



Highly Integrated 20 Watt RGB(W) LED Driver

L-Series Description

A single current source (Proprietary Technology) enables a highly integrated Drive, Networking & Control solution for high power (RGBW) LED lighting applications. L-Series products support a wide range of LED topologies.

L-Strip Standard

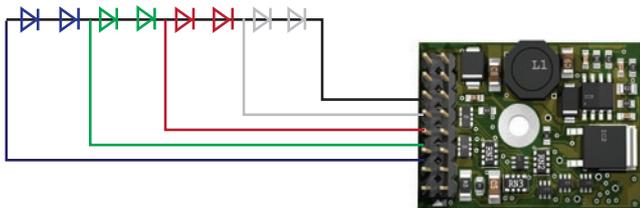
The L-Strip Standard product range is the ideal choice for powering 350-700mA high brightness and high power LED packages and LED arrays, especially where cost-effective colour-mixing is needed. The L-Strip is available in single, dual, 3 and 4 channel versions.

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

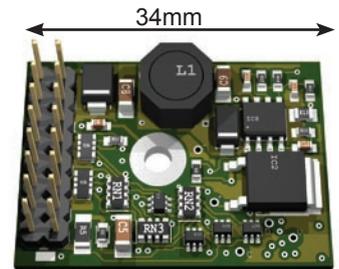
The "ShowMaster" versions of the L-Series products support custom design of scenes and shows that can be uploaded via the LedSync network. The L-Strip can broadcast the selected show to all connected L-Series devices.



Principle schematic of LED group wiring

Features

- RGB(W) colour mixing driver
- Up to 20W power output
- Power efficient (up to 95%)
- Small size (34x24mm)
- 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 700mA LED current*
 Power output range: 0 - 20W
 Nr of independent LED groups: 1,2,3 or 4*
 Nr of LED's per L-Strip: 1 to 12**
 External current setting: via external resistor 350mA (no resistor) to 700mA
 On board current settings: 350mA

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: up to 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

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

Electrical

Power: 24V - 28 V DC
 Efficiency: Up to 95%
 Processor: eldola FluxLogic 1600 series

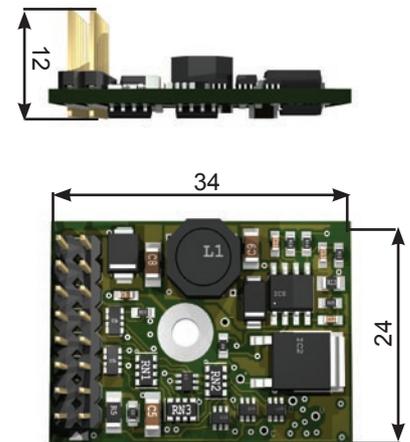
Connections

Power connection: Pin (2x)
 Data connection : Pin (5x)
 LED connection: Pin (5x)
 NTC connection: Pin (2x)
 Current setting: Pin (1x)
 External switch: Pin (1x)

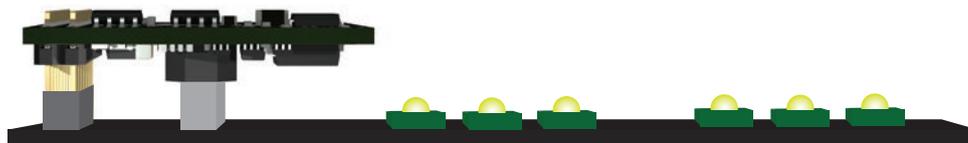
Miscellaneous

Orientation: Any
 Mounting: Mounting hole for using common M3 screw (1x)
 Relative Humidity: Non-Condensing
 Storage ambient Temperature: -40°C to 95°C

Mechanical Dimensions



Note: All dimensions are in millimeters



example of Strip mounting

Ordering information

Description	Product	Ordernr	Qty
L-Strip Standard 1 Channel	L-Strip/S 1020	LSS10201	50
L-Strip Standard 1 Channel, ShowMaster	L-Strip/S 1025	LSS10251	50
L-Strip Standard 2 Channel	L-Strip/S 2050	LSS20201	50
L-Strip Standard 2 Channel, ShowMaster	L-Strip/S 2055	LSS20251	50
L-Strip Standard 3 Channel	L-Strip/S 3020	LSS30201	50
L-Strip Standard 3 Channel, ShowMaster	L-Strip/S 3025	LSS30251	50
L-Strip Standard 4 Channel	L-Strip/S 4020	LSS40201	50
L-Strip Standard 4 Channel, ShowMaster	L-Strip/S 4025	LSS40251	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

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. V.4.0