eldoLED

your product | *our drive*

Datasheet LM-Dot / Connector **LM - Series**

Highly Integrated 150 Watt RGB(W) LED Driver

LM-Series Description

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

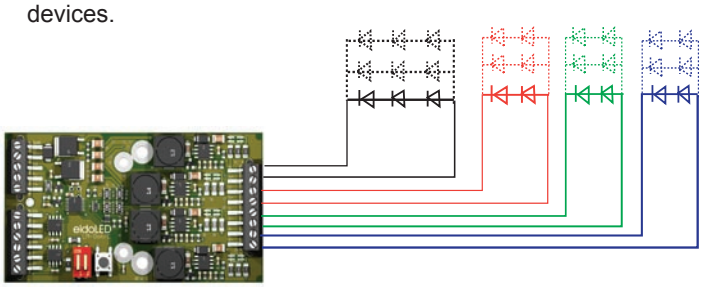
LM-Dot Connector

The LM-Dot Connector 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 Connector is available in a 3 and 4 channel version and provides you with almost endless flexibility.

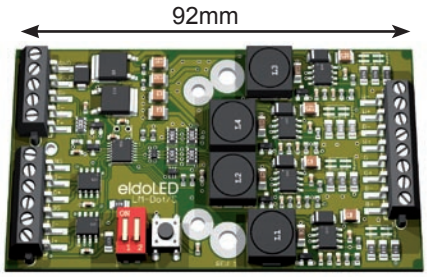
The LedSync network interface allows for high resolution, quick setup and lower cabling costs compared to other networking solutions. The LM-Dot Connector product range also accepts standard DMX as input protocol. For standalone applications one of 10 pre-defined shows can be selected. With its true 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%)
Longlife (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%)
Easy Installation, via screw connections
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

eldoLED B.V. Luchthavenweg 18, 5657 EB Eindhoven, The Netherlands | Tel +31 - 402054050 | Fax +31- 402054058 | info@eldoled.com

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

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

Connections
Power connection: Screw fitting (2x)
Data connection : Screw fitting (5x)
LED connection: Screw fitting (8x)
NTC connection: Screw fitting (2x)
External switch: Screw fitting (1x)

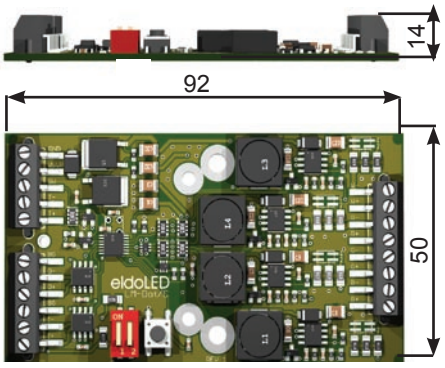
Dynamic Effects
Hydra Drive Algorithm Based Modulation
Control channel 1 (R): 0-100%
Control channel 2 (G): 0-100%
Control channel 3 (B): 0-100%
Control channel 4 (W): 0-100%
Resolution: 15 bit
Contrast ratio: up to 8000:1

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

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

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

Show Programming (ShowMaster Versions)
Max nr of shows: 20
Max nr of scenes: 50
Show upload: Via LedSync

Mechanical Dimensions


Note: All dimensions are in millimeters

Electrical
Power: 24V - 35 V DC
Efficiency: Up to 95%
Reverse polarity protection power supply
Processor: eldoLab FluxLogic 2400 series

Ordering information

Description	Product	Ordernr	Qty
LM-Dot Connector 3 Channel	LM-Dot/C 3150	LMC31501	50
LM-Dot Connector 3 Channel, ShowMaster	LM-Dot/C 3155	LMC31551	50
LM-Dot Connector 4 Channel	LM-Dot/C 4150	LMC41501	50
LM-Dot Connector 4 Channel, ShowMaster	LM-Dot/C 4155	LMC41551	50
(Optional) DIN rail clip with alu spacer	DIN rail clip	DRC10101	50

The LM-Dot is also available with soldering pads. For details please see the LM-Dot /Standard datasheet 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

eldoLED B.V. Luchthavenweg 18, 5657 EB Eindhoven, The Netherlands | Tel +31 - 402054050 | Fax +31- 402054058 | info@eldoled.com