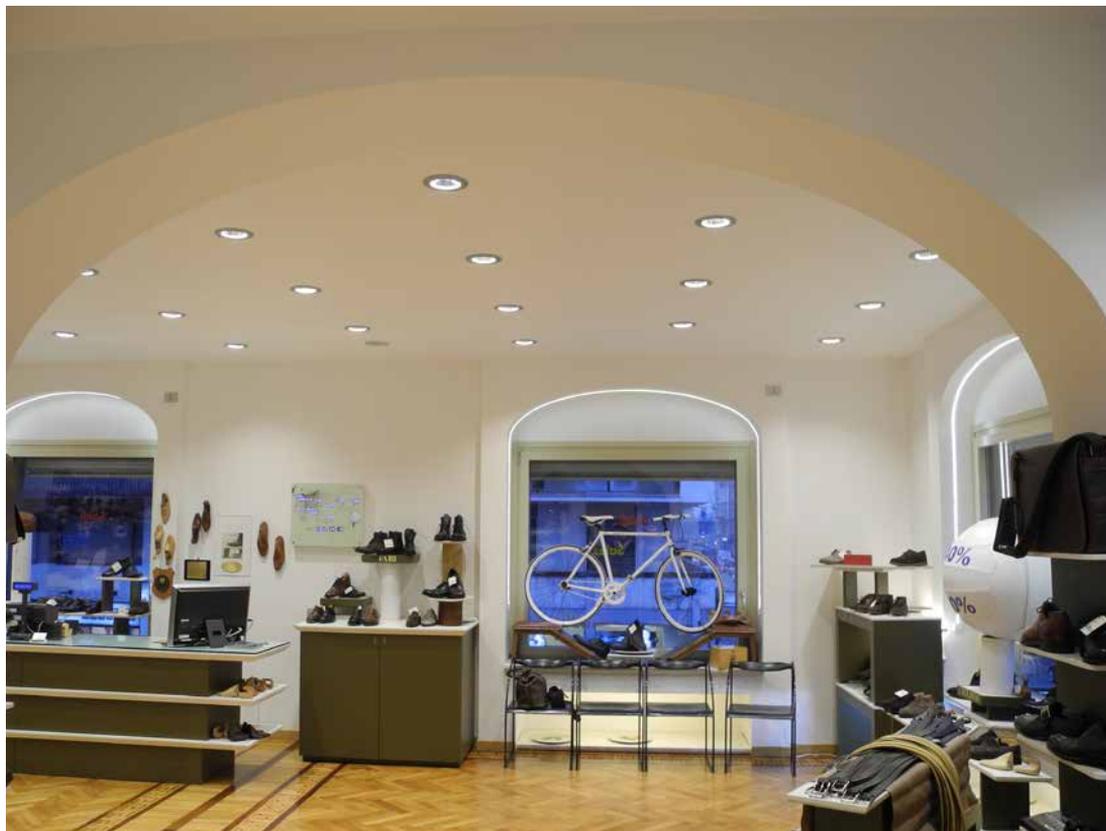
Not applicable for through-wiring.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

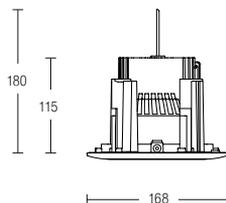
Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88406073	white	12W	3000K	WFL	218.00
88406683	silver	12W	3000K	WFL	218.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)



88415...  
Recessed LED spot



## Specification

Material: aluminium, light source: LED

Including light source and separate operating device.  
Not applicable for through-wiring.

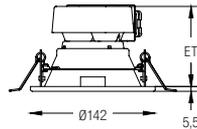
Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88415073	white satin	33W	3000K	FL	399.00
88415683	silver	33W	3000K	FL	399.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

Size data in mm / all price details are non-binding price recommendations (NBP) in € without VAT, errors excepted / order occurs in accordance with our general conditions of sale printed on page 130.

88431... / 88433...  
Recessed LED downlight

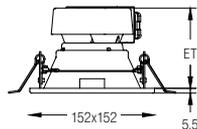
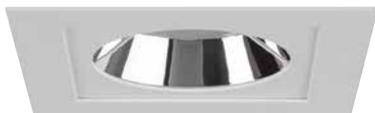
## Specification

Material: steel / aluminium  
Light source: LED

Including light source and operating device.  
Adapted for through-wiring.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Installation depth	Protection	Power	Colour temperature	Beam patterns	Price €
88431073	white	91mm	IP20	15W	3000K	WFL	139.00
88431074	white	91mm	IP20	15W	4000K	WFL	139.00
88433073	white	95mm	IP44	15W	3000K	WFL	149.00
88433074	white	95mm	IP44	15W	4000K	WFL	149.00

88445... / 88447...  
Recessed LED downlight

## Specification

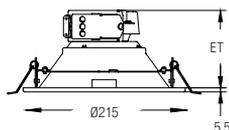
Material: steel / aluminium  
Light source: LED

Including light source and operating device.  
Adapted for through-wiring.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Installation depth	Protection	Power	Colour temperature	Beam patterns	Price €
88445073	white	77mm	IP20	15W	3000K	WFL	154.00
88445074	white	77mm	IP20	15W	4000K	WFL	154.00
88446073	white	81mm	IP44	15W	3000K	WFL	164.00
88446074	white	81mm	IP44	15W	4000K	WFL	164.00



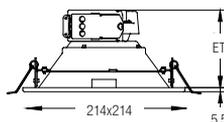
88432... / 88434...  
 Recessed LED downlight

**Specification**

Material: steel / aluminium, light source: LED

 Including light source and operating device.  
 Adapted for through-wiring.

 Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Installation depth	Protection	Power	Colour temperature	Beam patterns	Price €
88432073	white	104mm	IP20	26W	3000K	WFL	159.00
88432074	white	104mm	IP20	26W	4000K	WFL	159.00
88434073	white	108mm	IP44	26W	3000K	WFL	174.00
88434074	white	108mm	IP44	26W	4000K	WFL	174.00


 88446... / 88448...  
 Recessed LED downlight

**Specification**

Material: steel / aluminium, light source: LED

 Including light source and operating device.  
 Adapted for through-wiring.

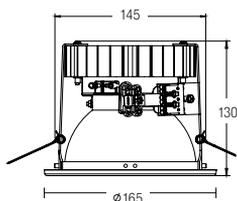
 Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Installation depth	Protection	Power	Colour temperature	Beam patterns	Price €
88447073	white	84mm	IP20	26W	3000K	WFL	164.00
88447074	white	84mm	IP20	26W	4000K	WFL	164.00
88448073	white	89mm	IP44	26W	3000K	WFL	189.00
88448074	white	89mm	IP44	26W	4000K	WFL	189.00



40501073

## Recessed LED downlight Ø165mm (ceiling cut-out 145mm)



## Dimmable via leading edge

All recessing/decorative rings on demand are also available in the following finishes: chromed steel, highly specular / nickel matt / gold coloured, highly specular / powder coated, silver grey / powder coated, any RAL colour / V2A stainless steel, white / V2A, powder coated or V2A, brush-finished.

## Further accessories (on request)

Release element for mineral fibre ceilings module 600 or module 625

## Specification

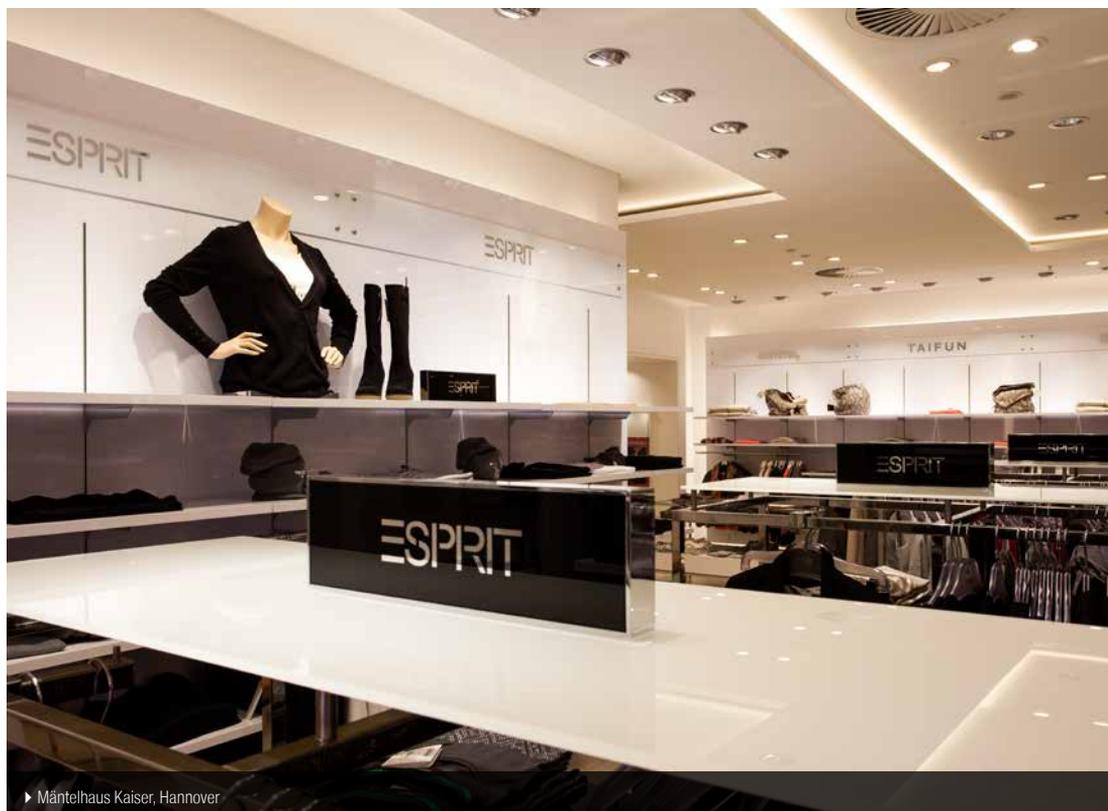
Stable metal-housing made of zinc-plated steel. Installation without tools by torsion springs. Removable ceiling ring white powder coated (alternative colours on request). Aluminium high gloss silver. With strain-relief to connect with 230V main voltage.

Light source: High-Power-LED 20W with solid heatsink (without fan)

Accessories (bayonet mounting) available on request (e.g. for rating class IP44 in closed ceiling systems).

Lighting equipment corresponds to energy efficiency class: **A++ to A**

Article-no.	Colour temperature	Beam patterns	Price €
40501073	3000K	WFL	199.00



► Mäntelhaus Kaiser, Hannover

0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

40502073

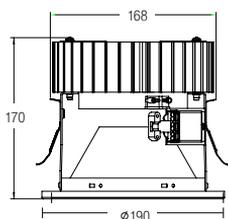
Recessed LED downlight Ø190mm (ceiling cut-out 168mm)

**Dimmable via leading edge**

All recessing/decorative rings on demand are also available in the following finishes: chromed steel, highly specular / nickel matt / gold coloured, highly specular / powder coated, silver grey / powder coated, any RAL colour / V2A stainless steel, white / V2A, powder coated or V2A, brush-finished.

**Further accessories (on request)**

Release element for mineral fibre ceilings module 600 or module 625



**Specification**

Recessed LED downlight Stable metal-housing made of zinc-plated steel. Installation without tools by mounting springs. Removable ceiling ring white powder coated (alternative colours on request). Aluminium high gloss silver. With strain-relief to connect with 230V main voltage.

Article-no.	Colour temperature	Beam patterns	Price €
40502073	3000K	WFL	269.00

Light source: High-Power-LED 32W with solid heatsink (without fan)

Accessories (bayonet mounting) available on request (e.g. for rating class IP44 in closed ceiling systems).

Lighting equipment corresponds to **energy efficiency class: A++ to A**



40503073

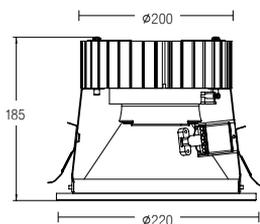
Recessed LED downlight Ø220mm (ceiling cut-out 200mm)

**Dimmable via leading edge**

All recessing/decorative rings on demand are also available in the following finishes: chromed steel, highly specular / nickel matt / gold coloured, highly specular / powder coated, silver grey / powder coated, any RAL colour / V2A stainless steel, white / V2A, powder coated or V2A, brush-finished.

**Further accessories (on request)**

Release element for mineral fibre ceilings module 600 or module 625



**Specification**

Stable metal-housing made of zinc-plated steel. Installation without tools by mounting springs. Removable ceiling ring white powder coated (alternative colours on request). Aluminium high gloss silver. With strain-relief to connect with 230V main voltage.

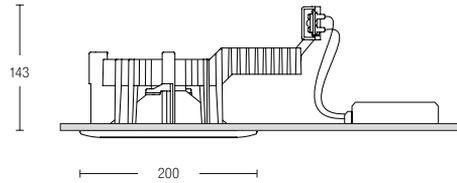
Article-no.	Colour temperature	Beam patterns	Price €
40503073	3000K	WFL	319.00

Light source: High-Power-LED 32W with solid heatsink (without fan)

Accessories (bayonet mounting) available on request (e.g. for rating class IP44 in closed ceiling systems).

Lighting equipment corresponds to **energy efficiency class: A++ to A**



88401... / 88402...  
Recessed LED downlight

## Specification

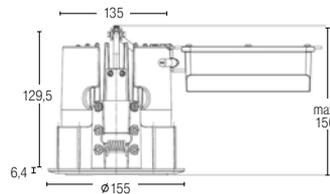
Material: aluminium, light source: LED

Including light source and separate operating device.

Not applicable for through-wiring.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Flux	Beam angle	Price €
88401073	white	39W	3000K	3500lm	100°	299.00
88401683	silver	39W	3000K	3500lm	100°	299.00
88402073	white	51W	3000K	5000lm	90°	389.00
88402683	silver	51W	3000K	5000lm	90°	389.00

1930...  
Recessed LED downlight

## LED

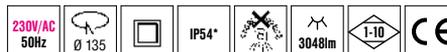
Material: aluminium / polycarbonate, light source: LED, colour temperature: 3000K, power: 41W

Including operating device.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Ambient colouring	Beam patterns	Dimming	Price €
19301073	texture white	amber ●	FL	1-10V	545.00
19302073	texture white	blue ●	FL	1-10V	545.00
19303073	texture white	white ○	FL	1-10V	545.00
19307073	texture white	without	FL	without	529.00
19304073	texture white	amber ●	WFL	1-10V	545.00
19305073	texture white	blue ●	WFL	1-10V	545.00
19306073	texture white	white ○	WFL	1-10V	545.00
19308073	texture white	without	WFL	without	529.00

\*IP54 - if mounted in closed ceilings.

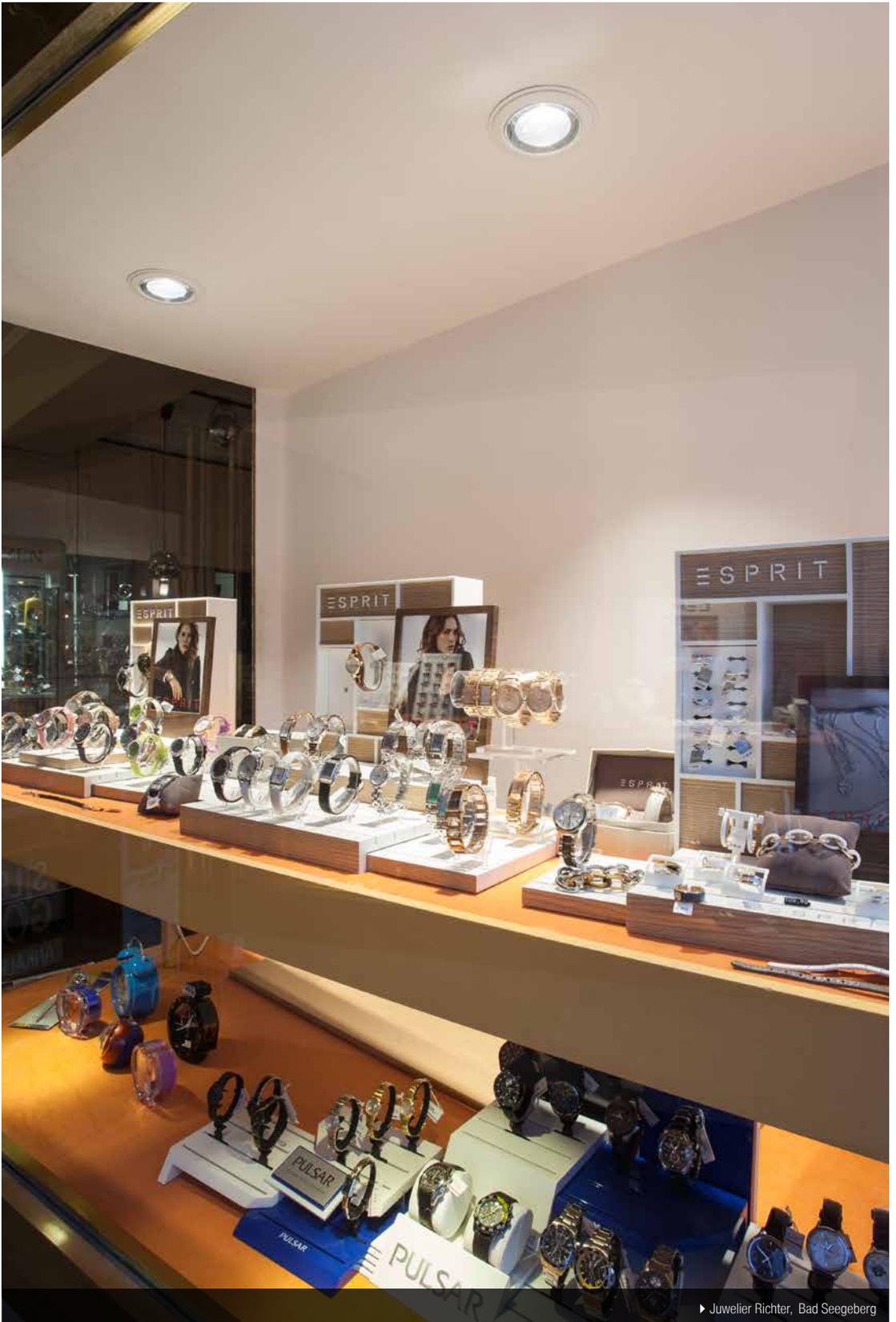


These three settings can be carried out on site using a screw mounting.



Standard setting ex works.

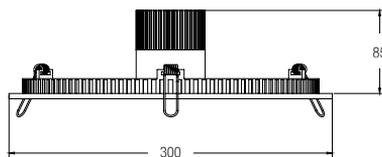
0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)



► Juwelier Richter, Bad Seegeberg

88438073

## Recessed LED spot + LED diffuser



## Specification

Material: aluminium, light source: LED

Incl. light sources and and operating devices for separate switching.

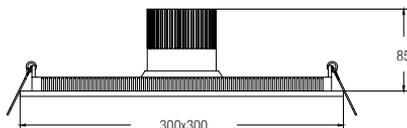
Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam angle	Price €
88438073	white	Spot: 6,5W Space: 15W	3000K	38° 111°	379.00



88439073

## Recessed LED spot + LED diffuser



## Specification

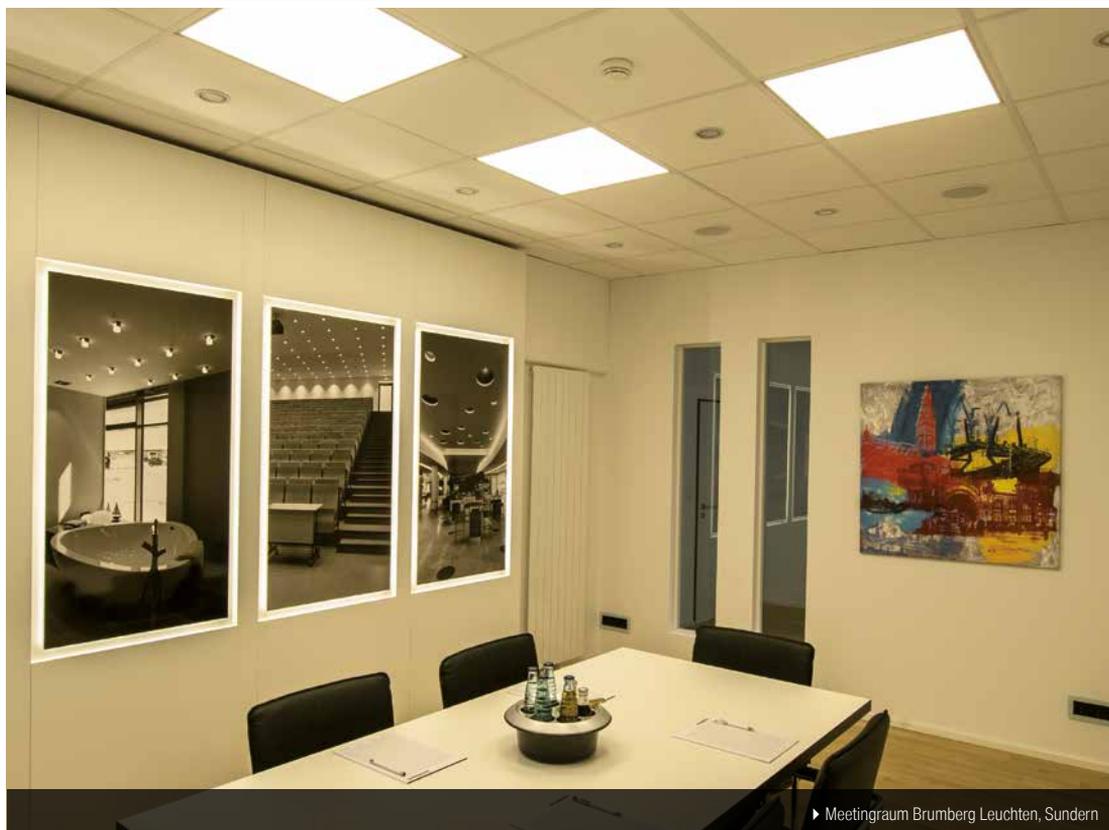
Material: aluminium, light source: LED

Incl. light sources and and operating devices for separate switching.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam angle	Price €
88439073	white	Spot: 6,5W Space: 18,5W	3000K	38° 111°	379.00





12030...  
LED Recessed-Panel



**Specification**

Material: aluminium / plastic satin,  
colour: silver satin, light source: 372x SMD-LED

Suitable for grid ceiling 625 x 625mm  
(for ceiling grid 600 x 600mm on request)

Driver see from page 120

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam angle	Price €
12030003	silver satin	48W	3000K	120°	411.00
12030005	silver satin	48W	6500K	120°	411.00

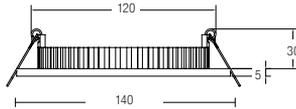


0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

Luminous intensity distribution curve on request. Size data in mm / all price details are non-binding price recommendations (NBP) in € without VAT; errors excepted / order occurs in accordance with our general conditions of sale printed on page 130.

12172073

## Recessed LED panel



## Specification

Material: aluminium / plastic,  
Light source: SMD-LED,  
dimension luminaire: Ø 140mm,  
dimension driver: length 68 x breadth 35 x  
height 21mm

Including light source and separate operating  
device for 230V connection. Not dimmable.

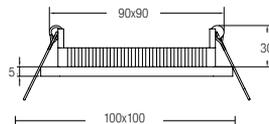
Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam angle	Price €
12172073	white	about 6W	3000K	120°	97.90



12173073

## Recessed LED panel



## Specification

Material: aluminium / plastic,  
Light source: SMD-LED,  
dimension luminaire: 100x100mm,  
dimension driver: length 68 x breadth 35 x  
height 21mm

Including light source and separate operating  
device for 230V connection. Not dimmable.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam angle	Price €
12173073	white	about 5W	3000K	120°	97.90



12174073  
Recessed LED panel



Specification

Material: aluminium / plastic,  
light source: SMD-LED,  
dimension luminaire: Ø 200mm,  
dimension driver: length 145 x breadth 55 x  
height 19 mm

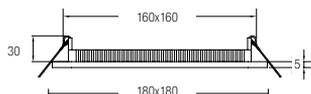
Article-no.	Colour of cabinet	Power	Colour temperature	Beam angle	Price €
12174073	white	about 11W	3000K	120°	171.00

Including light source and separate operating device for 230V connection. Dimmable 1-10V.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**



12175073  
Recessed LED panel



Specification

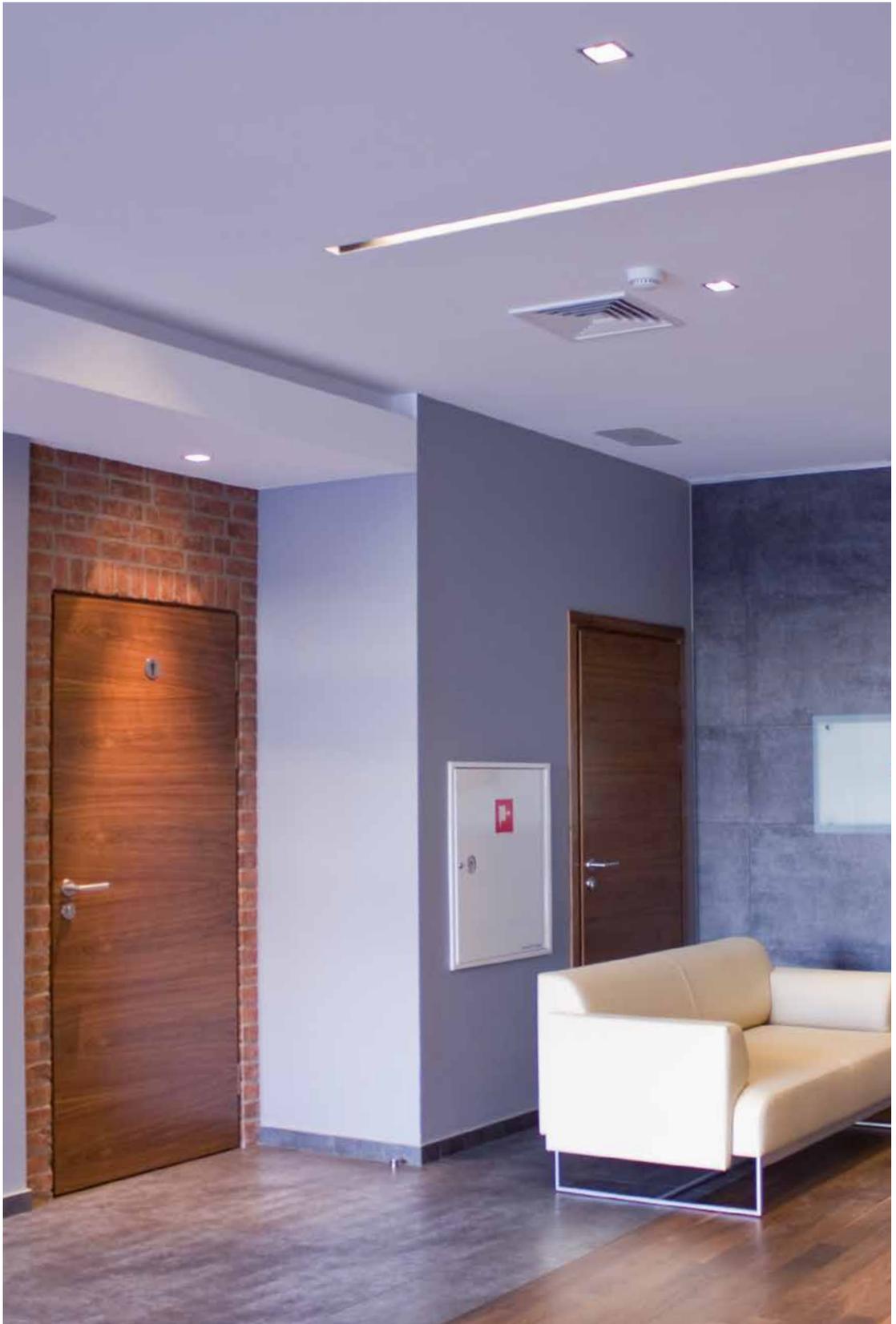
Material: aluminium / plastic,  
light source: SMD-LED,  
dimension luminaire: 180x180mm,  
dimension driver: length 145 x breadth 55 x  
height 19 mm

Article-no.	Colour of cabinet	Power	Colour temperature	Beam angle	Price €
12175073	white	about 12W	3000K	120°	171.00

Including light source and separate operating device for 230V connection. Dimmable 1-10V.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**





88441...  
LED Wallwasher



## Specification

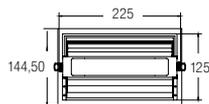
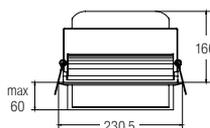
Material: aluminium,  
light source: LED

Including light source and separate  
operating device.

Not applicable for through-wiring.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

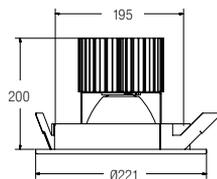
Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88441073	white	31W	3000K	WW (Wallwasher)	309.00
88441683	silver	31W	3000K	WW (Wallwasher)	309.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

**Luminous intensity distribution curve on request.** Size data in mm / all price details are non-binding price recommendations (NBP) in € without VAT; errors excepted / order occurs in accordance with our general conditions of sale printed on page 130.



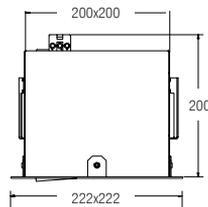
**88471... / 88472... / 88473...**  
 Recessed cardanic LED Spot

**Specification**

Material: steel / aluminium  
 Light source: LED

Including light source and separate operating device.

Lighting equipment corresponds to **energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88471073	white	41W	3000K	SP	419.00
88471083	black	41W	3000K	SP	419.00
88471683	silver	41W	3000K	SP	419.00
88472073	white	41W	3000K	MF	419.00
88472083	black	41W	3000K	MF	419.00
88472683	silver	41W	3000K	MF	419.00
88473073	white	41W	3000K	FL	419.00
88473083	black	41W	3000K	FL	419.00
88473683	silver	41W	3000K	FL	419.00


**88474... / 88475... / 88476...**  
 Recessed cardanic LED Spot

**Specification**

Material: steel / aluminium  
 Light source: LED

Including light source and separate operating device.

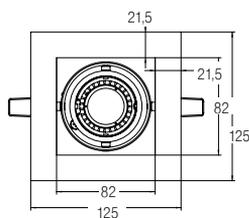
Lighting equipment corresponds to **energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88474073	white	41W	3000K	SP	419.00
88474083	black	41W	3000K	SP	419.00
88474683	silver	41W	3000K	SP	419.00
88475073	white	41W	3000K	MF	419.00
88475083	black	41W	3000K	MF	419.00
88475683	silver	41W	3000K	MF	419.00
88476073	white	41W	3000K	FL	419.00
88476083	black	41W	3000K	FL	419.00
88476683	silver	41W	3000K	FL	419.00



88454173

## Recessed cardanic LED Spot



## Specification

Material: steel / aluminium  
Light source: LED

Including light source and separate operating device.

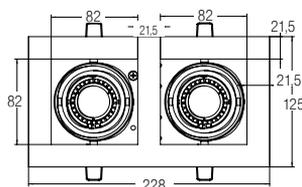
Lighting equipment corresponds to energy efficiency class: **A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88454173	white	1x 6.6W	2700K	FL	139.00



88457173

## Recessed cardanic LED Spot



## Specification

Material: steel / aluminium  
Light source: LED

Including light source and separate operating device.

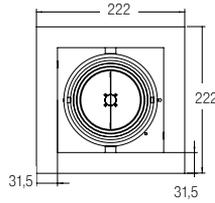
Lighting equipment corresponds to energy efficiency class: **A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88457173	white	2x 6.6W	2700K	FL	279.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

88461... / 88462... / 88463...  
Recessed cardanic LED Spot



Specification

Material: steel / aluminium  
Light source: LED

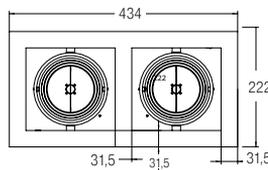
Including light source and separate operating device.

Lighting equipment corresponds to energy efficiency class: **A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88461173	white	1x 33W	3000K	SP	369.00
88462173	white	1x 33W	3000K	FL	369.00
88463173	white	1x 33W	3000K	WFL	369.00



88464... / 88465... / 88466...  
Recessed cardanic LED Spot



Specification

Material: steel / aluminium  
Light source: LED

Including light source and separate operating device.

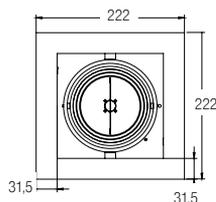
Lighting equipment corresponds to energy efficiency class: **A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88464173	white	2x 33W	3000K	SP	649.00
88465173	white	2x 33W	3000K	FL	649.00
88466173	white	2x 33W	3000K	WFL	649.00



## 46009...

## Recessed cardanic HIT-T spot



## Specification

Material: steel,  
fittings: for HIT, socket: G12

Delivery without lamp and operating device.

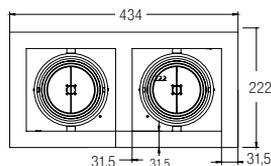
Lighting equipment corresponds to  
**energy efficiency class: A+ to E**

Article-no.	Colour of cabinet	Power	Beam patterns	Price €
46009020	chrome	max. 70W	FL	175.00
46009170	white	max. 70W	FL	133.00



## 46012...

## Recessed cardanic HIT-T spot



## Specification

Material: steel,  
fittings: for HIT, socket: G12

Delivery without lamp and operating device.

Lighting equipment corresponds to  
**energy efficiency class: A+ to E**

Article-no.	Colour of cabinet	Power	Beam pattern	Price €
46012020	chrome	max. 70W	FL	267.00
46012170	white	max. 70W	FL	195.00



## Accessory part

## Lamps

Art.-no.	Specification	Price €
88926003	Master Colour Elite CDM-T 35W/930 G12	41.90
88926004	Master Colour Elite CDM-T 35W/942 G12	41.90
88927003	Master Colour Elite CDM-T 50W/930 G12	41.90
88927004	Master Colour Elite CDM-T 50W/942 G12	41.90
88928003	Master Colour Elite CDM-T 70W/930 G12	41.90
88928004	Master Colour Elite CDM-T 70W/942 G12	41.90

## Filter disc

Art.-no.	Specification	Price €
88906000	UV-Filter disc, anti-glare coating	35.00
88907000	Fruits / Vegetables / Bakery products filter disc	72.00
88909000	Meat / Fish / filter disc	72.00

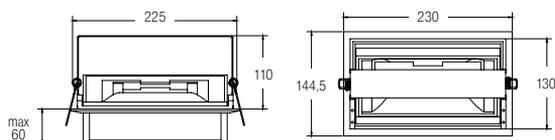
## Ballasts

Art.-no.	Specification	Price €
88941000	remote electronic ballast, 35W	55.00
88942000	remote electronic ballast, 50W	55.00
88943000	remote electronic ballast, 70W	55.00

0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)



88451...  
Recessed HIT-DE-Wallwasher



## Specification

Material: aluminium / steel,  
fittings: for HIT-DE, socket: RX7s

Delivery without lamp and operating device.  
Not applicable for through-wiring.

Lighting equipment corresponds to  
**energy efficiency class: A+ to E**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88451070	white	70W	3000K	WW (Wallwasher)	79,00
88451680	silver	70W	3000K	WW (Wallwasher)	79,00

### Accessory part

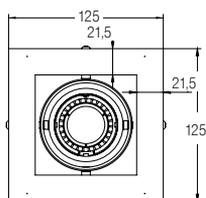
Ballast

Art.-Nr.	Specification	Price €
88943000	separate ballast, 70W	55,00



88503173

## Surface mounted LED spot



## Specification

Material: steel,  
Light source: LED

Including light source and operating device.

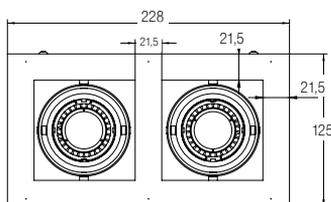
Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Flux	Price €
88503173	white	6.6W	2700K	FL	410lm	209.00



88506173

## Surface mounted LED twin-spot



## Specification

Material: steel,  
Light source: LED

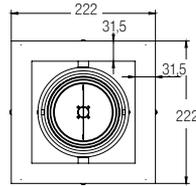
Including light source and operating device.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Flux	Price €
88506173	white	2x 6.6W	2700K	FL	2x 410lm	329.00



88511... / 88512... / 88513...  
Surface mounted LED spot



Specification

Material: steel,  
Light source: LED

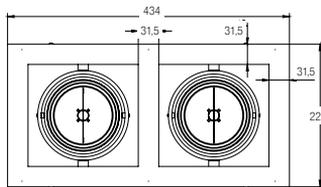
Including light source and operating device.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Flux	Price €
88511173	white	33W	3000K	SP	3270lm	389.00
88512173	white	33W	3000K	FL	3270lm	389.00
88513173	white	33W	3000K	WFL	3270lm	389.00



88514... / 88515... / 88516...  
Surface mounted LED twin-spot



Specification

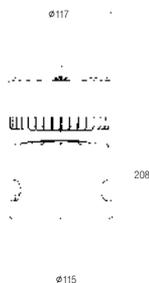
Material: steel,  
Light source: LED

Including light source and operating device.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Flux	Price €
88514173	white	2x 33W	3000K	SP	2x 3270lm	679.00
88515173	white	2x 33W	3000K	FL	2x 3270lm	679.00
88516173	white	2x 33W	3000K	WFL	2x 3270lm	679.00



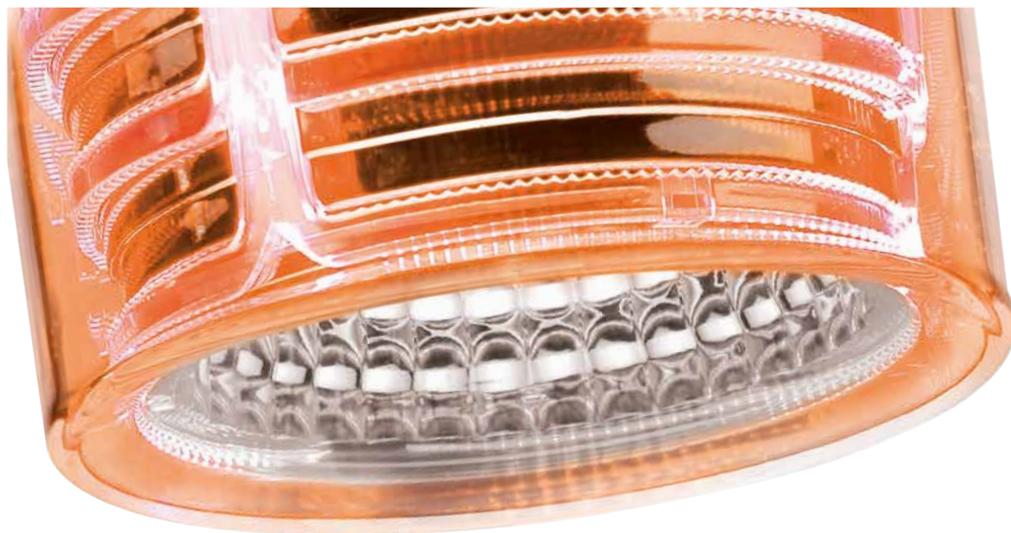
1931...  
Surface mounted LED spot

## LED

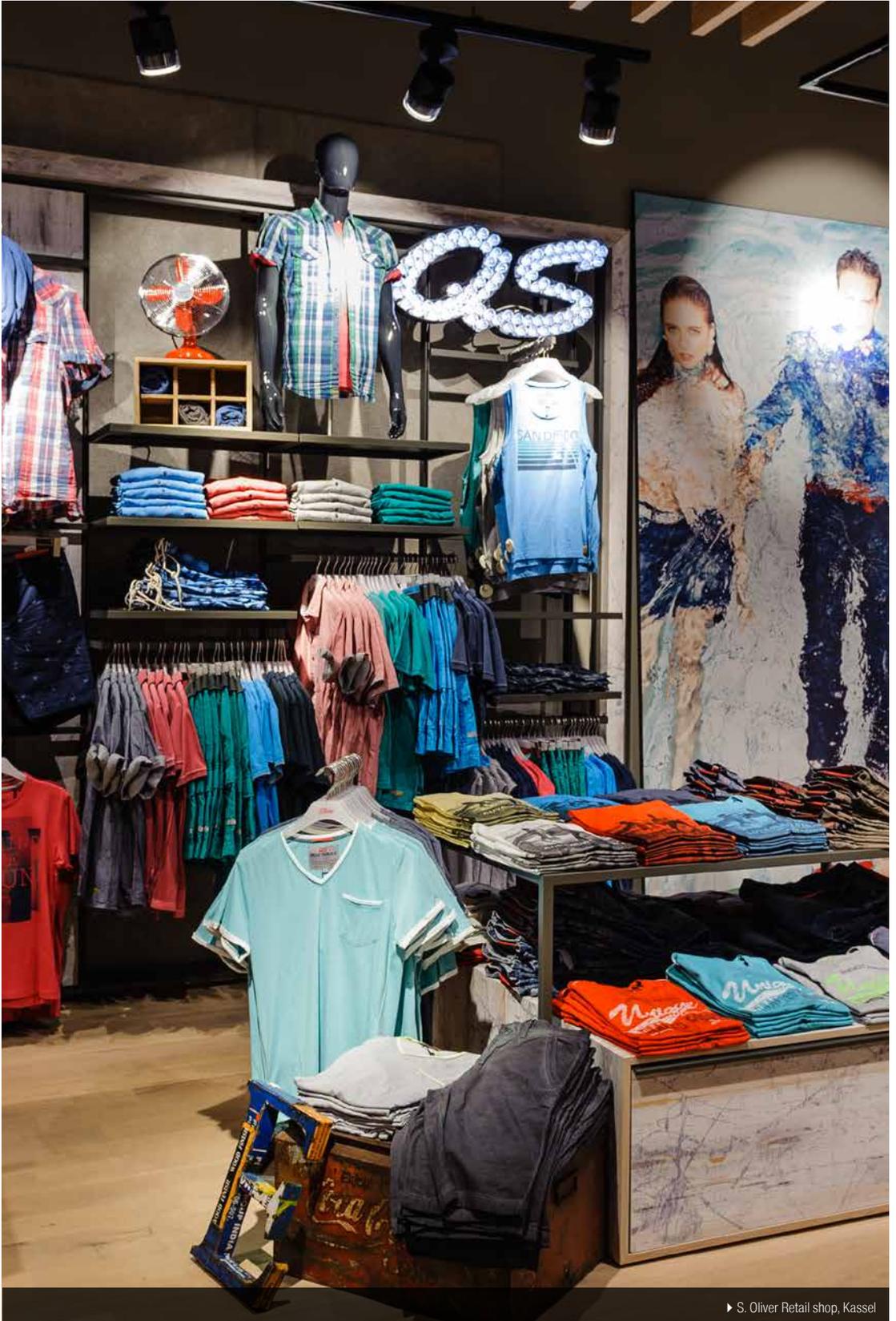
Material: aluminium / polycarbonate, colour: white, light source: LED, 3000K, power: 41W

Lighting equipment corresponds to energy efficiency class: **A++ to A**

Article-no.	Colour of cabinet	Ambient colouring	Beam patterns	Dimming	Price €
19311073	white	amber	● FL	1-10V	545.00
19312073	white	blue	● FL	1-10V	545.00
19313073	white	white	○ FL	1-10V	545.00
19317073	white	without	FL	without	529.00
19314073	white	amber	● WFL	1-10V	545.00
19315073	white	blue	● WFL	1-10V	545.00
19316073	white	white	○ WFL	1-10V	545.00
19318073	white	without	WFL	without	529.00

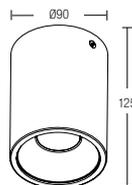


0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)



► S. Oliver Retail shop, Kassel

## 88521... Surface mounted LED downlight



### Specification

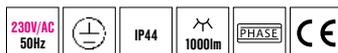
Material: aluminium,  
Light source: LED

Including light source and operating device.

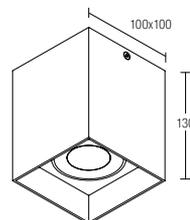
Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

dimmable via leading edge

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88521173	white	12W	3000K	WFL	179.00
88521183	black	12W	3000K	WFL	179.00
88521693	silver	12W	3000K	WFL	179.00



## 88522... Surface mounted LED downlight



### Specification

Material: aluminium,  
Light source: LED

Including light source and operating device.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

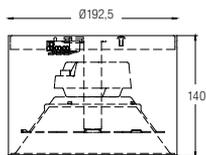
dimmable via leading edge

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88522173	white	12W	3000K	WFL	199.00
88522183	black	12W	3000K	WFL	199.00
88522693	silver	12W	3000K	WFL	199.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

88523...  
Surface mounted LED downlight



Specification

Material: aluminium,  
Light source: LED

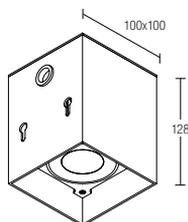
Including light source and operating device.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88523173	white	26W	3000K	WFL	209.00
88523183	black	26W	3000K	WFL	209.00
88523693	silver	26W	3000K	WFL	209.00



88525...  
Surface mounted luminaire



Specification

Material: aluminium,  
Light source: LED

Including light source and operating device.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**

dimmable via leading edge

Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88525173	white	12W	3000K	WFL	219.00
88525183	black	12W	3000K	WFL	219.00
88525693	silver	12W	3000K	WFL	219.00



88527073

## Surface mounted LED spot

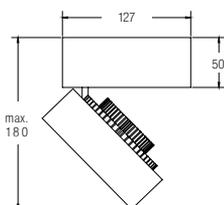


## Specification

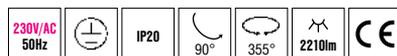
Material: aluminium, light source: LED

Including light source and operating device.  
Adapted for through-wiring.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**



Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88527073	black / white	26W	3000K	FL	249.00



0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

88528073

Surface mounted LED spot

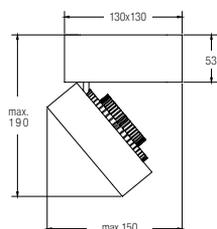


## Specification

Material: aluminium, light source: LED

Including light source and operating device.  
Adapted for through-wiring.

Lighting equipment corresponds to  
**energy efficiency class: A++ to A**



Article-no.	Colour of cabinet	Power	Colour temperature	Beam patterns	Price €
88528073	black / white	26W	3000K	FL	279.00



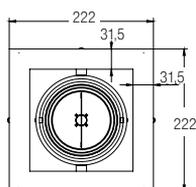
0°-8° = SSP (Super Spot), 9°-18° = SP (Spot), 19°-29° = MF (Medium Flood), 30°-45° = FL (Flood), 46°-60° = WFL (Wide Flood)

Special colours and luminous intensity distribution curve on request. Size data in mm / all price details are non-binding price recommendations (NBP) in € without VAT; errors excepted / order occurs in accordance with our general conditions of sale printed on page 130.



## 46309170

### Surface mounted cardanic spot



### Specification

Material: steel, fittings: for HIT, socket: G12

Article-no.	Colour of cabinet	Beam patterns	Power	Price €
46309170	white	FL	70W	288.00

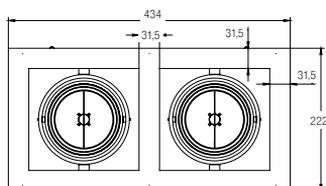
Including operating device. Delivery without lamp.

Lighting equipment corresponds to **energy efficiency class: A+ to E**



## 46312170

### Surface mounted cardanic spot



### Specification

Material: steel, fittings: for HIT, socket: G12

Article-no.	Colour of cabinet	Beam patterns	Power	Price €
46312170	white	FL	2x 70W	442.00

Including operating device. Delivery without lamp.

Lighting equipment corresponds to **energy efficiency class: A+ to E**



### Accessory part

Lamps			Filter disc		
Art.-no.	Specification	Price €	Art.-no.	Specification	Price €
88928003	Master Colour Elite CDM-T 70W/930 G12	41.90	88906000	UV-Filter disc, anti-glare coating	35.00
88928004	Master Colour Elite CDM-T 70W/942 G12	41.90	88907000	Fruits / Vegetables / Bakery products filter disc	72.00
			88909000	Meat / Fish / filter disc	72.00

# GROUND RECESSED LUMINAIRES

Indoor and outdoor

Whether for accentuation, route guidance or use in the outside area. The energy efficient ground recessed luminaires with enhanced IP-rating are suitable both for the inside and outside

area of your shop. High quality materials and modern and simple design fit in optimally with the architecture.



14001223



p. 90 14002223



p. 90 14003223



p. 92 14004223



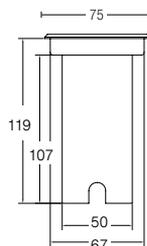
p. 92 14005223

p. 93



14001223

## Ground recessed LED Luminaire



## Specification

Material: stainless steel / plastic,  
colour: stainless steel  
Light source: 1x High-Power-LED, power: 4W,  
beam angle: 30°, incl. 500mm connecting cable

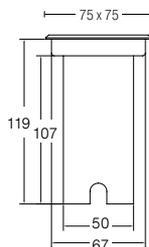
Article-no.	Light colour	Price €
14001223	3000K	190.00

→ see suitable driver from page 120



14002223

## Ground recessed LED Luminaire



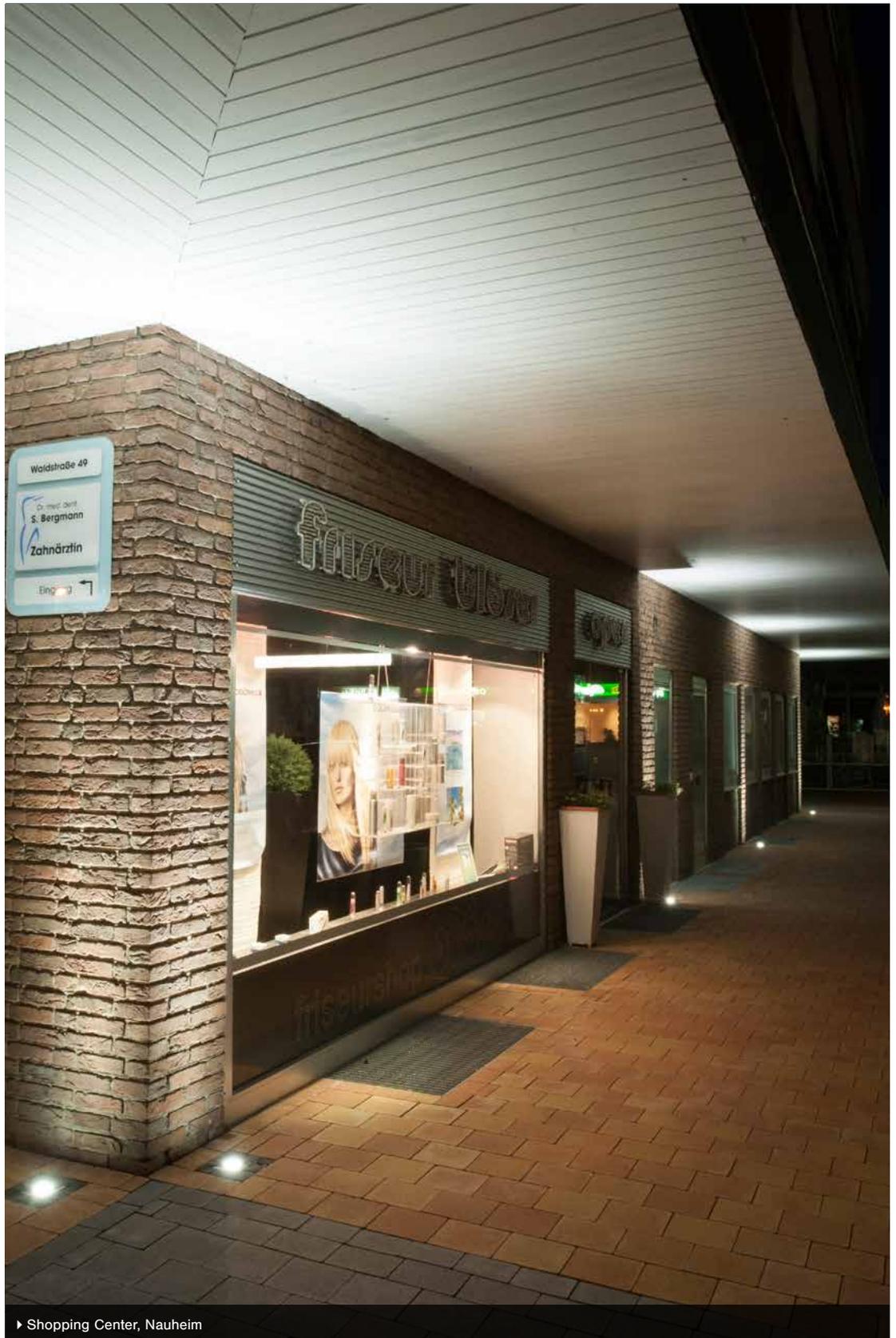
## Specification

Material: stainless steel / plastic,  
colour: stainless steel  
Light source: 1x High-Power-LED, power: 4W  
Beam angle: 30°, incl. 500mm connecting cable

Article-no.	Light colour	Price €
14002223	3000K	194.00

→ see suitable driver from page 120

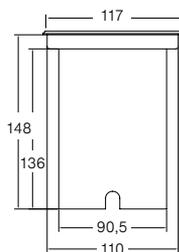




► Shopping Center, Nauheim

14003223

## Ground recessed LED Luminaire



## Specification

Material: stainless steel / plastic,  
colour: stainless steel  
Light source: 1x High-Power-LED, power: 9W  
Beam angle: 35°, incl. 500mm connecting cable

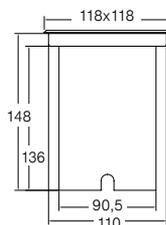
Article-no.	Light colour	Price €
14003223	3000K	358.00

→ see suitable driver from page 120



14004223

## Ground recessed LED Luminaire



## Specification

Material: stainless steel / plastic,  
colour: stainless steel  
Light source: 1x High-Power-LED, power: 9W  
Beam angle: 35°, incl. 500mm connecting cable

Article-no.	Light colour	Price €
14004223	3000K	363.00

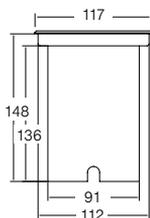
→ see suitable driver from page 120





► Winery Schmidt

**14005223**  
Ground recessed LED Luminaire



**Specification**

Material: stainless steel / plastic,  
colour: stainless steel  
Light source: 1x High-Power-LED, power: 4W,  
beam angle: 30°, incl. 500mm connecting cable

Article-no.	Light colour	Price €
14005223	3000K	246.00

→ see suitable driver from page 120

	<b>24V/DC</b>		<b>IP67</b>		<b>ET 148</b>		<b>1000 kg</b>		<b>10°</b>		<b>192lm</b>
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# QUALITYFLEX®

LED-Flexible strips, customized

Invisible, yet impressive – when it comes to ambient illumination of individual rooms or objects, LED flexible strips are universal light sources and a perfect fit. They can be integrated easily into the overall architecture in many different ways, or just into

individual pieces of furniture. Unique technical quality and quickly implemented individual solutions make QualityFlex® a highlight in every shop area.



Profile lights



p. 96 2-Channel-type flexible strips  
p. 97, 98



White light-strips  
p. 99, 100, 103



Coloured light-strips p. 101



Profile & accessories p. 104



LED-light strip p. 115

## CUSTOMIZED FOR YOU!

*Customization of flexible strips*

**We divided the full length of our QualityFlex® strips into the smallest non-divisible unit. According to the length you need, you have to order a multiple of this minimum unit.**

**Example: art.-no. 15002003 (full length 5000mm):  
minimum unit = 100mm = art.-no. 75002003)**

**Example for ordering for LED flexible strip IP00:**  
Assuming, you need 3600mm of flexible strip, your order has to consist of:  
36 x art.-no. 75002003 = QualityFlex® strip being 3600mm long  
1 x art.-no. 75998000 = customization for the connecting cable  
(300mm) of a IP00-QualityFlex strip

**Example for ordering for the LED flexible strip IP65:**

Assuming, you need 2100mm of flexible strip, your order has to consist of:  
21 x art.-no. 75003003 = QualityFlex® strip being 2100mm long  
1 x art.-no. 75999000 = customization for the connecting cable  
(300mm) of a IP65 - QualityFlex® strip

**Attention: Every customized length must be ordered as an individual item. The maximum roll length of 5000mm must not be exceeded.**



*Customization of aluminium and plastic profiles*

We provide our QualityFlex® aluminium extrusion profiles and fitting plastic covers in standard length of 1000mm and 2000mm. According to the customized length you need, you have to order a multiple of the minimum unit of 100mm.

**Example for ordering:** You need aluminium profile art.no. 15951260 and the fitting plastic cover art.no. 15934990 customized to 700mm length.

**Please order the following:**

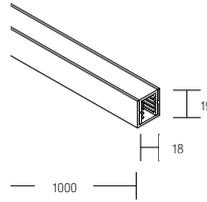
- 7 x art.no. 75951260 = aluminium profile being 700mm long
- 1 x art.no. 75991000 = customization aluminium profile
- 7 x art.no. 75934990 = plastic cover being 700mm long
- 1 x art.no. 75992000 = customization plastic cover

**Attention:** Every customized length must be ordered as an individual item. Special lengths exceeding 2000mm have to be requested separately. For any questions, please contact our sales team.

**Variants of customizations**

- 75998000 = customization for the connecting cable of a IP00-QualityFlex strip
- 75999000 = customization for the connecting cable of a IP65 - QualityFlex® strip
- 75991000 = customization aluminium profile
- 75992000 = customization plastic cover

## 15801... / 75801... / 75991... / 75992... LED-profile lights



### Specification

Material: aluminium / plastic (satin)  
 Light source: 60x SMD-LED  
 Power: about 4.8W  
 Dimensions: 1000 x 18 x 19mm

### Standard length: 1000mm

Article-no.	Light colour	Price €
15801005	6500K	99.00
15801003	3100K	99.00

### Customization

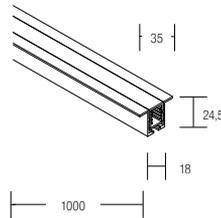
Article-no.	Light colour	Price €
75801005	6500K	12.90
75801003	3100K	12.90
75991000	customization aluminium profile	4.90
75992000	customization plastic cover	4.50



100mm segments, max. 2000mm Full-length

See ordering details for customization on p. 94  
 Driver see from page 120

## 15802003 / 15802005 LED wing profile lights



### Specification

Material: aluminium / plastic (satin) Light  
 Source: 60x SMD-LED  
 Power: about 4,8W  
 Dimensions: 1000 x 35 x 24.5mm

End-caps included in delivery

### Standard length: 1000mm

Article-no.	Light colour	Price €
15802005	6500K	139.00
15802003	3100K	139.00

### Customization

Article-no.	Light colour	Price €
75802005	6500K	18.10
75802003	3100K	18.10
75991000	customization aluminium profile	4.90
75992000	customization plastic cover	4.50

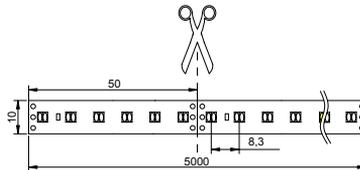


100mm segments, max. 2000mm Full-length

See ordering details for customization on p. 94  
 Driver see from page 120

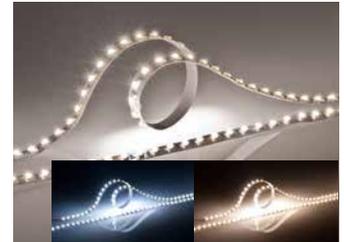


**15012004**  
LED 2 channel flexible strip



**New double-chip-technology**  
for homogeneous light distribution.

**Two channels of white light** for individual installation of colour temperature.



**Specification**

Light source:  
600x Bi-Color-LED (warm white + cool white)  
= 120x Bi-Color-LEDs/m (warm white + cool white), power: max. 90.0W (18W/m), beam angle: 120°, width: 10mm, length: 5000mm, scissile every 50mm

Two-sides 3M-adhesive tape for easy installation included in delivery. Fixation on aluminum profile is mandatory to control heat conduction (from p. 104). Planning instruction for system components: negative control (common anode). Control via double LED-PWM control (art. 17501000, see main catalogue) possible

**Standard length: 5000mm roll**

Article-no.	Light colour	Flux	Price €
15012004	6300K	570lm/m	379.00
	3200K	500lm/m	

**Customization**

Article-no.	Light colour	Price €
75012004	6300K	4.60
	3200K	
75998000	Customization IP00	9.90

50mm segments

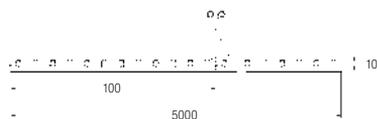
See ordering details for customization on p. 94  
Driver see from page 120





15006004

## LED 2 channel flexible strip



Two channels of white light for individual installation of colour temperature.

## Specification

Light source: SMD-LED: 300x warm white + 300x cool white (60LEDs/m warm white + 60LEDs/m cool white), power: max. 48.0W (9.6W/m), beam angle: 120°, width: 10mm, length: 5000mm, scissile every 100mm, two-sides 3M-adhesive tape included in delivery. **For an optimal heat conduction we advise to use aluminium profiles (from p. 104).** Planning instruction for system components: negative control (common anode). Control via double LED-PWM control (art. 17501000, see main catalogue) possible

## Standard length: 5000mm roll

Article-no.	Light colour	Flux	Price €
15006004	6500K ○	303lm/m	237.00
	3100K ●	266lm/m	

## Customization

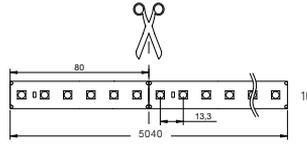
Article-no.	Light colour	Price €
75006004	6500K ○	5.70
	3100K ●	
75998000	Customization IP00	9.90

100mm segments

See ordering details for customization on p. 94  
Driver see from page 120



1501300...  
LED flexible strip



Specification

Light source: 378x SMD 5630-LED (75LEDs/m), power: max. 130.0W (26W/m), beam angle: 120°, width: 10mm, length: 5040mm, scissile every 80mm, two-sides 3M-adhesive tape included in delivery.

**Fixation on aluminum profile is mandatory to control heat conduction (from p. 104).**



Standard length: 5040mm roll

Article-no.	Light colour	Flux	Price €
15013005	6300K <input type="radio"/>	2100lm/m	319.00
15013003	2700K <input type="radio"/>	1840lm/m	319.00

Customization

Article-no.	Light colour	Price €
75013005	6300K <input type="radio"/>	6.10
75013003	2700K <input type="radio"/>	6.10
75998000	Customization IP00	9.90

80mm segments

See ordering details for customization on p. 94  
Driver see from page 120

Specification

Light source: 300x SMD 5050-LED (60LEDs/m), power: max. 72.0W (14.4W/m), beam angle: 120°, width: 12mm, length: 5000mm, scissile every 100mm, two-sides 3M-adhesive tape included in delivery.

**For an optimal heat conduction we advise to use aluminium profiles (from p. 104).**



Standard length: 5000mm roll

Article-no.	Light colour	Flux	Price €
15014005	6300K <input type="radio"/>	740lm/m	289.00
15014003	2700K <input type="radio"/>	490lm/m	289.00

Customization

Article-no.	Light colour	Price €
75014005	6300K <input type="radio"/>	7.00
75014003	2700K <input type="radio"/>	7.00
75998000	Customization IP00	9.90

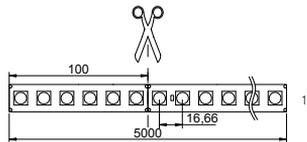
100mm segments

See ordering details for customization on p. 94  
Driver see from page 120

Colour rendering index

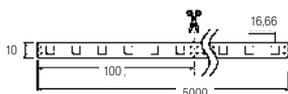
**CRI > 90**

For top quality illumination of textiles, jewelry, food etc.



1501400...  
LED flexible strip

## 1500400... LED flexible strip



### Specification

Light source: 300x SMD LED (60LEDs/m), power: max. 72.0W (14.4W/m), beam angle: 120°, width: 10mm, length: 5000mm, scissile every 100mm, two-sides 3M-adhesive tape included in delivery.

**For an optimal heat conduction we advise to use aluminium profiles (from p. 104).**



### Standard length: 5000mm roll

Article-no.	Light colour	Flux	Price €
15004005	6500K ○	1080lm/m	245.00
15004003	3100K ●	903lm/m	245.00

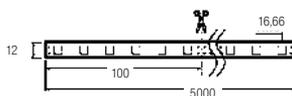
### Customization

Article-no.	Light colour	Price €
75004005	6500K ○	5.90
75004003	3100K ●	5.90
75998000	Customization IP00	9.90

100mm segments

See ordering details for customization on p. 94  
Driver see from page 120

## 1501000... LED flexible strip



Silicon coating (protection class: IP65)

**Attention:**  
the installer becomes liable for maintaining the degree of protection IP65 when cutting the conductor board by himself!

### Specification

Light source: 300x SMD LED (60LEDs/m), power: max. 72.0W (14.4W/m), beam angle: 120°, width: 12mm, length: 5000mm, scissile every 100mm, two-sides 3M-adhesive tape included in delivery.

**For an optimal heat conduction we advise to use aluminium profiles (from p. 104).**

Incl. accessory kit 15921000



### Standard length: 5000mm roll

Article-no.	Light colour	Flux	Price €
15010005	6500K ○	985lm/m	275.00
15010003	3100K ●	832lm/m	275.00

### Customization

Article-no.	Light colour	Price €
75010005	6500K ○	6.60
75010003	3100K ●	6.60
75999000	Customization IP65	14.90

100mm segments

See ordering details for customization on p. 94  
Driver see from page 120

1500200...  
LED flexible strip



Specification

Light source: 300xSMD LED (60LEDs/m), power: max. 24.0W (4.8W/m), beam angle: 120°, width: 8mm, length: 5000mm, scissile every 100mm, two-sides 3M-adhesive tape included in delivery.

**For an optimal heat conduction we advise to use aluminium profiles (from p. 104).**



Standard length: 5000mm roll

Article-no.	Light colour	Flux	Price €
15002005	6500K	360lm/m	99.00
15002004	4000K	330lm/m	99.00
15002003	3100K	301lm/m	99.00
15002008			99.00
15002006			99.00
15002009			99.00
15002007			99.00

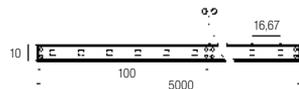
Customization

Article-no.	Light colour	Price €
75002005	6500K	2.40
75002004	4000K	2.40
75002003	3100K	2.40
75002008		2.40
75002006		2.40
75002009		2.40
75002007		2.40
75998000	Customization IP00	9.90

100mm segments

See ordering details for customization on p. 94  
Driver see from page 120

1500300...  
LED flexible strip



Silicon coating (protection class: IP65)



**Attention:**

the installer becomes liable for maintaining the degree of protection IP65 when cutting the conductor board by himself!

Specification

Light source: 300xSMD LED (60LEDs/m), power: max. 24.0W (4.8W/m), beam angle: 120°, width: 10mm, length: 5000mm, scissile every 100mm, two-sides 3M-adhesive tape included in delivery.

**For an optimal heat conduction we advise to use aluminium profiles (from p. 104).**

Incl. accessory kit 1592000



Standard length: 5000mm roll

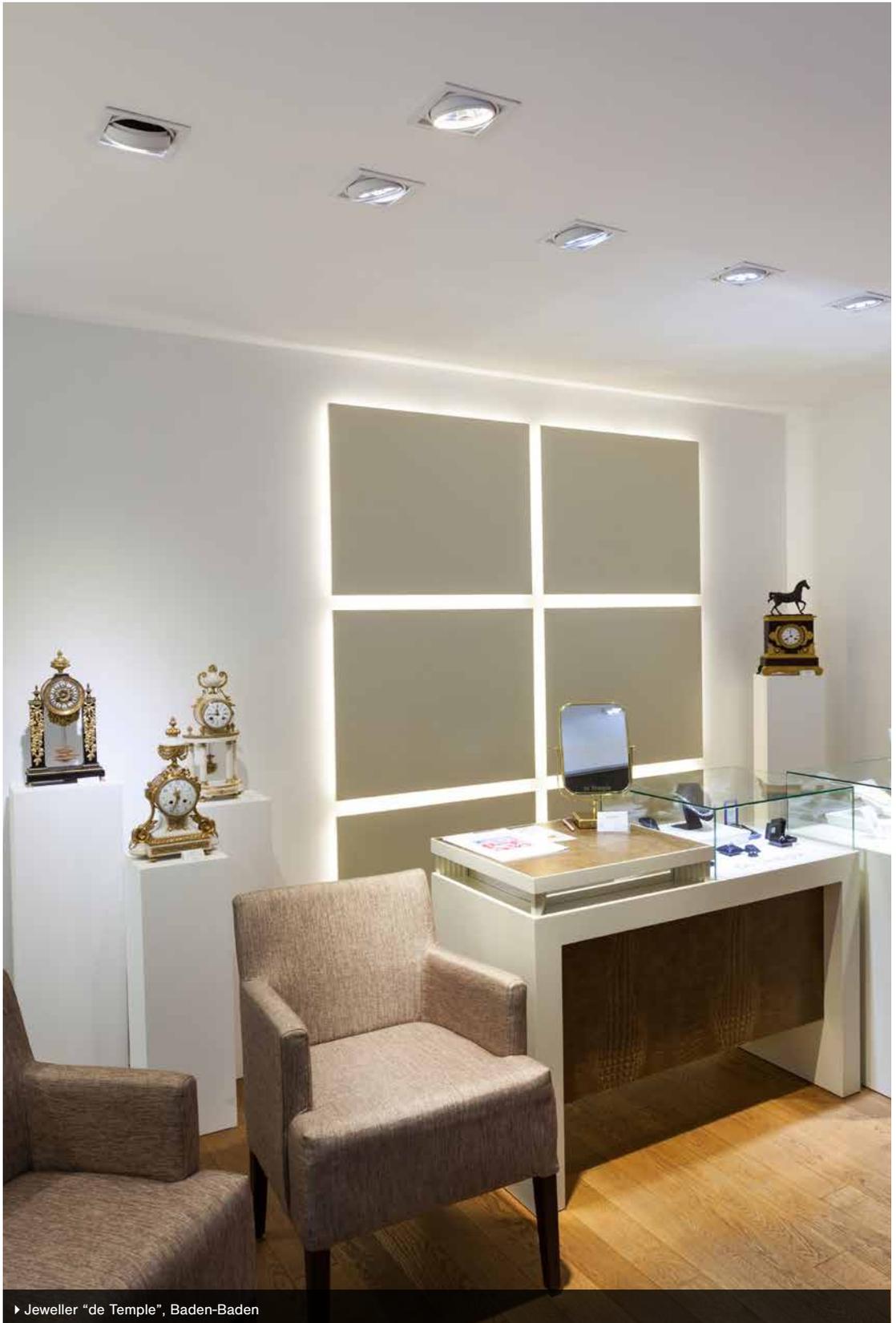
Article-no.	Light colour	Flux	Price €
15003005	6500K	330lm/m	128.00
15003004	4000K	310lm/m	128.00
15003003	3100K	256lm/m	128.00
15003008			128.00
15003006			128.00
15003009			128.00
15003007			128.00

Customization

Article-no.	Light colour	Price €
75003005	6500K	3.10
75003004	4000K	3.10
75003003	3100K	3.10
75003008		3.10
75003006		3.10
75003009		3.10
75003007		3.10
75999000	Customization IP65	14.90

100mm segments

See ordering details for customization on p. 94  
Driver see from page 120



► Jeweller "de Temple", Baden-Baden

**1501500...**  
LED flexible strip

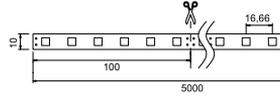
**Colour rendering index**

**CRI > 90**

For top quality illumination of textiles, jewelry, food etc.

**No voltage loss**

through integrated constant current source in each section.



**Specification**

Light source: 300xSMD-LED (60LEDs/m), power: max. 72.0W (14.4W/m), beam angle: 120°, width: 10mm, length: 5000mm, scissile every 100mm, two-sides 3M-adhesive tape included in delivery.

**For an optimal heat conduction we advise to use aluminium profiles (from p. 104).**



**Standard length: 5000mm roll**

Article-no.	Light colour	Flux	Price €
15015005	6500K	740lm/m	329.00
15015003	3100K	490lm/m	329.00

**Customization**

Article-no.	Light colour	Price €
75015005	6500K	7.90
75015003	3100K	7.90
75998000	Customization IP00	9.90

100mm segments

See ordering details for customization on p. 94  
Driver see from page 120

**1500100...**  
LED flexible strip



**Specification**

Light source: 1200x SMD-LED (240LEDs/m), power: max. 96.0W / 19.2W/m, beam angle: 120°, width: 10mm, length: 5000mm, scissile every 25mm, two-sides 3M-adhesive tape included in delivery.

**Fixation on aluminum profile is mandatory to control heat conduction (from p. 104).**



**Standard length: 5000mm roll**

Article-no.	Light colour	Flux	Price €
15001005	6500K	1440lm/m	448.00
15001003	3100K	1200lm/m	448.00

**Customization**

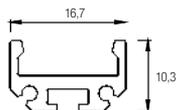
Article-no.	Light colour	Price €
75001005	6500K	2.70
75001003	3100K	2.70
75998000	Customization IP00	9.90

25mm segments

See ordering details for customization on p. 94  
Driver see from page 120

## 15911260 / 15912260

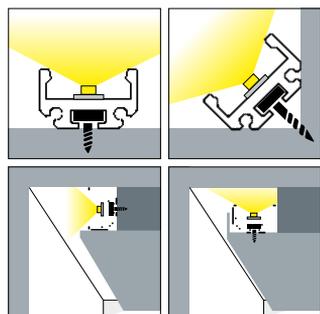
## Aluminium profile for surface mounting



## Specification

**Surface mounted profile** for LED flexible strips IP00 (without silicon coating) with a breadth of max. 12.0mm and for LED flexible strips IP65 (with silicon coating) with a breadth of max. 10.00mm, material: aluminium

Special length on request



## Standard lengths

Article-no.	Length	Colour	Price €
15911260	1000mm	silver anodized	30.00
15912260	2000mm	silver anodized	59.00

## Customization

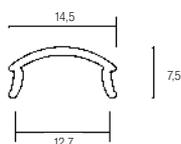
Article-no.	Customization	Price €
75911260	Aluminium profile 100mm	3.60
75991000	Customization aluminium profile	4.90

100mm segments  
See ordering details for customization on p. 104



Delivery without flexible strip.

## Accessory part



## Standard lengths

Article-no.	Length	Colour	Price €
15914000	1000mm	transparent	15.00
15915000	2000mm	transparent	30.00

Article-no.	Length	Colour	Price €
15917070	1000mm	opal	15.00
15918070	2000mm	opal	30.00

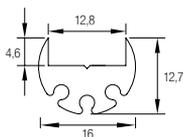
## Customization

Article-no.	Customization	Price €
75914000	Plastic cover 100mm	1.80
75992000	Customization plastic cover	4.50

Article-no.	Customization	Price €
75917070	Plastic cover 100mm	1.80
75992000	Customization plastic cover	4.50

100mm segments  
See ordering details for customization on p. 104

15901260 / 15902260  
Aluminium profile for surface mounting



Specification

**Surface mounted profile** for all LED flexible strips with a breadth of max. 12.0mm, material: aluminium, special length on request,

Standard length: 5000mm roll

Article-no.	Length	Colour	Price €
15901260	1000mm	silver anodized	37.00
15902260	2000mm	silver anodized	73.00

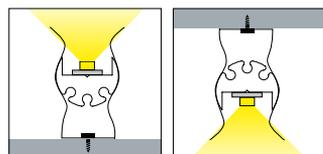
Customization

Article-no.	Customization	Price €
75901260	Aluminium profile 100mm	4.50
75991000	Customization aluminium profile	4.90

100mm segments  
See ordering details for customization on p. 104



Delivery without LED strip.

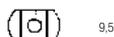
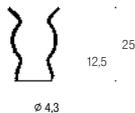


Accessory part

1 fixation clamp

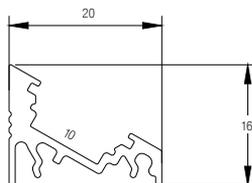
material: aluminium

Article-no.	Price €
15909260	1.80



## 15941260 / 15942260

## Aluminium profile for surface mounting



## Specification

**Corner profile** for LED flexible strips IP00 (without silicon coating) with a breadth of max. 10.0mm, material: aluminium

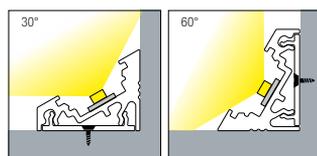
## Standard lengths

Article-no.	Length	Colour	Price €
15941260	1000mm	silver anodized	15.00
15942260	2000mm	silver anodized	29.00

## Customization

Article-no.	Customization	Price €
75941260	Aluminium profile 100mm	1.80
75991000	Customization aluminium profile	4.90

100mm segments  
See ordering details for customization on p. 104



Delivery without LED strip.



## Accessory part

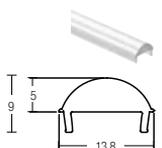
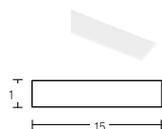
## Standard lengths

**Profile covers** / material: plastic

Article-no.	Length	Colour	Price €
15934070	1000mm	opal	5.00
15935070	2000mm	opal	9.00

## Customization

Article-no.	Customization	Price €
75934070	Plastic cover 100mm	0.60
75992000	Customization plastic cover	4.50



Article-no.	Length	Colour	Price €
15934000	1000mm	satined	5.00
15935000	2000mm	satined	9.00

Article-no.	Customization	Price €
75934000	Plastic cover 100mm	0.60
75992000	Customization plastic cover	4.50

Article-no.	Length	Colour	Price €
15934990	1000mm	transparent	16.00
15935990	2000mm	transparent	31.00

Article-no.	Customization	Price €
75934990	Plastic cover 100mm	2.00
75992000	Customization plastic cover	4.50

Beam angle 60°

100mm segments  
See ordering details for customization on p. 104

## 2x fixation kit



material: aluminium

Article-no.	Colour	Price €
15938000	aluminium	2.80

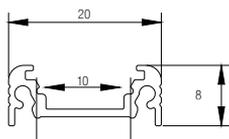
## 2 end caps (left + right)



material: plastic

Article-no.	Colour	Price €
15947000	silver	3.00

15951260 / 15952260  
Aluminium profile for surface mounting



**Specification**

**Surface mounted profile** for LED flexible strips IP00 (without silicon coating) with a breadth of max. 10.0mm, material: aluminium

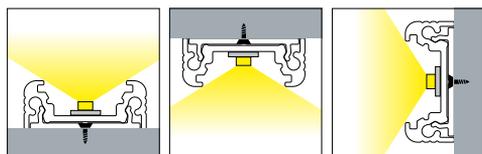
**Standard length: 5000mm roll**

Article-no.	Length	Colour	Price €
15951260	1000mm	silver anodized	15.00
15952260	2000mm	silver anodized	29.00

**Customization**

Article-no.	Customization	Price €
75951260	Aluminium profile 100mm	1.80
75991000	Customization aluminium profile	4.90

100mm segments  
See ordering details for customization on p. 104



Accessory part

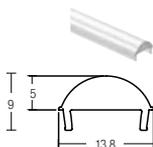
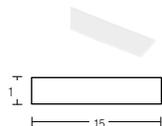
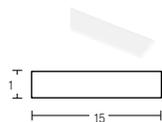
**Standard lengths**

**Profile covers / material: plastic**

Article-no.	Length	Colour	Price €
15934070	1000mm	opal	5.00
15935070	2000mm	opal	9.00

**Customization**

Article-no.	Customization	Price €
75934070	Plastic cover 100mm	0.60
75992000	Customization plastic cover	4.50



Article-no.	Length	Colour	Price €
15934000	1000mm	satined	5.00
15935000	2000mm	satined	9.00

Article-no.	Customization	Price €
75934000	Plastic cover 100mm	0.60
75992000	Customization plastic cover	4.50

Article-no.	Length	Colour	Price €
15934990	1000mm	transparent	16.00
15935990	2000mm	transparent	31.00

Article-no.	Customization	Price €
75934990	Plastic cover 100mm	2.00
75992000	Customization plastic cover	4.50

Beam angle 60°

100mm segments  
See ordering details for customization on p. 104

**2x fixation kit**



material: aluminium

Article-no.	Colour	Price €
15938000	aluminium	2.80

**2 end caps**



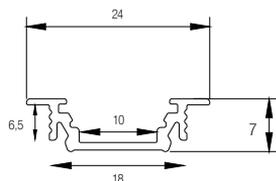
material: plastic

Article-no.	Colour	Price €
15957000	silver	3.00

## 15931260 / 15932260 Aluminium recessed profile



ET  
6,5



### Specification

**Recessed profile** for LED flexible strips IP00 (without silicon coating) with a breadth of max. 10.0mm, material: aluminium

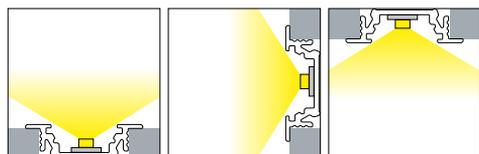
### Standard lengths

Article-no.	Length	Colour	Price €
15931260	1000mm	silver anodized	15.00
15932260	2000mm	silver anodized	29.00

### Customization

Article-no.	Customization	Price €
75931260	Aluminium profile 100mm	1.80
75991000	Customization aluminium profile	4.90

100mm segments  
See ordering details for customization on p. 104



Delivery without LED strip.

### Accessory part

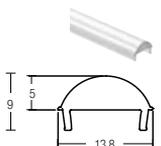
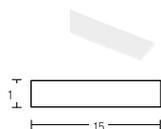
### Standard lengths

**Profile covers / material: plastic**

Article-no.	Length	Colour	Price €
15934070	1000mm	opal	5.00
15935070	2000mm	opal	9.00

### Customization

Article-no.	Customization	Price €
75934070	Plastic cover 100mm	0.60
75992000	Customization plastic cover	4.50



Article-no.	Length	Colour	Price €
15934000	1000mm	satined	5.00
15935000	2000mm	satined	9.00

Article-no.	Customization	Price €
75934000	Plastic cover 100mm	0.60
75992000	Customization plastic cover	4.50

Article-no.	Length	Colour	Price €
15934990	1000mm	transparent	16.00
15935990	2000mm	transparent	31.00

Article-no.	Customization	Price €
75934990	Plastic cover 100mm	2.00
75992000	Customization plastic cover	4.50

Beam angle 60°

100mm segments  
See ordering details for customization on p. 104

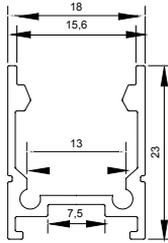
### 2 end caps



material: plastic

Article-no.	Colour	Price €
15937000	silver	3.00

15961260 / 15962260  
Aluminium build-up profile



Specification

**Surface mounted profile** for all LED flexible strips with a breadth of max. 12.0mm, material: aluminium



Delivery without LED strip.

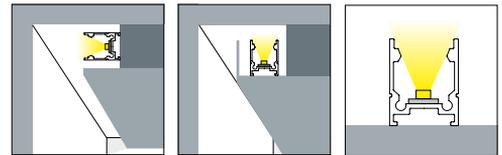
Standard lengths

Article-no.	Length	Colour	Price €
15961260	1000mm	silver anodized	18.00
15962260	2000mm	silver anodized	34.00

Customization

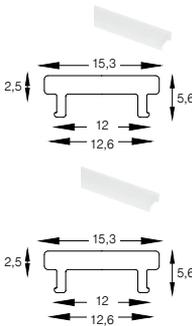
Article-no.	Customization	Price €
75961260	Aluminium profile 100mm	2.20
75991000	Customization aluminium profile	4.90

100mm segments  
See ordering details for customization on p. 104



Accessory part

Standard lengths



Article-no.	Length	Colour	Price €
15963000	1000mm	satined	19.00
15964000	2000mm	satined	36.00

Customization

Article-no.	Customization	Price €
75963000	Plastic cover 100mm	2.30
75992000	Customization plastic cover	4.50

Article-no.	Length	Colour	Price €
15965070	1000mm	opal	19.00
15966070	2000mm	opal	36.00

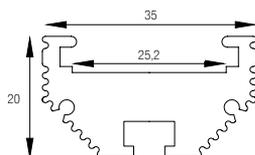
Article-no.	Customization	Price €
75965070	Plastic cover 100mm	2.30
75992000	Customization plastic cover	4.50

100mm segments  
See ordering details for customization on p. 104



Article-no.	Accessory part	Dimensions	Colour	Price €
15967000	End caps with cable hole	23 x 18 x 2	silver	3.90
15968000	End caps without cable hole	23 x 18 x 2	silver	3.90
15969000	Fixation unit	∅ 14.2mm	silver	3.70

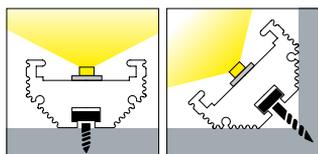
## 15971260 / 15972260 Aluminium build-up profile



### Specification

**Surface mounted profile** for flexible LED strips  
material: aluminium

Applicable to take max. two parallel installed  
flex conductor boards with a maximum power  
of 21W/m next to each other.



### Accessory part

### Standard lengths

Article-no.	Length	Colour	Price €
15971260	1000mm	silver anodized	34.00
15972260	2000mm	silver anodized	67.00

### Customization

Article-no.	Customization	Price €
75971260	Aluminium profile 100mm	4.10
75991000	Customization aluminium profile	4.90

100mm segments  
See ordering details for customization on p. 104

Delivery without LED strip.

max.  
**42W/m**



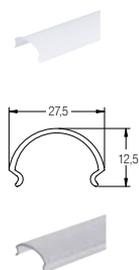
### Standard lengths

**Profile covers** material: plastic

Article-no.	Length	Colour	Price €
15974070	1000mm	opal	21.00
15975070	2000mm	opal	39.90

### Customization

Article-no.	Customization	Price €
75974070	Plastic cover 100mm	2.60
75992000	Customization plastic cover	4.50



Article-no.	Length	Colour	Price €
15974000	1000mm	transparent	21.00
15975000	2000mm	transparent	39.90

Article-no.	Customization	Price €
75974000	Plastic cover 100mm	2.60
75992000	Customization plastic cover	4.50

### End caps

material: aluminium

Article-no.	Accessory part	Dimensions	Colour	Price €
15977260	End caps with cable hole	35 x 29.8 x 1	silver	7.90
15976260	End caps without cable hole	35 x 29.8 x 1	silver	7.50



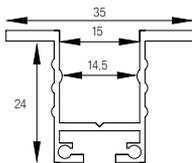
### Mounting element

material: aluminium

Article-no.	Price €
15978000	4.90



**15981260 / 15982260**  
Aluminium recessed profile



**Specification**

**Recessed profile** for all LED flexible strips with a breadth of max. 12.0mm, material: aluminium

**Standard lengths**

Article-no.	Length	Colour	Price €
15981260	1000mm	silver anodized	29.90
15982260	2000mm	silver anodized	58.00

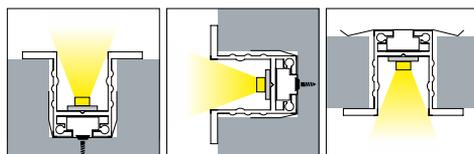
**Customization**

Article-no.	Customization	Price €
75981260	Aluminium profile 100mm	3.40
75991000	Customization aluminium profile	4.90

100mm segments  
See ordering details for customization on p. 104



Delivery without LED strip.



**Accessory part**

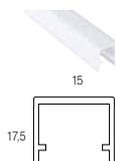
**Standard lengths**

Article-no.	Length	Colour	Price €
15984070	1000mm	opal	19.00
15985070	2000mm	opal	38.90

**Customization**

Article-no.	Customization	Price €
75984070	Plastic cover 100mm	2.40
75992000	Customization plastic cover	4.50

100mm segments  
See ordering details for customization on p. 104



**End caps**

material: aluminium



Article-no.	Accessory part	Dimensions	Colour	Price €
15986260	End caps with cable hole	23 x 18 x 2	silver	15.90
15987260	End caps without cable hole	23 x 18 x 2	silver	12.90

**Mounting element**

material: aluminium



Article-no.	Colour	Price €
15988000	aluminium	5.40

**Clamp**

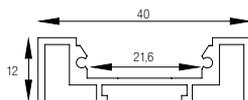
material: plastic



Article-no.	Colour	Price €
15989000	silver	6.90

## 15991260 / 15932260

## Aluminium profile for surface mounting



## Specification

**Surface mounted profile** for flexible strips IP00 (without silicon coating), material: aluminium

## Standard lengths

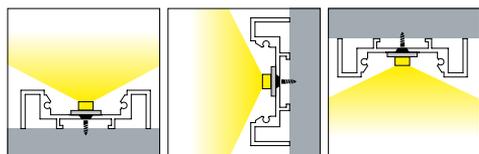
Article-no.	Length	Colour	Price €
15991260	1000mm	silver anodized	24.90
15992260	2000mm	silver anodized	48.90

## Customization

Article-no.	Customization	Price €
75991260	Aluminium profile 100mm	3.00
75991000	Customization aluminium profile	4.90

100mm segments  
See ordering details for customization on p. 104

Delivery without LED strip.



## Accessory part

## Standard lengths

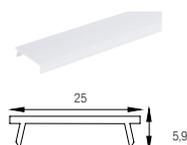
**Profile covers** material: plastic

Article-no.	Length	Colour	Price €
15994070	1000mm	satined	23.90
15995070	2000mm	satined	46.90

## Customization

Article-no.	Customization	Price €
75994070	Plastic cover 100mm	2.90
75992000	Customization plastic cover	4.50

100mm segments  
See ordering details for customization on p. 104



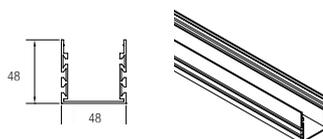
## End caps

material: aluminium



Article-no.	Accessory part	Dimensions	Colour	Price €
15997260	End caps with cable hole	23 x 18 x 2	silver	4.60
15996260	End caps without cable hole	23 x 18 x 2	silver	4.40
15969000	Fixation unit	∅ 14.2mm	silver	3.70

**15905070 / 15906070**  
Aluminium profile set



**Specification**

**Surface mounted profile** for surface mounting with opal cover and 2 end caps **for all flexible strips**, material: aluminium

Special length on request

**Standard lengths**

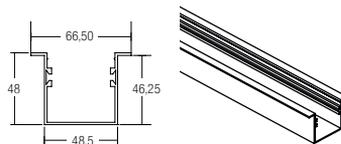
Article-no.	Length	Colour	Price €
15905070	48x48x1000mm	white	89.00
15906070	48x48x2000mm	white	178.00

**Customization**

Article-no.	Customization	Price €
75905070	Aluminium profile 100mm	11.60
75991000	Customization aluminium profile	4.90
75992000	Customization plastic cover	4.50

100mm segments  
See ordering details for customization on p. 104

**15907070 / 15908070**  
Aluminium profile set



**Specification**

**Recessed profile** for surface mounting with opal cover and 2 end caps **for all flexible strips**, material: aluminium

Special length on request

**Standard lengths**

Article-no.	Length	Colour	Price €
15907070	66x48x1000mm	white	99.00
15908070	66x48x2000mm	white	198.00

**Customization**

Article-no.	Customization	Price €
75907070	Aluminium profile 100mm	12.90
75991000	Customization aluminium profile	4.90
75992000	Customization plastic cover	4.50

100mm segments  
See ordering details for customization on p. 104

**15920000 / 15921000**  
Accessory kit

**Specification**

Accessory kit consisting of:  
10 clamps, 5 end caps,

1 tube of silicone for sealing

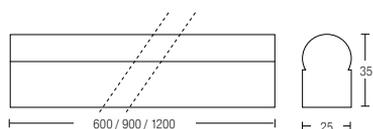
Article-no.	only for article	Price €
15920000	15003...	4.00
15921000	15008001, 15010...	4.00





► fashion store "Moden-Eck", Balve

15811... / 15812... / 15813...  
 LED strip for shelf lighting



## Specification

Material: aluminium, light source: LED

Article-no.	Length	Power	Colour temperature	Price €
15811003	600mm	8W	2700K	126.00
15812003	900mm	10W	2700K	138.00
15813003	1200mm	14W	2700K	149.00
15811000	600mm	8W	3000K	126.00
15812000	900mm	10W	3000K	138.00
15813000	1200mm	14W	3000K	149.00



## Accessory part

Article-no.	Specification	Price €
15816070	Connecting cable, white, 2000mm	9.50
15817070	Connecting cable, white, 4000mm	18.50
15818070	Direct connector, white	6.90
15819070	Electrical connection cable, white, 300mm	9.20
15820070	Electrical connection cable, white, 600mm	9.90
15821000	Fixing clip (set 2 pcs), metal	1.90



# ACCESSORY PART

The suitable equipment

Suitable and high quality accessories complete every lighting system. In this area you will find the accessories for our whole shop light range.



88101...

p. 118



17405000

p. 120



17207000

p. 120



17206000

p. 120



17212000

p. 121



17213000

p. 121



17202000

p. 121



SL3517

p. 122



SL3518

p. 122



17817000

p. 123

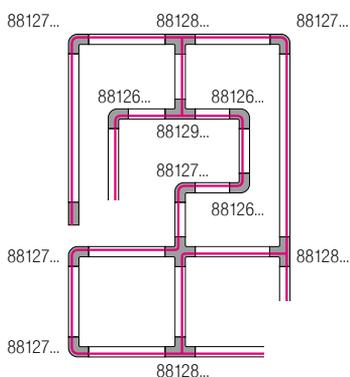
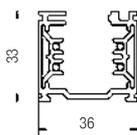
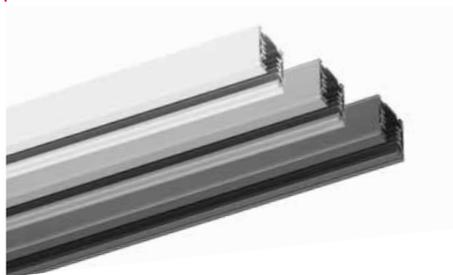


17205000

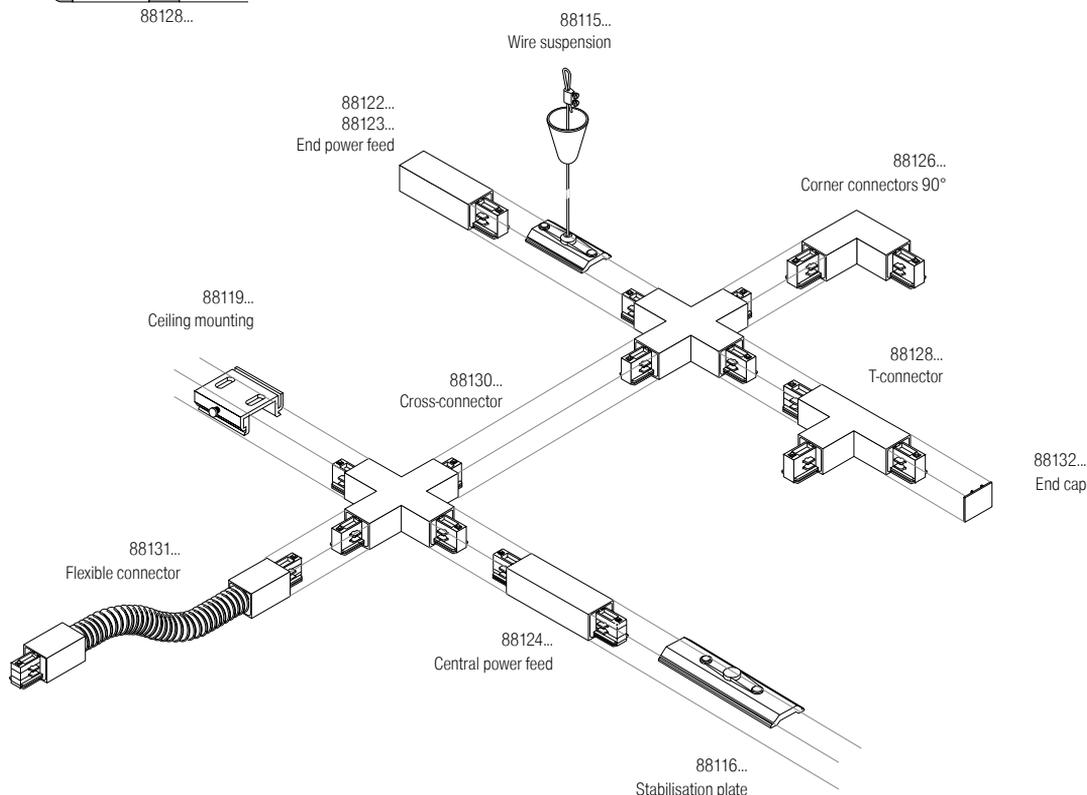
p. 123



88101..., 88102..., 88103...  
3 phase track



Article-no.	Length	Colour	Price €
88101070	1000mm	white	32.00
88101080	1000mm	black	32.00
88101250	1000mm	Anodised aluminium	32.00
88102070	2000mm	white	59.00
88102080	2000mm	black	59.00
88102250	2000mm	Anodised aluminium	59.00
88103070	3000mm	white	86.00
88103080	3000mm	black	86.00
88103250	3000mm	Anodised aluminium	86.00



**88114...**  
Electrical connector



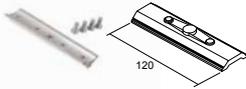
Article-no.	Colour	Price €
88114070	white	10.20
88114080	black	10.20

**88115...**  
Wire suspension with canopy



Article-no.	Colour	Price €
88115070	white	6.40
88115080	black	6.40

**88116250**  
Stabilisation plate, aluminium-untreated



Article-no.	Length	Price €
88116250	120mm	7.95

**88119250**  
Ceiling mounting, aluminium-untreated

Article-no.	Price €
88119250	6.60



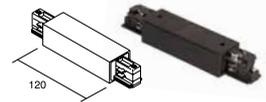
**88125...**  
Mechanical connector



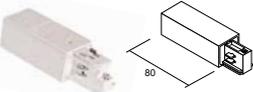
Article-no.	Colour	Price €
88125070	white	6.40
88125080	black	6.40

**88124...**  
Central power feed

Article-no.	Colour	Price €
88124070	white	29.90
88124080	black	29.90
88124680	silver	29.90



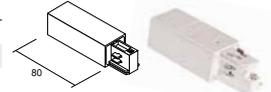
**88122...**  
End power feed, protective earth conductor right



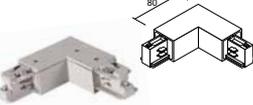
Article-no.	Colour	Price €
88122070	white	14.90
88122080	black	14.90
88122680	silver	14.90

**88123...**  
End power feed, protective earth conductor left

Article-no.	Colour	Price €
88123070	white	14.90
88123080	black	14.90
88123680	silver	14.90



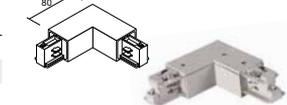
**88127...**  
Corner connectors 90°, protective earth conductor outside



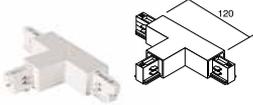
Article-no.	Colour	Price €
88127070	white	32.00
88127080	black	32.00
88127680	silver	32.00

**88126...**  
Corner connectors 90°, protective earth conductor inside

Article-no.	Colour	Price €
88126070	white	32.00
88126080	black	32.00
88126680	silver	32.00



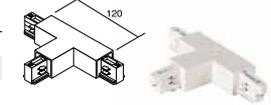
**88128...**  
T-connector, protective earth conductor right



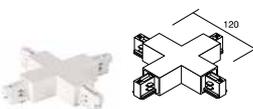
Article-no.	Colour	Price €
88128070	white	49.00
88128080	black	49.00
88128680	silver	49.00

**88129...**  
T-connector, protective earth conductor left

Article-no.	Colour	Price €
88129070	white	49.00
88129080	black	49.00
88129680	silver	49.00



**88130...**  
Cross-connector



Article-no.	Colour	Price €
88130070	white	63.00
88130080	black	63.00
88130680	silver	63.00

**88131...**  
Flexible connector

Article-no.	Colour	Price €
88131070	white	39.00
88131080	black	39.00
88131680	silver	39.00



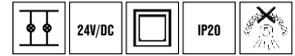
**88132...**  
End cap



Article-no.	Colour	Price €
88132070	white	1.90
88132080	black	1.90
88132680	silver	1.90

17405000

## LED driver 24V / DC constant voltage



## Specification

Material: plastic, primary voltage: 220 - 240V / 50Hz,  
 ambient temperature (ta): -20°C - +40°C, measuring point (tc): max. 80°C,  
 dimensions: 200mm x 63mm x 30mm

not dimmable

Article-no.	Secondary voltage	Power output	Price €
17405000	24V/DC	20-75W	125.00

17207000

## LED driver 24V / DC constant voltage



## Specification

Material: plastic, primary voltage: 100 - 240VAC / 50-60Hz, max.  
 primary current: 0.36A, ambient temperature (ta): -20°C - +50°C,  
 measuring point (tc): max. 85°C,  
 dimensions: 152mm x 50mm x 22mm

not dimmable

Article-no.	Secondary voltage	Power output	Price €
17207000	24V/DC	max. 30W	54.90

17206000

## LED driver 24V / DC constant voltage



## Specification

Material: plastic, primary voltage: 230 - 240V / 50-60Hz,  
 ambient temperature (ta): -20°C - +50°C,  
 measuring point (tc): max. 80°C, dimensions: 145mm x 55mm x 19mm,

dimmable: 1-10V

Article-no.	Secondary voltage	Power output	Price €
17206000	24V/DC	max. 20W	49.40

**17212000**
**LED driver 24V / DC constant voltage**

**Specification**

Dimensions: 210 x 71 x 44mm, material: aluminium,  
 primary voltage: 170-264VAC // 240-374VDC // 47-63Hz,  
 secondary voltage: 24VDC (+/-2%) (2.5A), power factor: > 0.96 (230V / AC),  
 electrical feeding (in / out): 350mm / 2x350mm,  
 Tc / Ta: 75°C / -25°C - +40°C, weight: 980g,

not dimmable

Article-no.	Secondary voltage	Power output	Price €
17212000	24V/DC	max. 60W	119.00

**17213000**
**LED driver 24V / DC constant voltage**

**Specification**

dimensions: 240 x 71 x 45mm, material: aluminium,  
 primary voltage: 170-264 VAC // 240-374 VDC // 47-63Hz,  
 secondary voltage: 24VDC (+/-2%) (4.2A), power factor: > 0.98 (230 VAC),  
 electrical feeding (in / out): 300mm / 2x300mm,  
 Tc / Ta: 75°C / -25°C - +40°C, weight: 1200g

not dimmable

Article-no.	Secondary voltage	Power output	Price €
17213000	24V/DC	max. 100W	149.00

**17202000**
**LED driver 24V / DC constant voltage**

**Specification**

Material: aluminium / primary voltage: 90-295 V/DC // 127-417 V/DC // 47-63Hz,  
 power factor: >0.95 / 230V/AC, electrical feeding (in / out): 300mm, Ta: -40° - +70°,  
 dimensions: 222mm x 68mm x 39mm, weight: 1.0kg

not dimmable

Article-no.	Secondary voltage	Power output	Price €
17202000	24V/DC	max. 150W	161.00

## SL3517

## Hella LED driver 700mA 1-10V, dimmable



## Specification

For the use of 1-2 Power-Spots SL5...  
or 1 spot SL6...

Dimensions: 112 x 52 x 25mm

Article-no.	Constant current	Power	Dimmable	Input	Frequency	Price €
SL3517	700mA	16W/700mA	1-10V (analog)	220-240V	50-60Hz	115.00



Ambience control: Hella spots with an inner und outer ambient light can be regulated in connection with:

- a 1-10V dimmer - if the main light is regulated down to <2V, the ambience function is automatically activated.
  - switch series - if the ambient light is switched on and the main light activated, the ambience function is automatically stopped.
- Simultaneous operation of main light and ambient light is not possible.

Main light control: The control of the main light without ambient light (SL6...) can effect by a 1-10V dimmer or switch.

## SL3518

## Hella LED driver 700mA 1-10V, dimmable



## Specification

For the use of 1-4 Power-Spots SL5...  
or 1 spot SL6...

Dimensions: 71 x 69 x 38mm

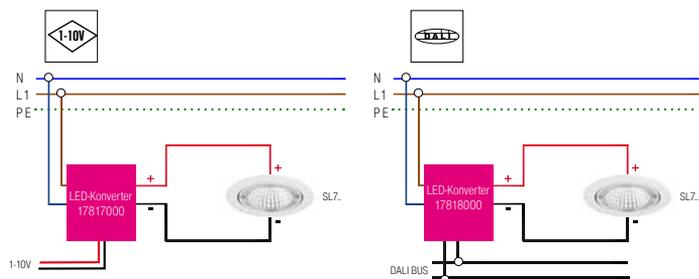
Article-no.	Constant current	Power	Dimmable	Input	Frequency	Price €
SL3518	700mA	35W/700mA	1-10V (analog)	220-240V	50-60Hz	149.00



Ambience control: Hella spots with an inner und outer ambient light can be regulated in connection with:

- a 1-10V dimmer - if the main light is regulated down to <2V, the ambience function is automatically activated.
  - switch series - if the ambient light is switched on and the main light activated, the ambience function is automatically stopped.
- Simultaneous operation of main light and ambient light is not possible.

Main light control: The control of the main light without ambient light (SL6...) can effect by a 1-10V dimmer or switch.



**17817000**  
LED driver 500mA, dimmable



**Specification**

For the use of 1x SL700... or 1x SL720...

Type: with strain relief,  
dimensions: 180 x 32 x 32mm,  
full-load efficiency: min. 86%,  
ambient temperature (ta): -40°C - +50°C,  
measuring point (tc): max. 80°C,  
standards: EN61347-2-13 / EN61000-3-2/  
EN61000-3-3 / EN61547 / EN55015 / EN62384  
Approval: ENEC / CE,  
Case material: plastic

Article-no.	Constant current	Power	Dimmable	Input	Frequency 119	Price €
17817000	500mA	5.4-24W (10.8-48V)	1-10V (analog)	220-240V / AC	47-63 Hz	79.00
17818000	500mA	7.5-24W (15-48V)	Dali (digital)	220-240V / AC	47-63 Hz	79.00



**17205000**  
LED driver 24V / DC constant voltage



**Specification**

Material: aluminium,  
power factor: >0.95 / 230 V/AC, electrical feeding  
(in / out): 300mm, Ta: -40° - +70°, dimensions:  
244mm x 68mm x 39mm, weight: 1.3kg

not dimmable

Article-no.	secondary voltage	Power	Input	Frequency	Price €
17205000	24V/DC	max. 240W	90-264 V/AC // 127-373 V/DC	47-63Hz	257.00



# BRUMBERG®

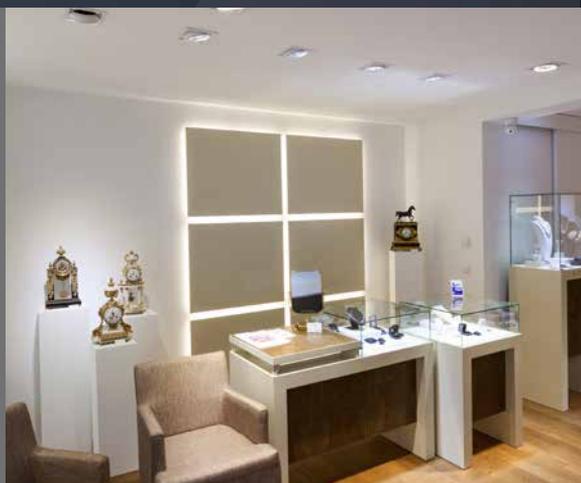
— Licht seit Generationen —

## ILLUMINATING COMPETENCE

### SMART LIGHTING

With the motto „progress as a tradition“, JUNG has established itself as a specialist for switches and systems, in over 100 years of successful company history. As the manufacturer of system solutions in electrical installation, JUNG in cooperation with BRUMBERG provides the knowledge for intelligent building services engineering. Sales rooms noticeably gain atmosphere through light colour and colour gradients. At the same time, room functions such as music or climate can be integrated. In this way there is a consistent overall picture, and a place with a special ambience for the customer.

In addition, the flexible building control by JUNG is oriented towards the individual requirements of the user. Pre-set scenes, e.g. according to season or time of day, enable the perfect shop lighting. Differentiated illumination of the sales room is also easily possible with the JUNG technology. Whether entrance, till area or spot illumination of goods: With BRUMBERG and JUNG shops are always impressively presented.



## SMART CONTROLLED

For example various scenes are programmed via the JUNG facility pilot. Centrally located, it functions as a control centre for lighting atmosphere, room and music functions throughout the whole shop. Stored scenes and conditions can be called up and displayed.

Lighting atmosphere, light colours, ventilation and various room functions can be called up individually or in scenes using the JUNG push button sensors.

The well thought out design integrates ideally into the shop's overall concept.

**JUNG**

The use of intelligent building system technology offers countless possibilities, especially for the shop. Switching situations can be adjusted to the current exhibition requirement, without a great deal of effort.



The JUNG F 50 push button sensors impress with their high quality look and the extremely flexible variety of functions.



The JUNG Smart-Pilot acts as a control centre for lighting atmosphere, room and music functions in the whole of the exhibition space.

# vitaLED®

■ intelligent light ■

## INTELLIGENT LIGHT FOR SHOP

vitaLED® supports the presentation of products in stores and shopping centres. Similar to stage productions, light is a central ingredient of product staging.

Lighting turns shopping into an experience, it formulates and dramatises, emotionalises and differentiates, calms, increases the feeling of well-being and stimulates. With vitaLED®, “experience” shopping worlds are created. Products are emphasised by the lighting. Quiet oases are also created, which simply invite shoppers to “stay awhile”.

Good presentation of the wares is as important as the wares themselves! With vitaLED®, the wares become part of a product staging.

With vitaLED® the way the customer feels and his emotional condition can be positively influenced, promoting sales-promotional aspects. Blue rays in the lighting regulate the hormone production within the brain via the retinal ganglion cells in the eye (these are photo-receptors that are not

responsible for sight). Light with a high percentage of blue rays suppresses the production of the sleep hormone melatonin and stimulates the production of serotonin, thereby increasing the attention of the customers. The blue range of the spectrum activates and a lack of blue rays calms.

Various areas that are used by customers e.g. traffic areas, presentation areas, action zones, resting areas etc. can be given different lighting scenes via vitaLED®. The various use-associated effects – from calming to stimulating – can be achieved in this way.

In rest areas, a warm white light with very little in the blue spectrum, invites one to “stay awhile”. In the checkout areas of stores, calming warm white light also is advantageous.

In order to maintain the optimal circadian cycle in your sales areas, we would be delighted to work out an individual solution together with you!





Light is not only used for seeing. With vitaLED® positive physiological and psychological non-visual-effects of the entire spectrum of light rays are additionally employed to support the well-being and efficiency of people.



All information regarding vitaLED® are available in our dedicated online catalogue (PDF).  
[www.brumberg.com/en/Service/Download](http://www.brumberg.com/en/Service/Download)

## CREATIVE & INNOVATIVE LIGHT DESIGN

Almost no other accent lighting can be used in so many individual ways as fibre technology. The practical, flexible PMMA fibre from BRUMBERG allows you to create light, colour, and movement in many different ways. The only limit is your own imagination!

Ranging from a static starry sky to moving shooting stars or changes of colour, the usage is diverse. With up to 500 light spots per projector, this form of lighting is particularly suited for creating individual lighting and controlling changes of colour in spas, lobbies, presentation rooms, and also in restaurants and bars.

Our fibre technology lighting is available in various shades of white light, static light colours, or RGB colours, as well as in different fibre strengths. You can also combine them with faceted light spots made of crystal glass conjuring classy light spots. For your basic lighting, you could add spotlights to your ceiling and let your lighting dreams come true.

Fibre technology lighting has been an integrated part of BRUMBERG's product range for many years. Due to the high demand, we had set up its own production line in 2001. Our professional team specialises in finding the optimal light solution for you and adjusting fibre sets to your requirements. Customising fibre lengths and set combinations is part of our daily business. To make things easier for first-time users, our range, of course, also includes ready-made sets.

Discover the diverse, fascinating and creative possibilities fibre technology has to offer.





Indoor:  
offices, lifts, lobbies, handrails, starry skies,  
signs, allround-lighting

Outdoor:  
facades, stairs, columns, canopies,  
fountains, billboards, direction signs

Public areas:  
art galleries, museums, parcs, stadiums,  
bridges, airports, churches, hospitals



## FIBRE OPTICS

- › no UV and IR radiation
- › electrical disconnection of light source and light exit
- › no current at the end of the fibre
- › no electronic protection measures needed at the light exit
- › no rise in temperature at the light exit
- › low current consumption

## General Terms of Sale

General Terms and Conditions of Sale  
of Brumberg Leuchten GmbH & Co. KG Company

### § 1

#### General - Scope

1. Our Terms and Conditions shall apply exclusively; contradicting conditions or conditions of the customer that deviate from our Terms and Conditions will not be accepted by us unless we have expressly agreed to their applicability in writing. Our Terms and Conditions shall also apply when we perform deliveries without objection while being aware of contradicting conditions or Terms and Conditions that differ from ours.
2. Decisive for the content and scope of deliveries and services shall be our written offer and, if we issue an order confirmation, our written order confirmation.
3. Our Terms and Conditions shall only be applicable to companies within the meaning of § 310 Sec. 1 BGB [Bürgerliches Gesetzbuch - German Federal Civil Code].
4. Our Terms and Conditions shall also apply to all future business with the customer. The following Terms and Conditions supersede the customer's Terms and Conditions that differ in content. The customer's waiver of the applicability of any of their own Terms and Conditions shall also not be invalidated by our silence or our performance. A deviation from the following Terms and Conditions in an individual case shall require our written confirmation.
5. All technical data in our catalogues and other sales materials, lists and drawings as well as weight, measurement and mixing information has been carefully prepared, however, we reserve the right to later corrections.
6. It shall be the customer's responsibility to check whether our product is suitable for the customer's specified purpose.

### § 2

#### Quote - Quotation Documents

1. If the order is to be qualified as a quote in accordance with § 145 BGB, we shall have the right to accept it within four weeks.
2. We reserve property rights and intellectual property rights in depictions, drawings, calculations and other documents; they must not be made available to third parties. This shall also apply to any written documents labelled as confidential. Their disclosure to third parties by the customer shall require our express written approval. Quotes shall only be valid if in written form. The prices stated shall apply subject to the condition that the order data on which the quote tendered was based remain unchanged.
3. We shall only prepare first samples and first sample test reports upon express written agreement, billed at cost.
4. For products ordered based on customer's drawings or samples, customer shall be obliged to check for possible property rights of third parties and to not infringe upon them. If, due to a breach of this obligation a third party is prohibiting a production claiming a property right belonging to said third party, or if the product can not be used due to a violation of said property right, we shall be entitled - without having to verify the legal status and to the exclusion of any compensation to the customer, no matter what the legal status may be - to stop production and delivery until the facts have been clarified and to demand compensation from the customer, in the amount of at least 15 % of the invoice total for the product ordered. Customer shall already now hold us harmless of any and all claims for damages or other compensation, especially from the holders of right, upon first response. Included in the scope of the damages shall also be such costs as we may incur due to having to defend against claims of third parties.

### § 3

#### Prices - Terms and Conditions of Payment

1. Unless the order confirmation specified something else, our prices shall be ex-works, incl. packaging typically used for our products, plus the value added tax applicable at the date of the invoice. Requested special packaging or outer packaging or special small packages shall be billed to the customer. The prices shall be applicable, respectively, only to the contractually agreed upon quantity and design. If the customer requests changes that require higher processing than what the contract or typical production process is based on, we shall reserve the right to a reasonable adjustment of the price. We reserve the right to increase our prices if - after the contract has been signed - in particular if due to bargaining agreements, increases in the prices of materials, especially increases in the prices of raw materials or increases in costs of energy.
  2. The statutory value-added tax is not included in our prices; it will be specified separately on the invoice in the statutory amount applicable on the day the invoice is issued.
  3. The deduction of a discount shall require a special written agreement.
  4. Unless specified differently in the order confirmation, the purchase price shall be due net (without deduction) free of transaction charges and shall be payable within 10 days of the date of the invoice. If customer is in default, we shall be entitled to demanding interest on arrears in the amount of 8 percentage points above the statutory base interest rate per year. If we are able to provide proof of higher damages due to this default, we shall be entitled to claim those. The Customer, however, shall have the right to prove to us that we did not incur damages or did incur significantly lower damages as a result of this default.
  5. Customer shall be entitled to offsetting only if its counterclaims have been judicially determined, are uncontested, or have been acknowledged by us. Also, customer shall not have any right to retention on account of contested counterclaims. Furthermore, customer shall only be entitled to exercising a right of retention to the extent that its counterclaim is based on the same contractual relationship. Credit memos are expressly granted for the purpose of offsetting. There shall be no claim to the payment outright.
  6. In case of doubt regarding customer's ability to pay, we reserve the right to demand advance payments or that securities be rendered.
- If we obtain knowledge that an attachment could not be enforced at the customer or if we receive any indication of a financial collapse of the customer, we shall be entitled to withdraw from the contract subject to a charge for the expenses incurred.

### § 4

#### Delivery Schedule - Terms and Conditions of Delivery

1. The start of the delivery schedule stated by us or agreed upon with us presupposes that all technical questions have been addressed, all documents to be supplied by the customer have been delivered, all necessary permits and releases have been obtained by the customer, especially with respect to plans as well as the adherence to the agreed upon Terms and Conditions of Payment and the fulfilment of the other acts of cooperation by the customer.
2. Furthermore, the adherence to our obligation to deliver presupposes the timely and proper fulfilment of the customer's obligation as well as that we received proper delivery of the raw materials necessary for manufacturing the delivery product. The right to objection of non-fulfilled shall remain reserved.
3. If the non-adherence to delivery schedules is due to force majeure, e. g. strike, lock-out, etc., the deadlines shall be rea-

sonably extended. Such a reasonable extension of the delivery deadlines shall also apply if we do not receive our deliveries on time.

4. If customers is defaulting on acceptance or if customer culpably violates other duties of cooperation, we shall be entitled to demand compensation of any resulting damages including any possible extra expenses. We reserve the right to assert further claims and rights.
- If the delivery or shipment is postponed upon customer's request, we shall be entitled to bill the customer a storage fee in the amount of 0.05 % of the invoice total for each month started, up to a maximum of 5 % of the invoice total, 10 days after notifying customer that the goods are ready for shipment. Both parties to the contract shall have the right to prove higher or lower expenses.
5. If the prerequisites in Sec. 4 exist, the risk of accidental loss or accidental deterioration of the goods shall pass to customer at the moment customer defaults on acceptance or payment.
  6. In accordance with the statutory regulations, we shall be liable to the extent that the underlying purchasing contract is a fixed date transaction in the meaning of § 286 Sec. 2 Nr. 4 BGB or of § 376 HGB (German Commercial Code). In accordance with the statutory regulations, we shall also be liable if customer, due to a delayed delivery due to our fault, is entitled to claim that customer's interest in the continued fulfilment of the contract has ended.
  7. Furthermore, in accordance with the statutory regulations, we shall be liable if the delayed delivery is due to a wilful or grossly negligent breach of contract for which we are responsible; culpability of our representatives or vicarious agents shall be attributed to us. If the default in delivery is due to a grossly negligent breach of contract for which we are responsible, our liability shall be limited to the foreseeable, typically occurring damages.
  8. We shall also be liable in accordance with statutory provisions, insofar as the delay in delivery that was our fault is based on a culpable breach of a material contractual obligation; in this case, however, the liability for damages shall be limited to the foreseeable, typically occurring damages.
  9. We shall be entitled to make partial deliveries within a reasonable scope. Deviations in measurements, weight, technical design, manufacturing and quantity of the goods to be delivered shall be allowed within customary, product-related tolerances. Further-more deemed as approved by the manufacturer shall be modifications that serve technical advancement and improvement of our products.

### § 5

#### Transfer of Risk - Packaging Costs

1. Unless the order confirmation specifies otherwise, the delivery shall be agreed upon ex works.
2. The return of packaging materials shall be subject to special agreements.
3. If requested by the ordering party, we will obtain transport insurance for the delivery; the costs caused by it shall be born by the ordering party.
4. Customer shall be required to name one or more people within a reasonable period before delivery of the goods who are authorised by customer to accept the goods and the accompanying documents, and to sign the delivery papers and accompanying documents on behalf of customer. This shall apply in particular if the goods are delivered to a location other than customer's place of business. If such information is not provided, those persons who actually accept the goods shall be deemed authorised to accept the goods and to sign the transfer papers (delivery note and other accompanying papers).

## General Terms of Sale

5. If none of the people named by customer are present at the agreed upon time at the specified location or if this person or other persons are not willing to accept the goods, customer shall be in default of acceptance, with the consequence that the risk transfers to customer. Furthermore, customer shall bear the extra costs arising from a renewed delivery.

6. Customer shall not be entitled to reject deliveries due to minor defects.

### § 6

#### Liability for Defects

1. Customer's claims for defects presuppose that customer properly fulfilled its inspection and complaint obligations owed in accordance with § 377 HGB.

2. If the purchased item does have a defect, we shall - at our discretion - be entitled to provide remedy in form of a correction of the defect or to deliver a new defect-free item. In case of a remedy of the defect, we shall be required to bear all expenses necessary for the remedy, in particular transport, travel, work and materials costs, if those are not increased by the fact that the purchased item was brought to a location different from the place of fulfillment.

In any case, in case of a remedy of the defect, we shall only bear the expenses up to the amount of the purchase price.

3. If the remedy fails, customer - at its discretion - shall have the right to demand withdrawal or reduction.

4. We shall be liable in accordance with the statutory stipulations insofar as customer makes claims for damages that are a result of intent or gross negligence, including intent of gross negligence of our representatives or vicarious agents. Unless we are claimed to be in deliberate breach of contract, our liability for damages shall be limited to the foreseeable, typically occurring damages.

5. In accordance with the statutory regulations, we shall be liable if we culpably violated a material contractual obligation; however, even in this case, the liability for damages shall be limited to the foreseeable, typically occurring damages. A material contractual obligation shall exist if the violation of the obligation refers to an obligation in whose fulfillment customer has trusted and could be expected to trust in.

6. Liability for culpable injury to life, limb or health shall remain unaffected; this shall also apply to mandatory liability in accordance with the product liability law (Produkthaftungsgesetz).

7. To the extent not otherwise specified above, any liability shall be excluded.

8. The period of limitation for claims for defects shall be 12 months, as from the transfer of risk.

### § 7

#### Joint and Several Liability

1. Liability for damages other than that provided in § 6 shall be excluded - regardless of the legal nature of the claim. This shall in particular apply to claims for damages arising from negligence when entering into the contract, damages because of other breaches of obligations, or damages because of tortious claims for compensation for damages in accordance with § 823 BGB.

2. The period of limitation for all claims that are not subject to the period of limitation for defects of the item shall be a preclusion period of 18 months. It shall commence upon obtaining knowledge of the damage and of the person causing the damage.

3. The limitation pursuant to Sec. 1 shall also apply, insofar as the customer demands compensation of useless expenses instead of performance.

4. Insofar as liability for damages against us is excluded or limited, this shall also apply with respect to the personal liability for damages of our employees, workers, associates, representatives and vicarious agents.

### § 8

#### Securing Retention of Title

1. We shall retain the title to the purchased item until we have received all payments due us from the business relationship with customer. To the extent that we agree with the customer on payment of the purchase price owed on the basis of the check/note payment procedure, the retention shall also extend to the redemption of the note from the customer, accepted by us, and shall not be eliminated by the crediting of the check we received. If customer breaches the terms of the contract, in particular in case of default of payment, we shall be entitled to take back the purchased goods. Our garnishment of the purchased goods shall constitute a withdrawal from the contract. Upon taking back the purchased goods, we shall be entitled to reuse them; after the deduction of reasonable utilisation costs, the proceeds from the sale shall be offset against the ordering party's liabilities.

2. Customer agrees to handle the purchased goods with care; in particular, the ordering party shall be required to insure them at its own expense against fire, water and theft at their original value. Where maintenance and inspection work is required, customer shall have it performed timely at its own expense.

3. In case of attachments or other encroachments by third parties, customer shall notify us immediately so that we can file a lawsuit in accordance with § 771 ZPO (German Code of Civil Procedure). Insofar as the third party is not able to reimburse us for the judicial and extra-judicial costs of such a lawsuit in accordance with § 771 ZPO, customer shall be liable for any losses we incur.

4. Customer shall be entitled to resell the purchased goods in the ordinary course of business; Customer shall, however, already now assign to us all accounts receivable in the amount of the final invoice amount (incl. VAT) of our account receivable that accrue to him against purchasers or third parties on resale, independently of whether the purchased goods were resold without or after processing it. Customer shall remain authorised to collect this account receivable even after assignment. Our authorisation to collect the account receivable ourselves shall remain unaffected by this. However, we agree not to collect the accounts receivable as long as customer complies with its payment obligations from the collected proceeds, does not default in payment and, in particular, no petition for the institution of insolvency or composition proceedings is filed or cessations of payment exist. But if this is the case, we shall be entitled to demand that customer inform us about assigned receivables and the debtor of same, provide us with all information required for collection, hand out the pertinent documents and inform the debtor (third party) of the assignment. The claim already ceded to us in advance shall also apply to the acknowledged balance, as well as, in the case of an insolvency of the customer, to the then existing causal balance.

5. The processing or transformation of the purchased goods by customer shall always be done for us. If the purchased goods are processed together with other items not belonging to us, we shall consequently acquire co-ownership of the new object in proportion to the value of the purchased goods (invoice total, incl. VAT) to the other processed items at the time at which processing took place. Incidentally, for the object resulting from the processing, the same shall apply as for the purchased goods under reservation.

6. If the purchased goods are combined with other objects not belonging to us such that they cannot be separated from one another, we then shall acquire joint ownership of the new object in proportion to the value of the purchased goods (invoice total, incl. VAT) to the other processed items at the time at which combining took place. If the combining occurs such that customer's object is regarded as the principal item, then it is deemed agreed upon that customer shall transfer co-ownership to us proportionally. Customer shall keep safe the resulting sole ownership or co-ownership for us.

7. As security for our claims against it, customer shall assign to us all claims against a third party resulting from combining the purchased goods with real property.

8. We undertake to release the securities due to us at customer's request insofar as the realisable value of our securities exceeds the secured accounts receivable by more than 10 %; the selection of the securities to be released shall be at our discretion.

### § 9

#### Place of Jurisdiction - Place of Performance - Severability Clause

1. If the customer has merchant status, the court, which is locally competent for the place of our business, shall have jurisdiction; we shall, however, also be entitled to bring action against customer at its place of business.

2. The laws of the Federal Republic of Germany shall be applicable; the terms of the UN Convention on Contracts for the Sale of Goods shall be excluded.

3. Unless stated otherwise in the order confirmation, place of performance shall be the headquarters of Brumberg Leuchten GmbH & Co. KG.

4. In the event that individual provisions of these General Terms and Conditions of Sale are in whole or in part violating mandatory law or are for other reasons invalid or ineffective, this shall not affect the validity of the remaining provisions.

5. The German version of the General Terms and Conditions shall be the authoritative version. In case of translations, it shall prevail over the English translation and is designed based on German law.

Sudern, 01.01.2014

## pictograph description



to be installed in parallel connection  
(constant voltage)



to be installed in parallel connection  
(constant current)



the operating current is as indicated in mA  
(constant current)



operating voltage 12V, constant current  
(DC)



operating voltage 24V, constant current  
(DC)



operating voltage 230V, alternating  
current (AC)



installation depth in mm



ceiling cut-out in mm for the article



protection class I:  
with protective grounding (PE)



protection class II:  
protective insulation (e.g. plastic housing  
resp. increased or double insulation)



protection class III:  
safety extra-low voltage (SELV) ≤ 50V



degree of protection, see explanation on  
page 132



Article partially consists of V4A-stainless  
steel and is recommended for shore areas



membran impregnated against humidity



VDE-Certification



ENEC - Certification



weight capacity up to 1000kg



Article is not appropriate for covering with  
heat insulation material



Lights to be installed into furnitures  
consisting of material with unknown fire  
behaviour.



Not applicable for insertion into installation  
boxes



pivoting angle in °



Rotation in °



Fitting of illuminant without visible circlip



Code of shackle for this article. Attention: low-voltage lamps will generally be delivered without  
shackle. Please order separately!



Code of cache-pot for article



Dimmable via 1-10V interface



Dimmable via DALI bus



Dimmable via trailing edge control



Article is equipped with our plug&play plug-in system. Incorrect wiring is impossible.



Max. flux in lumen. See exact values at request. Measurements DIN EN 13032 conform: this standard among other things regulates methods for measuring  
(e.g. by goniophotometers) and presentation of photometric data (light distribution curve) for lamps and luminaires.



Pre-installation via sep. ceiling-ring:

Separate ceiling-ring provides easy installation. The front can be removed for renovation of the ceiling.



degree of protection description

The protection class characterises the protection against the infiltration of foreign bodies and dampness.

The designation follows this scheme: IP XX

The letters IP indicate „degree of protection“ and the double XX has to be replaced as following:

1st place: protection against solid particles

2nd place: protection against the ingress of moisture

**Ratio for protection against contact / ingress of objects**

IP 0X	No protection
IP 1X	protection against objects sized >50mm diameter
IP 2X	protection against objects sized >12mm diameter
IP 3X	protection against objects sized >2,5mm diameter
IP 4X	protection against objects sized >1mm diameter
IP 5X	protection against harmful dust deposit insite
IP 6X	no ingress of dust

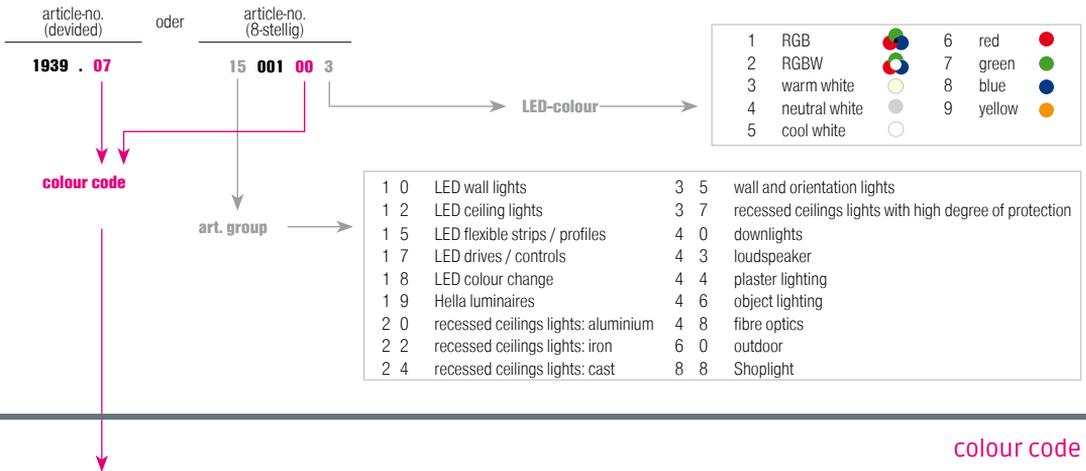
**ratio for liquid ingress protection**

IP X0	not protected against liquid ingress protection
IP X1	protected against drops of water falling vertically
IP X2	protected against drops of water from angles up to 15°
IP X3	protected against showers up to 60°
IP X4	protected against splash water
IP X5	protected against water jets
IP X6	protected against heavy downpours
IP X7	protected against immersion
IP X8	protected against submersion

**Example:**

IP 44 means: protected against foreign bodies > 1 mm and against splash water.

article code



colour code



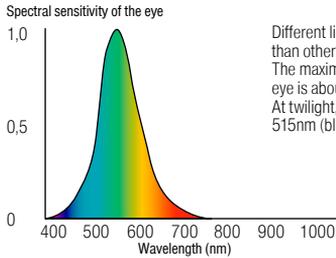
## Glossary

### Light

#### What is light?

Light is that small part of electromagnetic radiation, which can be perceived by the human eye. The actual wavelengths range from 380nm to 750nm.

#### Spectral sensitivity of the eye



Different light colours appear lighter than others at the same intensity. The maximum perceived by the human eye is about 555nm (blue-green). At twilight, the maximum falls to 515nm (blue shades).

#### Weighted light colour

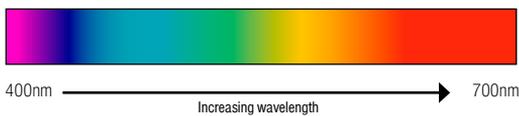
... indicates the light colour of the light source perceived by the eye of the spectator.

#### Weighted colour impression

... describes the colour impression experienced by the spectator.

#### Light spectrum

The light spectrum is the whole of all distinguishable spectral colours. The forms of representation contain information about wavelength and intensity of luminous power.

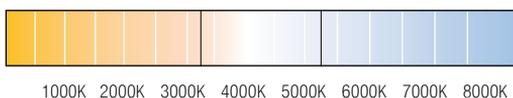


#### Light colour

The light colour, also described as spectral colour, specifies a colour impression of light in one single wavelength.

#### Colour temperature

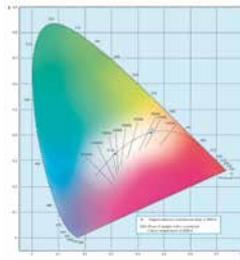
Describes the temperature at which a theoretically black body emits a weighted colour impression.



#### Planck's law

The black body curve, commonly also referred to as Planck's curve, depicts the colour temperatures as a curve in the CIE standard chromaticity diagram.

#### CIE standard chromaticity diagram



Since 1931, the CIE standard chromaticity diagram has been the most widely used, perception-related colour description system containing all of the perceivable colours. By reference to the colour space coordinates, the system is also called Xyy colour space or CIE Xyy.

#### UV light

UV light is electromagnetic radiation with a wavelength shorter than that of light perceivable by the human eye (less than 380nm). This range is further sub-divided into the sub-ranges of UV-A, UV-B and UV-C.

#### IR light

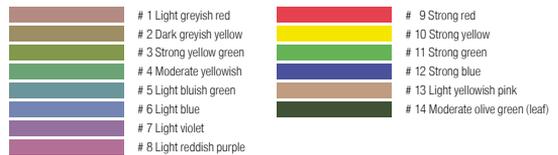
IR (infra-red) light is electromagnetic radiation with a wavelength longer than that of light perceivable by the human eye (more than 780nm). This radiation is also called thermal radiation.

#### Colour rendering

Colour rendering describes how natural an object illuminated by an artificial light source appears.

#### Colour rendering index

The colour rendering index contains light colours determined in accordance with DIN 6169 14.



#### Rx specification

„x“ specifies the test colours (i.e. 1-12) measured for the determination of the colour rendering index.

#### Ra specification

Ra describes the general colour rendering index and specifies that only the first 8 (out of 14) test colours were measured for the determination of the colour rendering index.

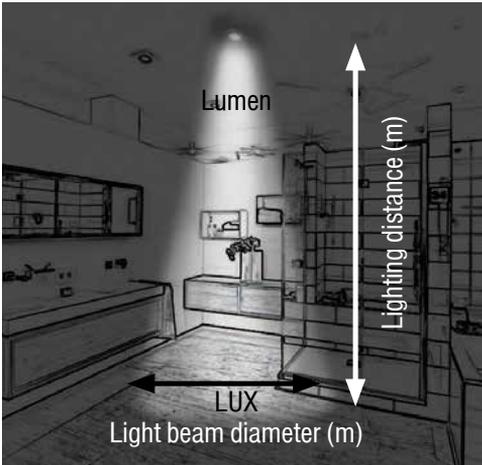
#### Light flux



The light flux describes the total radiation power of a light source irrespective of the radiation direction. Light flux is denominated in lumen.

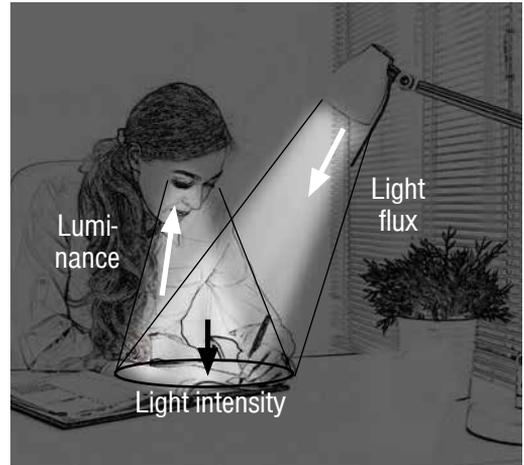
### Light intensity

The light intensity is the measured light that actually reaches the area to be illuminated. Light intensity is denominated in lux.



### Luminance

Luminance is the photometric measure for the phenomenon that is perceived by the human eye as brightness of a surface.



Denomination	Unit	Abbr.
Light intensity	Lux	lux
Light flux	Lumen	lm
Colour temperature	Kelvin	K
Luminance	Candela per square metre	cd/m <sup>2</sup>
Colour rendering index	ColorRenderingIndex	CRI
General colour rendering index	Test colours 1-8	Ra
Thermal radiation	Infra-red radiation	IR
Chemical radiation	Ultraviolet radiation	UV

### Reflection

Describes the relation between impinging light and reflected light. Both the amount of reflection and the content of reflection depend on the surface material. The direction of reflection depends on the type of surface.

### Luminescence

Luminescence is a type of optic radiation in which a solid body is excited to emit electromagnetic radiation by applying an electrical voltage.

### Absorption

Describes the relation between impinging light and non-reflected light.

### Phosphorescence

Phosphorescence describes the conversion of monochromatic light into a wider light spectrum.

### Zhaga

Name of an industrial consortium aiming at specifying standards for LED modules, thereby ensuring their easy replaceability.

## Glossary

### Light source

#### DIE

A DIE is an LED flip chip.

#### T type

T types are the original LED designs, which today are still used in the field of signal lights and orientation lights.

#### SMD

Denotes a "Surface Mounted Device".

SMD is a type of LED design in which the LED unit is directly soldered to a printed circuit board using soldering contact faces.

#### COB

"Chip On Board" ( COB)

This type of design is widely used for LED components with a great number of light diodes. It is a type of design, in which the light diode chip is attached directly to the printed circuit board using wire bonding, after which the chip is covered with a phosphorescent layer.

#### LED module

Is the design of a COB LED with standardised terminals and mounting elements.

#### LLE

"LED Light Engine"

LLE is a term derived from the standardisation of the Zharga consortium and denotes the combination of a LED module, a connecting cable and a suitable operational device.

#### Service life

The service life is the time during which a light source can be used until complete failure without being replaced.

#### Average service life

... denotes the service life during which a light source maintains up to 50% of the original luminous power without being replaced.

#### Useful service life

... denotes the service life during which a light source maintains the original luminous power – within the stated rate of degradation – without being replaced.

#### Degradation

... defines the light flux degradation across the stated service life.

#### Failure rate

... is the number of light sources expressed in percent that may exceed the light flux degradation within the stated service life.

#### Total failure rate

... is the number of light sources expressed in percent that may completely lose their luminous power within the stated service life.

#### Binning

... is the division of LED diodes into defined lighting intensities in so-called bins.

#### MacAdam ellipse

A MacAdam ellipse defines the area around a reference colour space, in which space the reference colours are perceived as being the same.

#### Denomination

#### Abbr.

Light flux degradation	L
Degradation	B
Total failure	C
General failure (combination of B and C)	F
MacAdam ellipse	SCM

#### Colour tolerance

... is the declaration of the different MacAdam ellipses of the light sources used in their condition at delivery.

#### Colour stability

... is the declaration of the different MacAdam ellipses of the light sources used at the end of their service lives.

#### Retrofitting

... describes the retrofitting of a luminaire with an illuminant that was originally not designed for this type of luminaire.

---

### System power

... is the power consumption of a luminaire including illuminant and ballast.

---

### System light flux

... is the light flux of a luminaire including reflector absorption and thermal influence.

---

### Thermal management

... describes the dedicated direction and control of thermal fluxes.

---

### Tc spot

The Tc spot is the hottest and most critical spot of a device with heat development. "Tc" means "casing temperature".

---

### Operational efficiency

The operational efficiency defines the distribution of incoming and outgoing energy.

---

### Rail-mounted spotlights

... are spotlights mounted to a bus bar that can be freely arranged in the room.

---

### Spots

... are recessed luminaires with at least one pivot axis that can be freely arranged in the room.

---

### Wallwashers

... are recessed luminaires with a homogeneous lighting of the wall.

---

### Downlights

... are fixed recessed luminaires without pivot axis.

---

### Pivot radius

... indicates the radius of movement around the pivot axis in degree.

---

### Gimbal mounting

... describes the pivotability in two concurrent pivot axis that are placed rectangularly to each other.

---

### Mounting depth

... denotes the necessary depth for recessed luminaires. The size can be different from the luminaire dimensions to ensure sufficient cooling, e.g. of LED luminaires.

---

### Mounting diameter

... states the necessary opening diameter in the ceiling that is necessary for mounting a recessed luminaire.

---

### Outer diameter

... denotes the outer diameter of the cover ring of recessed luminaires.

---

### Alternating voltage

... is an electric current, the direction (polarity) of which alternates in regular intervals.

---

### Direct current voltage

... is an electric current, the direction (polarity) of which does not alternate.

## Glossary

### Light direction

#### Reflector

... is the name of concave mirrors behind a light source to bundle light.

#### Lens

... is the name of transparent components in front of a light source to bundle light.

#### Collimator

... is a special form of a lens, which must ensure a parallel flow of the beams.

#### Radiation angle

... is the geometric angle resulting from the focal point of the illuminant and the emission point of the light. Commonly, the radiation angle is used equally under the name of angle of half intensity.

#### Angle of half intensity

The angle of half intensity is the angle at which the light intensity is only 50% of the maximum light intensity of the centre.

#### Calculation formula for light intensity

$$\text{Light intensity at distance "x"} = \frac{\text{Basic value at 1m}}{\text{Distance "x"}^2}$$

#### HotSpot

A HotSpot is the common denomination of the representation of the angle of half intensity in the light diagram.

#### Corona

A corona is the common denomination of the representation between the angle of half intensity and the radiation angle in the light diagram.

#### Light distribution curves

... are graphic representations of the light distribution in a room.

#### Beam diagram

... is the special representation of the light distribution with regard to light intensity.

#### Polar diagram

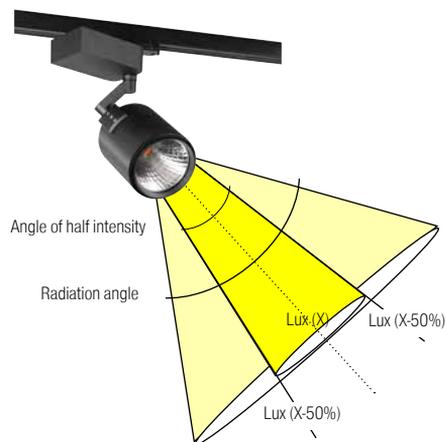
... is the special representation of the light distribution with regard to the direction in the room.

#### Glare suppression

... describes the feature of reduced direct glaring of a human being with the help of the light source used.

#### LOR value (Light Output Ratio)

This value describes which part of the light generated within the luminaire can actually be used externally.





## Index

Art.-No.	Page	Price	Art.-No.	Page	Price	Art.-No.	Page	Price
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0063.25	44	16,20	15012004	97	379,00	15932260	108	29,00
0065.07	44	18,20	15013003	99	319,00	15934000	106	5,00
0065.25	44	18,20	15013005	99	319,00	15934000	107	5,00
12030003	67	411,00	15014003	99	289,00	15934000	108	5,00
12030005	67	411,00	15014005	99	289,00	15934070	106	5,00
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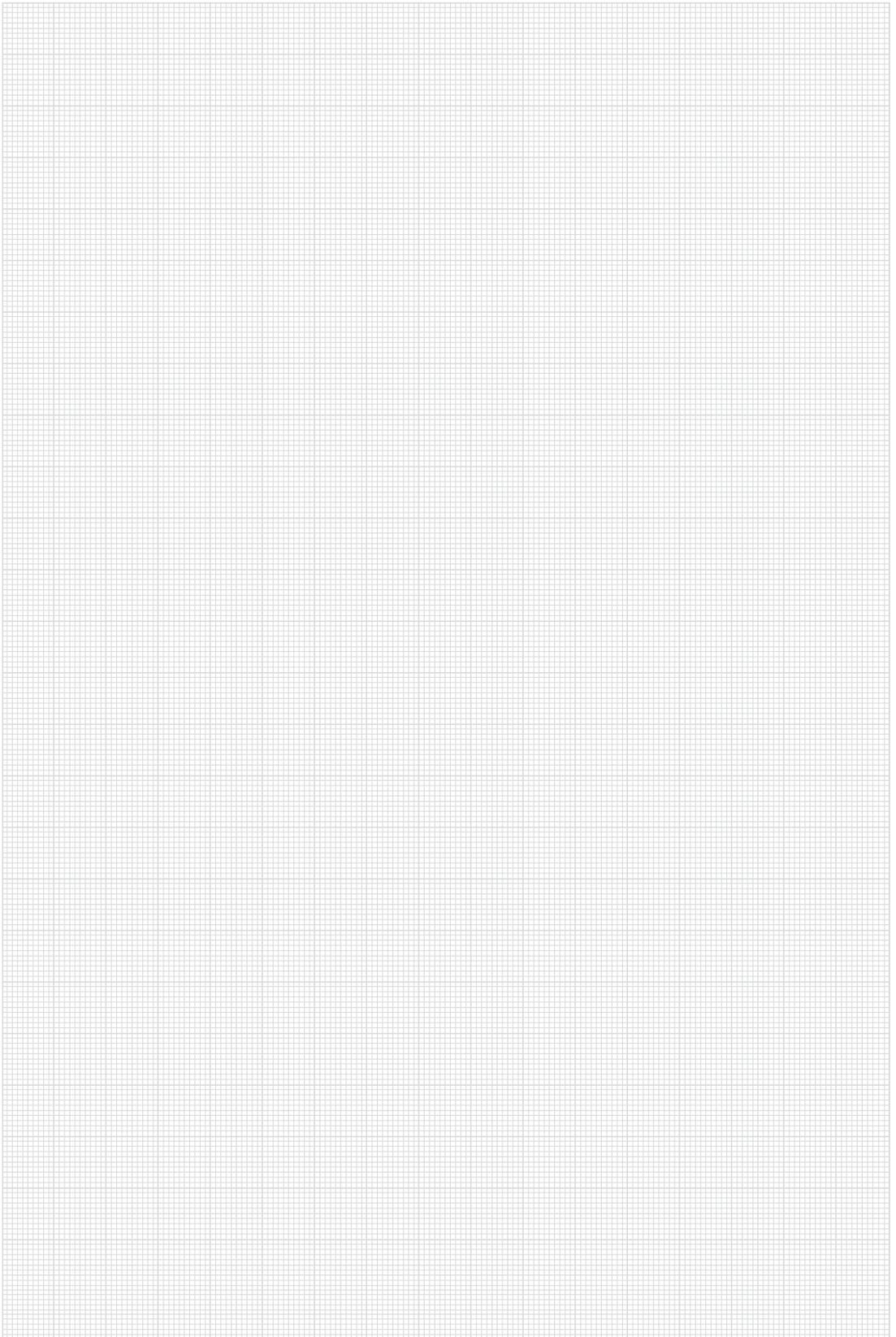
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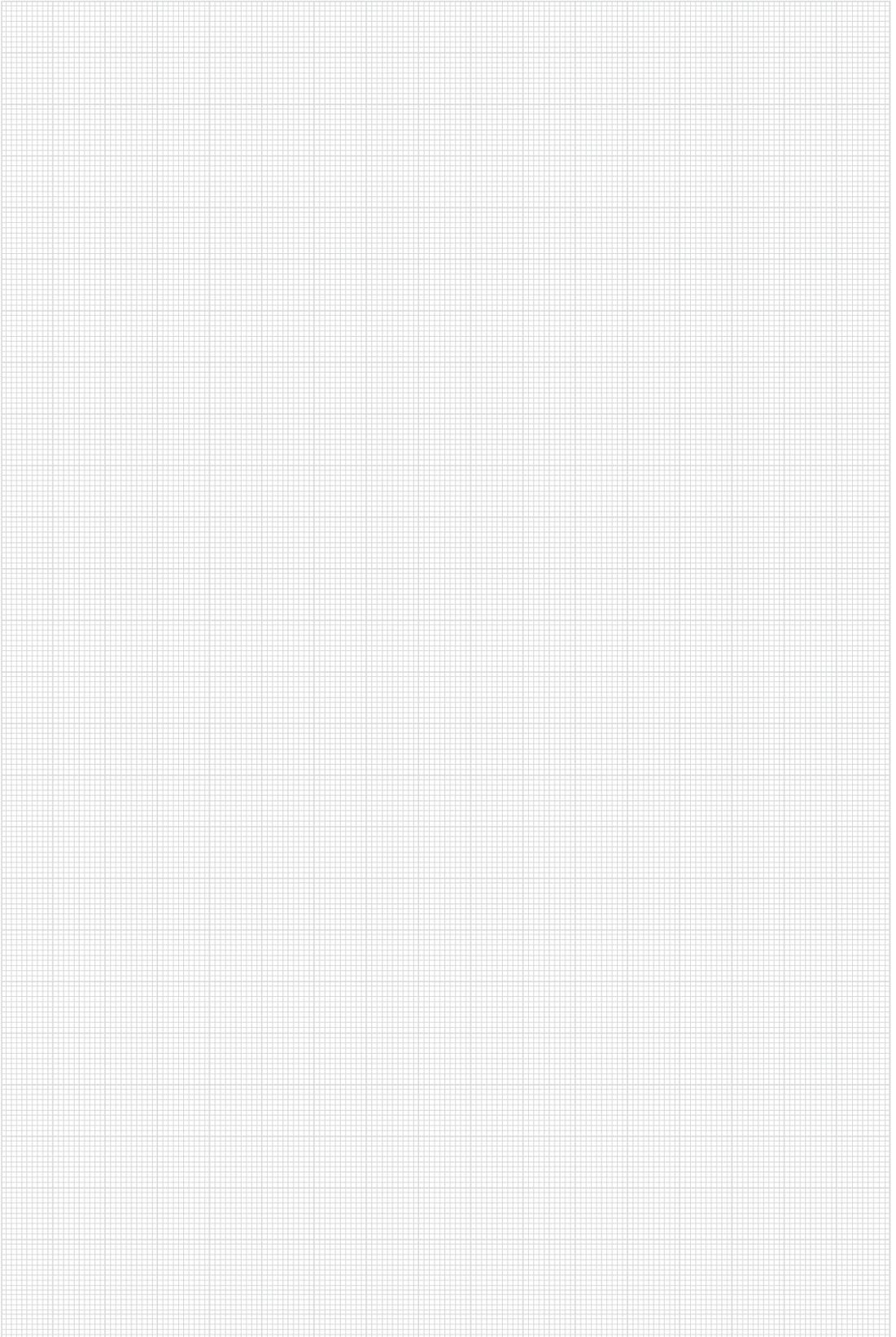
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