

## 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 the 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

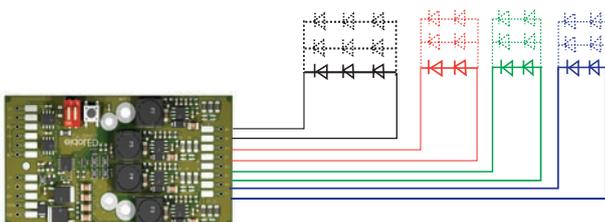
The LM-Dot Standard product range is the ideal choice for powering 350mA-1,4A high brightness, high power LED packages and LED arrays, especially where colour-mixing is needed. The LM-Dot Standard is available in a 3 and 4 channel version and provides you with almost endless flexibility.

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

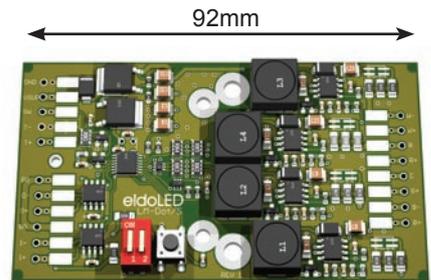
The "ShowMaster" versions of the LM-series products supports custom design of scenes and shows that can be uploaded via the LedSync network. The LM-Dot can broadcast the selected show to all connected LM-Series devices.



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

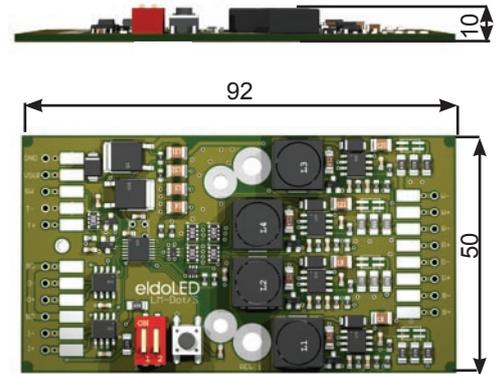
**Connections**

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](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 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. V.1.1