

LED Driver
LC1x30-E-DA
220-240VAC 50/60
DALI Dimmable

LED Solutions

freedom in lighting

Step into the world of LED



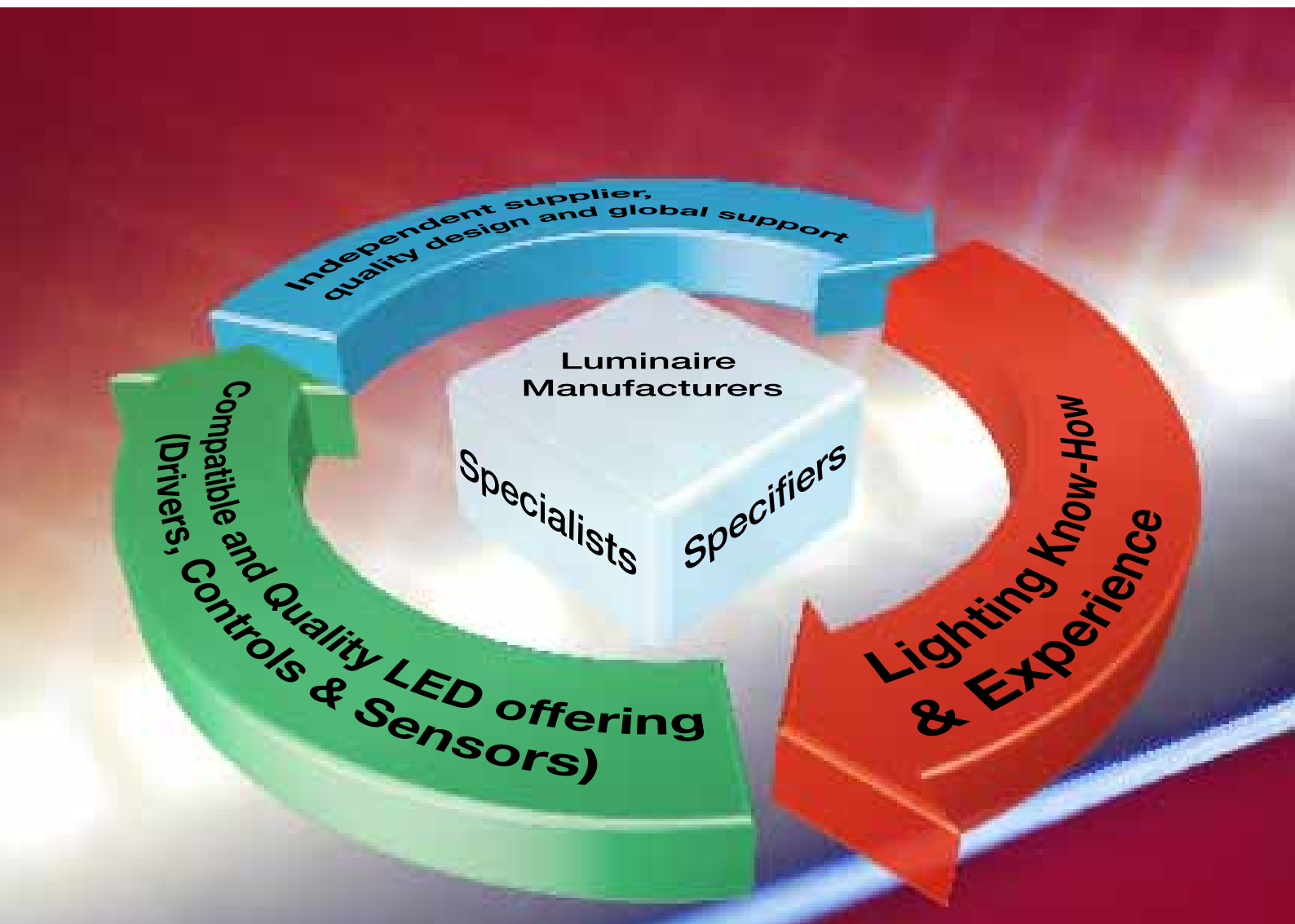
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*Key West, Witten Germany,
Helvar LED drivers are used
in Key West.*

Helvar LED Vision

LED technology has become a cost effective and energy efficient alternative for many lighting applications. Helvar's offering roadmap is aligned to target viable LED lighting applications.

LED offers creativity in lighting yet demands quality design and lighting knowhow. Wide market requirements have resulted from emerging LED standards. Close partnerships with Luminaire Manufacturers help us create a simplified and quality offering. Helvar's continuous investments in R&D aim to support our customers in making a successful transition to LED.



Competitive Advantage

Helvar's competitive advantage includes its combined and compatible offering for LED drivers, controls and sensors. Quality design; supported by our longstanding experience in Lighting Electronics and Lighting Controls.

The LED driver range is designed for easy installation, long lifetime, high efficiency and high immunity. Dimmable drivers offer smooth dimming 1 % - 100 %. Helvar LED drivers are complemented by controls and sensors, including luminaire based solutions (μ Dim, iDim, MIMO3) and networked solutions (DIGIDIM and Imagine).

Applications Solutions Offering

Helvar focus on providing LED solutions for professional lighting applications. The continuous improving LED efficacy, quality and cost effectiveness allows more and more applications to be designed around this technology. So far LED has been successful applied in among others accent / ambient lighting, beautification and safety lighting. Also functional lighting in commercial applications is increasingly becoming viable; all part of Helvar's application and solution focused approach.

Retail, Museum, Conference centres

- LED drivers & compatible sensor solutions, enabling maximum energy saving

Offices, Education, Healthcare

- LED drivers with high efficiency & long lifetime, aiming for low cost of ownership

Hotels, Museums, Restaurants, Cruise liners

- Dimmable LED drivers & controls systems, allowing smooth dimming 1 %-100 %

Facades, Industry, Arena, Public spaces

- LED drivers with high efficiency, high immunity & robust enclosures for reliable operation

Beautification & Safety



Functional



Accent



Ambient

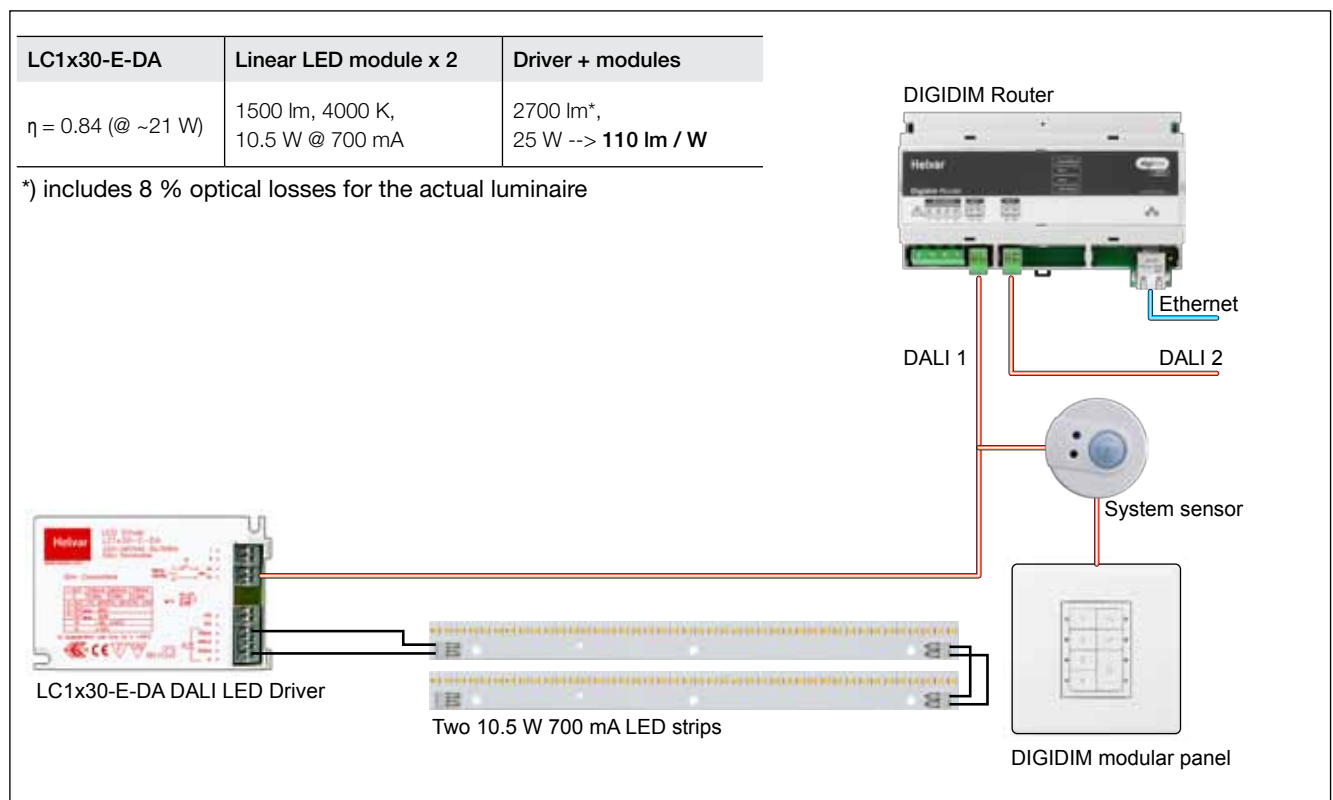


Applications Solutions Offering

System solution

This solution shows a public area in an office application. Two linear LED modules are connected in series to Helvar's DALI dimmable 30 W LED driver. Multiple DALI drivers are networked via the Digidim router as part of a larger integrated office building solution. The Digidim multi-sensor (movement, constant light and IR) enables the LED light source to be automatically dimmed up or down, depending on the user activity and the level of natural daylight in the area. Additional Digidim modular panels provide manual override, useful for control during after-office hours. All components are DALI based, allowing wiring simplicity and programming flexibility.

- Smooth LED dimming 1 %-100 % for comfort
- High efficiency and control for maximum energy saving
- Integrated LED driver and controls solution for full compatibility



Luminaire solution

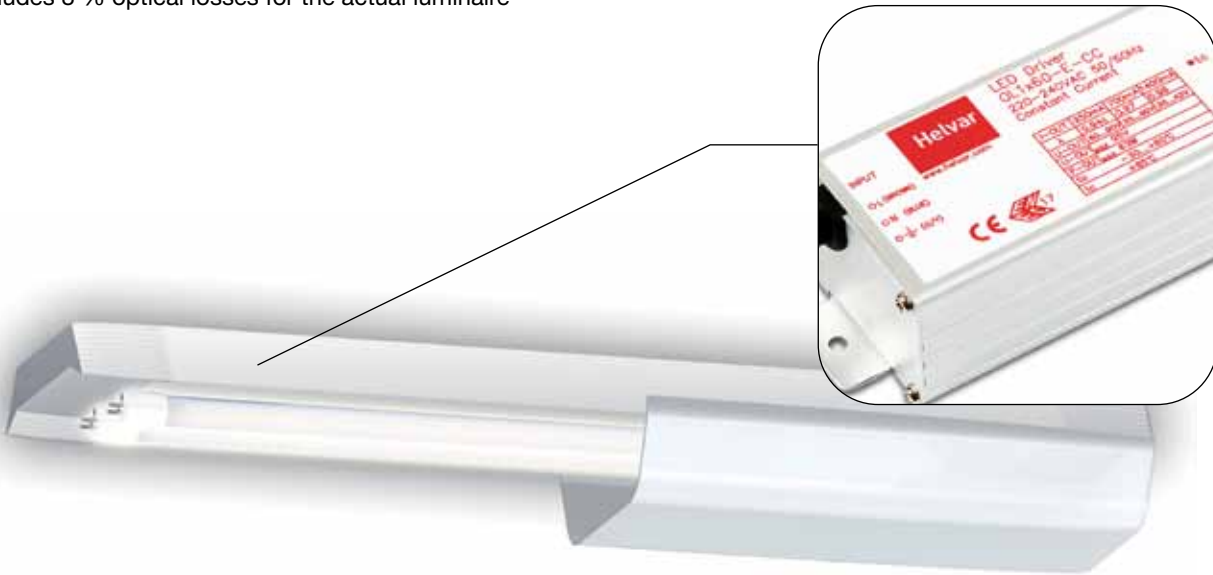
Following solution shows a LED luminaire used in a car park application as part of an office building. Each luminaire features two integrated glass LED modules connected in series to a Helvar 60 W outdoor constant current driver. The LED modules are rated at 760 mA and under driven at 700 mA. This means that the light output will be slightly reduced, yet the LED lifetime will be prolonged due to reduced thermal stress. The design of LED driver has been optimised for use in LED luminaires in outdoor environmental conditions. Flying lead cables allow the LED driver to be IP65 rated.

- Robust enclosure and high immunity for stable operation
- Long lifetime for lower cost of ownership
- High efficiency for optimised energy saving



OL1x60E-CC	Linear glass LED module each x 2	Driver + modules
$\eta = 0.88$ (@ ~46 W)	2100 lm, 4000 K, 22 W, @ 760 mA	3550 lm*, 46 W, 700 mA --> 77 lm / W

*) includes 8 % optical losses for the actual luminaire



The inset image shows the internal components of the luminaire. It features a white Helvar LED driver with a red label that reads 'LED Driver OL1x60E-CC 220-240VAC 40/50mA Constant Current'. Below the driver are two linear glass LED modules. The entire assembly is housed within a white, rectangular enclosure.

Applications Solutions Offering

6 and 20 W Constant Current Drivers



LL6-U-CC



LL20-U-CC

- High efficiency & High immunity
- Supports 350 mA and 700 mA output currents.
- Accepts DC mains in case of central emergency battery situation.
- Long lifetime (50.000 h)

30 W Driver platform



LC1x30-E-CC



LC1x30-E-DA



LC1x30-E-AN



LC1x30-SR

- Supports 350 mA, 500 mA and 700 mA output currents
- Smooth dimming DALI and 1-10V (1 % - 100 %)
- High efficiency & low stand-by power 0.3 W (DALI)
- Accepts DC mains in case of central emergency battery situation
- Optional Strain Relief for independent use (LC1x30-SR)

3 Channel 50 W DMX Driver



LC50-U-DX3

- 3-channel precision controlled driver
- Maximum 50 W total loading
- Default 350 mA (programmable 200 mA-1050 mA) output
- Smooth dimming DMX (0.1% - 100 %)
- Optional USB-DMX programming dongle

IP65 Rated 60 and 100 W Constant Current Drivers



OL1x60-E-CC



OL1x100-E-CC1



OL1x100-E-CC2

- High efficiency & High immunity
- Robust IP65 enclosure for outdoor applications
- Supports multiple currents incl. 350 mA, 700 mA, 1050 mA, 1400 mA and 2100 mA
- Long lifetime (up to 50.000 h)

Product range details

	Control interface				Output current	Output voltage	Max. output Power	Efficiency at max power	IP Class	Dimensions l x w x h (mm)
	Switching	1 - 10 V	DALI	DMX						
LL6-U-CC	●	-	-	-	350 700	7 - 16 7 - 10	7	80 %	20	118 x 40 x 21
LL20-U-CC	●	-	-	-	350 700	12 - 43 12 - 29	20	87 %	20	184 x 40 x 25
LC1x30-E-CC	●	-	-	-	350 500 700	10 - 60 10 - 60 10 - 43	30	86 %	20	106 x 67 x 28 *
LC1x30-E-AN	-	●	-	-	350 500 700	10 - 60 10 - 60 10 - 43	30	86 %	20	106 x 67 x 28 *
LC1x30-E-DA	-	-	●	-	350 500 700	10 - 60 10 - 60 10 - 43	30	86 %	20	106 x 67 x 28 *
OL1x60-E-CC	●	-	-	-	350 700 1400	60 - 90 35 - 90 35 - 42	63	90 %	65	149 x 53 x 35
OL1x100-E-CC1	●	-	-	-	700 1050	70 - 120 70 - 100	105	91 %	65	234 x 53 x 35
OL1x100-E-CC2	●	-	-	-	1400 2100	30 - 72 30 - 48	101	91 %	65	234 x 53 x 35
LC50-U-DX3	-	-	-	●	350 200-1050	10 - 55	50	89 %	20	130 x 76 x 30

* Dimensions 127 x 67 x 28 mm with LC1x30-SR strain relief attached

Sensors

Helvar offer a range luminaire based and standalone sensors (MIMO3, μ Dim and iDim). All our sensors are compatible with Helvar's LED drivers and enable further energy saving potential.

MIMO3



iDim



μ Dim



Control Systems

Helvar's control systems allow to create solutions from single room to integrated networks. Compatible controls ensures smooth and efficient dimming and control of Helvar's LED drivers.

digidim

Imagine



LEDesign™ is a calculating tool to assist LED specialists in selecting the appropriate control gear for a given LED light source. Using the LED's main input data it will automatically recommend Helvar's compatible driver. Additionally it will alert the user when LED's are being under or overdriven.

The LEDesign™ calculator is available from the Helvar website as online web version or as downloadable offline version for Windows PC or MAC OS X operating systems. Any values calculated in this tool are for illustrative and indicative purposes. If in doubt please consult your nearest Helvar support representative for advice.



Visit our website: www.helvar.com

Due to a policy of continuous improvement, Helvar reserve the right to alter specifications without notice at anytime.