



Colour
is our nature

Intelligent 15/30/45 Watt LED Driver/Controller

ECOdrive DC Series

ECOdrive DC is a highly integrated, cost-effective, enclosed and easy-to-configure constant current driver/controller for high-power, indoor LED lighting applications.

ECOdrive DC can be integrated in a network or used as a standalone device. ShowMaster, supported on all eldoLED driver/controllers, allows you to upload show sequences for use in standalone mode. You can create and manage your own show sequences with the TOOLbox and freely available PC software.

ECOdrive DC features one LED current source that drives up to 4 LED groups. It is DMX and LedSync compatible, and allows 15-bit dimming and colour control and bidirectional communication for driver configuration and temperature read-out.

ECOdrive 15/30/45

With their wide supply voltage range (12V-32V DC), ECOdrive 15, 30 and 45 are the ideal choice for powering 15W 200mA - 500mA HB LEDs, 30W 200mA - 1050mA HB LEDs, and 45W 200mA - 1.4A HB LEDs respectively.

Single current source, multiple LED colour groups

eldoLED technology enables running 4 LED groups from a single, high-precision LED current source. It gives ECOdrive a 15-bit control resolution per LED group, a power efficiency of up to 95% and its break-through form factor.

Suitable for practically all LED types

The ECOdrive user interface lets you set the LED current to any value between 200mA and 1.4A in 50mA steps, making it the perfect match for practically all LED types and configurations.

Setup is a breeze!

Configure ECOdrive DC over its intuitive, 3-button user interface with display. The easy-to-navigate menu allows you to set parameters such as number of channels, DMX network start address for networked mode and show/colour/dim values for standalone operation. You can also lock the driver's configuration and perform a test run of the connected LED groups.



LEDcode compatible

Set up your ECOdrive DC even faster by simply entering the 7-digit code generated on the LEDcode website. This code finetunes the LED current for your LED application.

Robust thermal management

All ECOdrives have built-in over temperature protection and ECOdrive 30/45 have an interface for connecting an NTC thermistor. An NTC thermistor provides feedback on LED engine temperature and allows LED throttling, a graceful decrease of light output until normal operating temperatures are reached.

Low EMI

ECOdrive DC's EMI is very low due to slew-rate controlled dimming, shielded conductors and the use of only one LED current source.

Easy to connect

Take off ECOdrive DC's top cover to discover that connecting is self-explanatory: the spring-cage connectors for LEDs, power and network leads are all clearly marked. Strain reliefs prevent leads from being pulled out by accident.

Advantages

- Available in 15-, 30- and 45-watt version
- DMX and 0-10V compatible
- High power efficiency of up to 95%
- Suited for practically all LED types
- Unprecedented ease-of-configuration
- LEDcode compatible
- Extremely smooth dimming and fine colour mixing:
 - 15-bit control resolution for each LED group
- ShowMaster: user-definable show sequences
- Very low EMI
- Compact form factor: 153x50x23mm / 6.02"x1.97"x0.91"

Electrical data

- LED current settings in 50mA steps:
ECOdrive 15: 200mA - 500mA
ECOdrive 30: 200mA - 1050mA
ECOdrive 45: 200mA - 1.4A
- Power output range:
ECOdrive 15: 0 - 15W
ECOdrive 30: 0 - 30W
ECOdrive 45: 0 - 45W
- Operating supply voltage range:
12V-32V DC
- Efficiency: up to 95%
- Processor: eldoLED FluxLogic 1650 Series
- Independent LED groups: up to 4
- Reverse polarity protection

Dynamic effects

- Hydradrive Algorithm Based Modulation
- Control of channel 1 (R), 2 (G), 3 (B) and 4 (W/A): 0 - 100% in 15-bit set point resolution
- Contrast ratio: up to 8,000:1

Thermal data

- Cooling: passive (integrated heat spreader). Second heat spreader on ECOdrive 45 ensures ease of mounting onto required heat sink.
- Built-in protection against overheating of driver/controller
- NTC thermistor interface: for reliable over temperature protection of connected LEDs (on ECOdrive 30 and ECOdrive 45)

Mounting data

- Mounting orientation: any
- Mounting holes: for M4 screws (4)

Network control

- Network input: USITT DMX512A or LedSync
- Network throughput: LedSync
- Network input/throughput: based on RS485 specification
- DMX/LedSync-in update rate: 8ms
- Network resolution: 8 or 16 bit
- Network channels used by driver in 8-bit resolution: 4
- Network channels used by driver in 16-bit resolution: 8
- Communication: bidirectional for driver configuration and temperature read-out
- Configuration: via 3-button user interface or via TOOLbox and freely available PC software

Certifications

- CE: IEC 61347, EN 55015, IEC 61003, EN 61547
- UL

ShowMaster

- Nine standard shows or up to 20 customer-defined shows set at factory
- User-defined shows (ShowMaster): up to 20 shows, via TOOLbox and PC software
- Show selection: via menu buttons

Environmental ratings

- T_a range: -20°C...50°C (-4°F...122°F)
- T_c max: 65°C (149°F)
- T_{heatsink} max: 60°C (140°F)
- Relative humidity: non-condensing

User interface

- Menu buttons: M, - and + (3)
- Display: segmented (4 x 16)
- Modes: colour/show/DMX
- Features: setup, lock, LEDcode, reset

LEDcode-compatibility

- Visit www.ledcode.com for wiring diagrams and code for automatic configuration, specifically generated for your LED application

Spring cage connectors

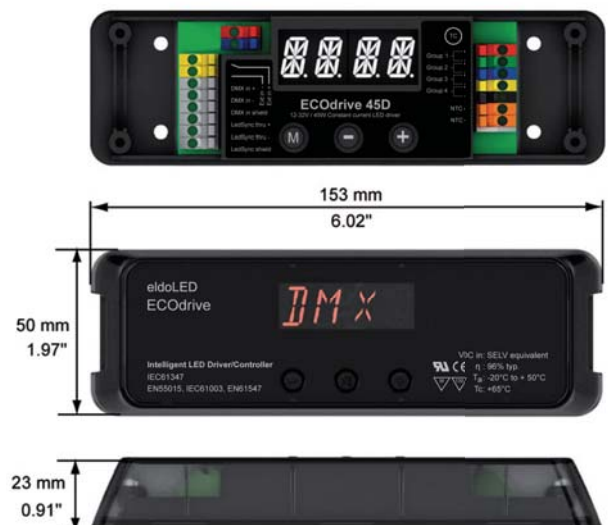
- VDC: + and - (2)
- DMX in: +, - and shield (3)
- LedSync thru: +, - and shield (3)
- EXT in: + and - (2) for 10kΩ potentiometer, 0-10V or show switch
- LED groups: group 1 through 4 and LED ground (5)
- NTC thermistor: + and - (2; on ECOdrive 30 and ECOdrive 45)

Dimensions

- LxWxH: 153 mm x 50 mm x 23 mm
6.02" x 1.97" x 0.91"

Ordering information

Description	Product	Order nr
ECOdrive 15W Display	Eco 15/D	ECO015D1
ECOdrive 30W Display	Eco 30/D	ECO030D1
ECOdrive 45W Display	Eco 45/D	ECO045D1



More information, application notes and eldoLED's terms and conditions are available at www.eldoled.com. © 2009 eldoLED. All rights reserved. LEDcode is a registered trademark of LEDcode bv.

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