

# Optoelectronics – No matter where you look.



Consumer  
Electronics



Automotive

Instrumentation



Communications

Office Equipment



Industrial



Home  
Appliances



Medical Equipment



Computers

Across the board. Around the world.™

**FAIRCHILD**  
SEMICONDUCTOR®

# There we are.

Fairchild is a leader in the design and production of optocouplers, LED lamps, LED displays, and infrared components. Offering industry-standard and application-specific devices for computer, communications, automotive, consumer, and industrial markets, the group's portfolio is comprehensive. It features a variety of advanced solutions such as a full-color spectrum of low-power and high-brightness SMD LEDs, infrared sensing, mini-flat packaged optocouplers, surface-mount infrared LEDs, optically coupled Solid State Relays, and isolated error amplifiers.

No matter where you look or what you do, there we are.

# Optocouplers

Markets

Communications  
Computing  
Consumer  
Industrial

Fairchild offers a broad range of package platforms, incorporating various combinations of input and output configurations.

Packages include 4-pin MFP; 4-pin, 6-pin, and 8-pin DIP; and 8-pin SOIC. Fairchild offers simple function optocouplers for low-bandwidth/general switching applications, high-performance optocouplers for high bandwidth/high-gain applications, high-voltage optocouplers for AC load switching applications, and other more complex functions that provide unique performance characteristics. In addition, the optocouplers offer a wide range of safety approval certification.

## Communications

### Cell Phones

*Battery charger*  
HMA2701,  
MOC207M,  
FOD2741A

### Telephones/ Facsimile

*Telephone line interface*  
H11A817D,  
H11B815, H11G1,  
HSR312

*Polarity detection*  
MOCD207M,  
MOCD213M

*Cross point switch*  
H11C4

*Ring signal detection*  
HMAA2705,  
MOC256M

## Computing

### Printers

*Power supply  
voltage regulator*  
MOC207M

*Isolation between AC  
line and digital logic*  
CNY17F-3

### Photocopiers

*Power supply  
voltage regulator*  
H11C4

*Fan motor and  
copy lamp*  
MOC3063M

### Notebook PCs

*AC Adapter*  
FOD2712,  
H11A817,  
FOD2741A

## Industrial

### Factory Automation (Process Controllers)

*High speed logic  
ground isolation*  
HCPL-0600,  
HCPL-2631

### Switch Mode Power Supplies

*Over-voltage protection*  
MOC3052M,  
H11C4

*AC Line monitor*  
HCPL-3700,  
MID400

*Feedback loop isolation*  
H11A817B,  
CNY17F-3,  
FOD2741A

## Consumer

### Set Top Box

*Power Supply: isolation  
in the feedback loop*  
HMA121, FOD2712,  
H11A817

*Interface between high  
and low voltage circuit*  
MOC207

*Modem: on/off  
hook switch*  
HSR312

*Ring signal detection*  
HMAA2705,  
H11AA814

### Inverter Controlled Air Conditioner

*Power transit control*  
6N137, HCPL-2631

*Igniter drive/evaporation*  
MOC3023M

### Appliances

*AC line to digital logic isolation*  
CNY17F-3, CNY17-3

*Fan motor drive*  
MOC3052M

*Defrosting heater drive  
(refrigerator)* MOC3023M



# LED Lamps

Markets

Automotive  
Communications  
Computer  
Consumer

Fairchild provides a full-color spectrum of low-power and high-brightness surface-mount LEDs for illumination, backlighting, and status indication applications.

## Automotive

**Backlighting dashboard/  
instrument clusters**

QTLP670C-X

**CHSMLs, brake lights,  
turn signals**

QTLP320C-X



## Computer

**Printer status indicators**

QTLP670C-X

**Laptop status indicators**

QTLP650C-X



## Communications

**Backlighting cell  
phone keypads**

QTLP600C-X/QTLP601C-X

**LCD display lighting**

QTLP610C-X/QTLP611C-X

**Desktop phone indicators**

QTLP653C-X/QTLP680C-X



## Consumer

**Electronic toys**

QTLP912-X

**Audio electronics**

QTLP650C-X



# LED Displays

Markets

Communications  
Consumer  
Industrial

Fairchild's LED displays incorporate low current capability, low power consumption, and high brightness in a compact, highly reliable frame.

## Consumer

**Set top box**  
MSQC4XXC

**Audio electronics**  
MV5X164

**Washer/Dryer**  
MSDXXC/MAN6XXX

**Microwave**  
MSQC4XXC



## Industrial

**Process controller display**  
MSDXXC/MAN6XXX

**Industrial equipment display**  
MSDXXC/MAN6XXX



## Communications

**Moving message panel**  
GMAXXXC

**Information display**  
GMAXXXC

# Infrared Products

Markets

Automotive  
Computing  
Consumer  
Industrial Controls

Fairchild offers a diverse range of standard, as well as custom infrared devices to meet customers' specific design requirements. The portfolio includes light emitting diodes, photosensors, transmissive and reflective opto sensors.

## Computing

**Print media sensing devices**  
QVEXXX, H22AX

**Position sensors**  
QRBXXXX, QRDXXXX,  
QVE00033

**Optical encoders**  
QVE00112, QCKX, KAT00115

## Consumer

**Smoke detectors**  
**Remote control**  
**VCR/DVD, joysticks**

L14GX, QED234  
KAT130

**Ice & water dispenser**  
QED123, QSD122

## Automotive

**Steering control, Rain sensors**  
QEE123, QSE159

**Ignition, Alarms**  
QEB421, QEE123, QRE1113

## Industrial Controls

**Optical encoders**  
**Vending machines**  
KAT00030, QVE00118

**Game machines**  
KAT00028

# For More Information

## Optoelectronics

Description	Web Address
Product home page	<a href="http://www.fairchildsemi.com/optosolutions">www.fairchildsemi.com/optosolutions</a>
Safety Agency Certificates	<a href="http://www.fairchildsemi.com/sac">www.fairchildsemi.com/sac</a>
New products	<a href="http://www.fairchildsemi.com/whats_new/#opto">www.fairchildsemi.com/whats_new/#opto</a>
Presentations, literature, intelligence, power campaign, etc.	<a href="http://www.syberworks.com/Fairchild">www.syberworks.com/Fairchild</a>
Application notes	<a href="http://www.fairchildsemi.com/apnotes">www.fairchildsemi.com/apnotes</a>

## Reference Tools

Description	Web Address
Cross-reference page	<a href="http://www.fairchildsemi.com/crossref/crossref.jsp">www.fairchildsemi.com/crossref/crossref.jsp</a>
Reverse cross-reference page	<a href="http://www.syberworks.com/Fairchild">www.syberworks.com/Fairchild</a> (under Sales Tools)
Distributor inventory check	<a href="http://www.fairchildsemi.com/buy_products">www.fairchildsemi.com/buy_products</a>

## Regional Marketing Contacts

**[www.syberworks.com/Fairchild](http://www.syberworks.com/Fairchild)**

(under Sales Tools)

# Optoelectronics Literature

## Description

## Literature #

Infrared Products Selection Guide

250002-001

Optocouplers and Solid State Relays Selection Guide

250001-001

Optoelectronics Product Portfolio Brochure

240009-001

Solid State Relay Brochure

240008-001

Surface Mount LED Lamps Brochure

240006-001

October 2001 Optoelectronics Design Solutions Brochure

240007-001

July 2001 Optoelectronics Design Solutions Brochure

240003-001

Optoelectronics Power Solutions Brochure

240005-001

Optically Isolated Error Amplifier (FOD2712) Brochure

240004-001

Small Outline Package Optocoupler Brochure

240002-001

Optoelectronics Applications Brochure

240001-001

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