

Highly Integrated 150 Watt RGB(W) LED Driver

LM-Series Description

Where the L-Series (single current source) products support LED solutions of up to 50W, the LM-Series, a multiple current source solution, caters for applications up to 150W LED lighting. The 3 or 4 independently controllable current sources allow for all the flexibility you need in driving your LED's.

LM-Dot Standard

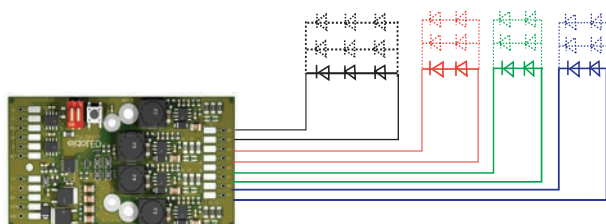
The LM-Dot Standard product range is the ideal choice for powering 350mA-1,4A high brightness, high power LED packages and LED arrays, especially where colour-mixing is needed. The LM-Dot Standard is available in a 3 and 4 channel version and provides you with almost endless flexibility.

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

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

ShowMaster

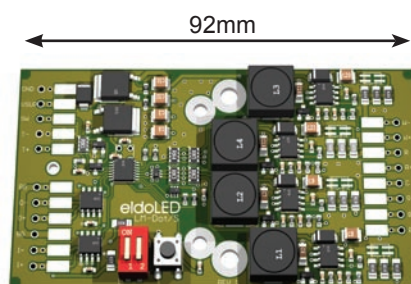
The "ShowMaster" versions of the LM-series products supports custom design of scenes and shows that can be uploaded via the LedSync network. The LM-Dot can broadcast the selected show to all connected LM-Series devices.



Principle schematic of LED group wiring

Features

- RGB(W) colour mixing driver
- Up to 150W power output
- Power efficient (up to 95%)
- Long life (5 years)
- 24V-35V supply range
- LedSync and DMX compatible
- Low EMI through smart electronics design
- High-resolution colour mixing with HydraDrive Algorithm Based Modulation (Proprietary Technology)
- LM-Dot over-temperature protection with on board thermal-throttling
- LED thermal sensor interface (NTC) included
- Optional DIN-Rail(EN50022) mounting set available



Form Factor

The LM-Dot is a breakthrough in LED Drive, Networking & Control form factor. The small form factor enables integration of LM-Dot 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%)
- 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
- Standard LED wiring

Output

Output current: up to 1400mA LED current*

Power output range: 0 -150W

Nr of current sources: 3 or 4*

Nr of independent LED groups: 1,2, 3 or 4*

Nr of LED's : 1 to 96**

Current setting: individual per group

On board current settings: 350mA / 700mA / 1000mA / 1400mA

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

LM-Dot thermal protection on board

Electrical

Power: 24V - 35 V DC

Efficiency: Up to 95%

Reverse polarity protection power supply

Processor: eldoLab FluxLogic 2400 series

Network Control

Input Protocol: LedSync or USITT DMX-512A

Output Protocol: LedSync

Input/output network: RS485

Input update rate: 8ms

Network channels: 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: Soldering pad (2x)

Data connection : Soldering pad (2x)

LED connection: Soldering pad (8x)

NTC connection: Soldering pad (2x)

External switch: Soldering pad (1x)

Miscellaneous

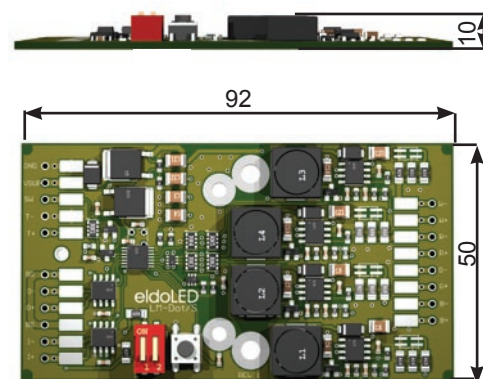
Orientation: Any

Mounting: Mounting hole for using common M3 screw (2x), M4 screw (2x)

DIN-Rail EN50022 Form factor

Relative Humidity: Non Condensing

Storage ambient Temperature: -40°C to 95°C

Mechanical Dimensions

Note: All dimensions are in millimeters

Ordering information

Description	Product	Ordernr	Qty
LM-Dot Standard 3 Channel	LM-Dot/S 3150	LMS31501	50
LM-Dot Standard 3 Channel, ShowMaster	LM-Dot/S 3155	LMS31551	50
LM-Dot Standard 4 Channel	LM-Dot/S 4150	LMS41501	50
LM-Dot Standard 4 Channel, ShowMaster	LM-Dot/S 4155	LMS41551	50
(Optional) DIN rail clip with alu spacer	DIN rail clip	DRC10101	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 LM-Dot type, connections, and (*) depends on applied LM-Dot 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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