



## Highly Integrated 30 Watt RGB(W) LED Driver

### L-Series Description

A single current source (Proprietary Technology) enables a highly integrated drive, networking, and control solution for high power (RGBW) LED lighting applications. L-Series products support a wide range of LED topologies.

### L-Strip Connector

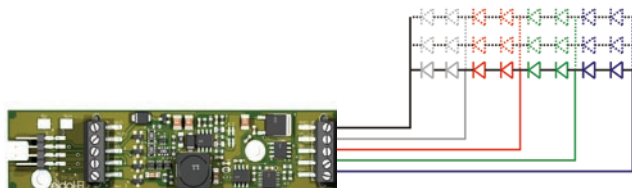
The L-Strip Connector is the ideal choice for powering 350mA-1A high brightness and high power LED packages and LED arrays, especially where cost-effective colour-mixing is needed. The L-Strip Connector is available in single, dual, 3 and 4 channel versions.

The LedSync network interface allows for high resolution, quick setup and lower cabling costs compared to other networking solutions. The L-Strip product range also accepts standard DMX as input protocol. For stand-alone applications one of 10 pre-defined shows can be selected.

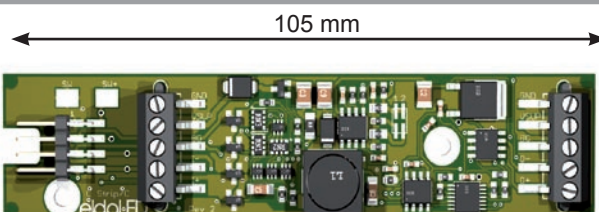
With its true 15 bit resolution per output channel the L-Strip is capable of accurate dimming and extremely fine colour mixing.

### ShowMaster

The "ShowMaster" versions of the L-Series products support custom design of scenes and shows that can be uploaded via the LedSync network. The L-Strip can broadcast the selected show to all connected L-Series devices.



Principle schematic of LED group wiring



### Features

- RGB(W) colour mixing driver
- Up to 30W power output
- Power efficient (up to 95%)
- Small size (105x24mm)
- Long life (5 years)
- 24V-28V supply range
- LedSync and DMX compatible
- Low EMI through smart electronics design
- High-resolution colour mixing with HydraDrive Algorithm Based Modulation (Proprietary Technology)
- L-Dot over-temperature protection with on board thermal-throttling
- LED thermal sensor interface (NTC) included

### Form Factor

The L-Strip is a breakthrough in LED drive & control form factor. This ultra small size enables integration of L-Strip into the lighting fixture. This feature guarantees lower EMI emissions than other solutions, where the control unit is placed externally.

### Advantages

- Power-efficient (up to 95%)
- Fewer and shorter cables
- Integration of Drive & Control (no external boxes)
- Smooth colour control
- Simplifies total system solution
- Accurate dimming solution
- Drive & Control per fixture
- Thermal protection per fixture
- Easy network setup

## Output

Output current: up to 1000mA LED current\*  
 Power output range: 0 - 30W  
 Nr of independent LED groups: 1,2,3 or 4\*  
 Nr of LED's per L-Strip: 1 to 24\*\*  
 External current setting: via external resistor 350mA (no resistor) to 1A  
 On board current settings: 350mA / 460mA / 700mA / 900mA

## Dynamic Effects

Hydra Drive Algorithm Based Modulation  
 Control channel 1 (R): 0-100%  
 Control channel 2 (G): 0-100%  
 Control channel 3 (B): 0-100%  
 Control channel 4 (W): 0-100%  
 Resolution: 15 bit  
 Contrast ratio: 8000:1

## Thermal

Cooling: Passive;  
 Maximum ambient temperature: 60°C  
 Minimum ambient temperature: 0°C  
 LED thermal sensor: NTC interface  
 L-Strip thermal protection on board

## Electrical

Power: 24V - 28 V DC  
 Efficiency: Up to 95%  
 Reverse polarity protection power supply  
 Processor: eldoLab FluxLogic 1600 series

## Network Control

Input Protocol: LedSync or USITT DMX-512A  
 Output Protocol: LedSync  
 Input/output network: RS485  
 Update rate: 8ms  
 Network channels: 1,2,3 or 4\*  
 Network resolution: 8 or 16 bit  
 Communication: bi-directional for configuration or reading sensor values

## Control and Programming

LedSync Address setting: Auto-addressing or via programmer  
 Standalone features: 10 standard shows or 10 factory set custom shows, or (ShowMaster versions) 20 customer designed and uploaded shows.  
 Show selection: Via external switch

## Show Programming (ShowMaster Versions)

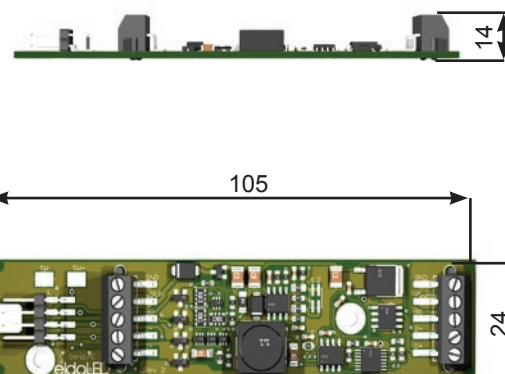
Max nr of shows: 20  
 Max nr of scenes: 50  
 Show upload: Via LedSync

## Connections

Power connection: Screw fitting (4x)  
 Data connection : Screw fitting (6x)  
 LED connection: Pin (5x)  
 NTC connection: Pin (2x)  
 Current setting: Pin (1x)  
 External switch: Soldering pad (1x)

## Miscellaneous

Orientation: Any  
 Mounting: Mounting hole for using common M3 screw (2x)  
 Relative Humidity: Non-Condensing  
 Storage ambient Temperature: -40°C to 95°C



Note: All dimensions are in millimeters

## Ordering information

Description	Product	Ordernr	Qty
L-Strip Connector 1 Channel	L-Strip/C 1020	LSC10202	50
L-Strip Connector 1 Channel, ShowMaster	L-Strip/C 1025	LSC10252	50
L-Strip Connector 2 Channel	L-Strip/C 2050	LSC20201	50
L-Strip Connector 2 Channel, ShowMaster	L-Strip/C 2055	LSC20251	50
L-Strip Connector 3 Channel	L-Strip/C 3020	LSC30202	50
L-Strip Connector 3 Channel, ShowMaster	L-Strip/C 3025	LSC30252	50
L-Strip Connector 4 Channel	L-Strip/C 4020	LSC40202	50
L-Strip Connector 4 Channel, ShowMaster	L-Strip/C 4025	LSC40252	50

For special form factors, connectors or other customised solutions, please contact our OEM support desk. More information, application notes and user manuals available at [www.eldoled.com](http://www.eldoled.com)

Disclaimer: eldoLED b.v. reserves the right to make changes without further notice to any products herein to improve function or design. (\*) depends on applied L-Dot type, connections, and (\*\*) depends on applied L-Strip type, connections, and supply voltage (\*\*) see application notes for possible LED topologies "eldoLED", "HydraDrive", "L-Strip", "LedSync", and "FluxLogic" are registered trademarks of eldoLab Technologies. © 2008 eldoLED; all rights reserved.

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