



Colour
is our nature

8A DALI DT6 Full-Colour Dimmable LED Driver

LINEARdrive

LINEARdrive gives you all the control you need for your low-voltage LED application. This constant voltage LED driver is DALI DT6 compatible and enables you to create the perfect shade of white or show sequence without an external controller. Symbiosis ensures the LED driver works seamlessly together with LED modules, controls and intelligent luminaire elements.

Product offering



LINEARdrive 200D-D2Z2D

Part number (P/N)	LN200D-D2Z2D2
Product description	LINEARdrive DC, 224W, DALI DT6, 2 control channel, constant voltage, 2x LED outputs, plastic long

Features & benefits

LightShape	Tunable White: colour temperature and intensity control
Programmable	Fine-tune your driver for any application
Camera compatibility	HydraDrive technology is proven to work in TV studios and security camera environments

Programming tools

Programming interface	TOOLbox pro (TLU20504)
Programming cable set	TOOLbox pro to LED driver, programming cable, 5pcs (TLC03051)
Programming software	FluxTool

Warranty

Warranty period	General Terms and Conditions
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Order number configurator

Standard	LN200D-D2Z2D2 <small>Part Number</small>	<div style="display: flex; gap: 5px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> <small>Dimming Curve</small>				
LightShape	LN200D-D2Z2D2 <small>Part Number</small>	<div style="display: flex; gap: 5px;"> <div style="border: 1px solid black; padding: 2px;">T</div> <div style="border: 1px solid black; padding: 2px;">W</div> <div style="border: 1px solid black; padding: 2px;">H</div> </div> <small>LightShape Control Type</small>	<div style="display: flex; gap: 5px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> <small>Dimming Curve</small>	<div style="display: flex; gap: 5px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> <small>Gamut CCT</small>	<div style="display: flex; gap: 5px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> <small>Gamut Lumen Output</small>	<div style="display: flex; gap: 5px;"> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> <div style="border: 1px solid black; width: 20px; height: 20px;"></div> </div> <small>Path CCT</small>

LightShape control type	"TWH" stands for Tunable White
Dimming curve	"LOG" for logarithmic (default) "LIN" for linear
Gamut CCT	LightShape-specific option. Enter the LEDs' CCT as "XX-YY" where XX is LED output 1 and YY is LED output 2. Available options per output: 18, 20, 22, 25, 27, 30, 35, 40, 50, 57 and 65. E.g. "18-50" for 1800K on LED output 1 and 5000K on LED output 2. Default is 27-65
Gamut lumen output	Enter the lumen output range for LED output 1 and 2 as "XX-YY" where XX is LED output 1 and YY is LED output 2. Available range per output: from "01" for 100lm to "99" for 9900lm. E.g. "10-12" for 1000lm on LED output 1 and 1200lm on LED output 2.
Path CCT	Leave blank if Path CCT requires the same values as Gamut CCT. Or specify the Path CCT values as "XX-YY" where XX is LED output 1 and YY is LED output 2. Available options per output: 18, 20, 22, 25, 27, 30, 35, 40, 50, 57, 65. E.g. "18-50" for 1800K on LED output 1 and 5000K on LED output 2.

Input characteristics

Nominal input voltage DC	12 - 28V
Maximum input current	8A, irrespective of PSU voltage

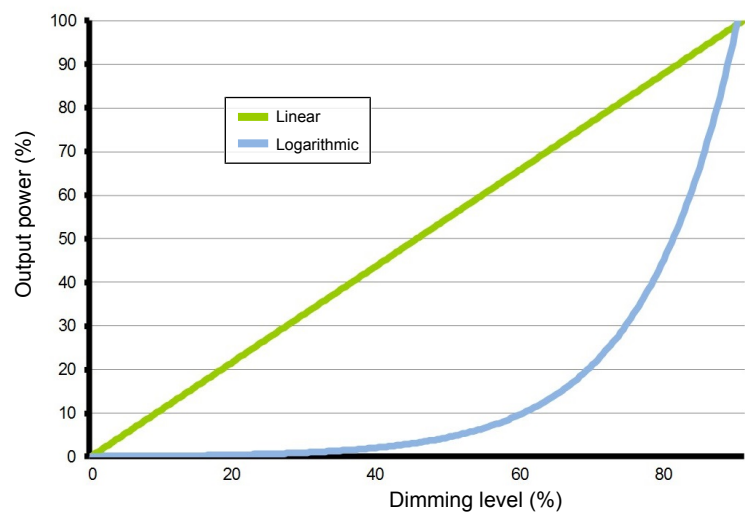
Output characteristics

LED output load	8A maximum, irrespective of whether using one or both LED outputs
Maximum LED output power	224W
Number of LED outputs	2
LED output voltage	12 - 28V
Circuit protection	To prevent excessive output current from damaging the LED driver, it is highly recommended to use circuit protection appropriate for your application's nominal and inrush current requirements in combination with an OVP, OVC short circuit protected AC/DC adapter.

Control characteristics

Control channels	2
Control protocol	DALI Device Type 6
	LEDcode
Dimming range	100% - 0.1%
Dimming curve options	Logarithmic (default) Linear
Dimming method	HydraDrive

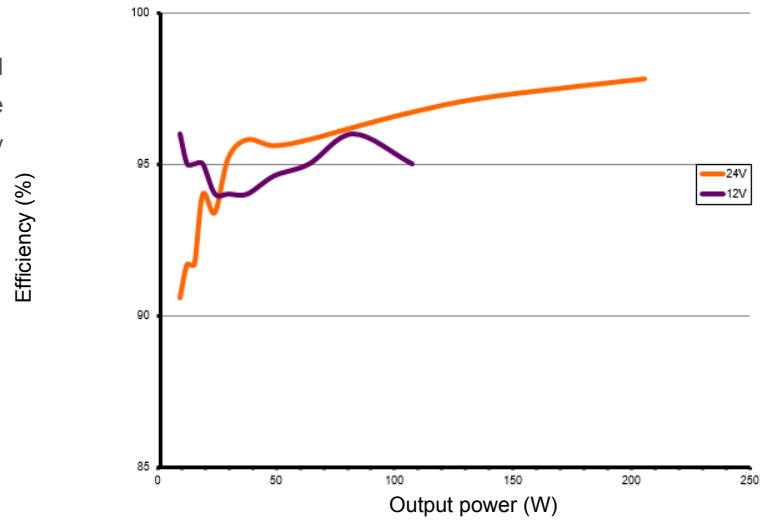
Dimming curves



Performance

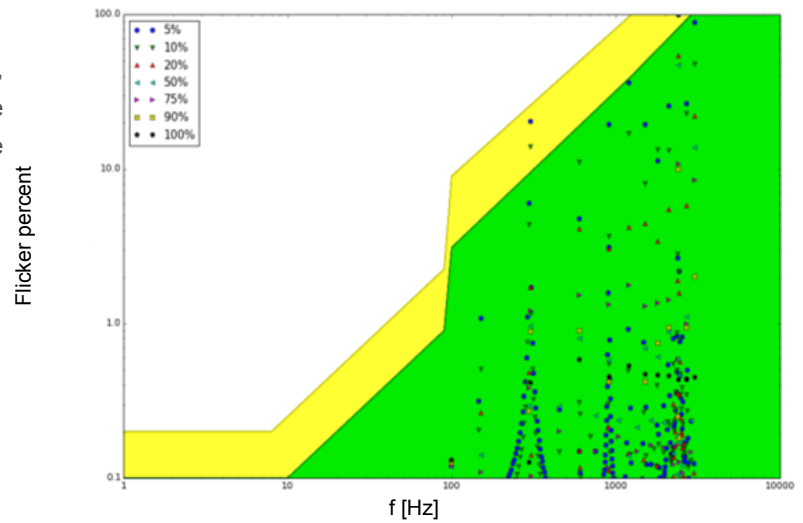
Typical efficiency vs load

Tested with a load of 24 LEDs in series, programmed for 8000mA and at 25 °C ambient temperature. The measurements below 192W were performed by dimming the light output.



Typical flicker performance

Typical flicker percent as a function of frequency, measured across the dimming range. The results are overlaid with the low-risk (yellow) and no observable effect (green) levels as defined in IEEE P1789.



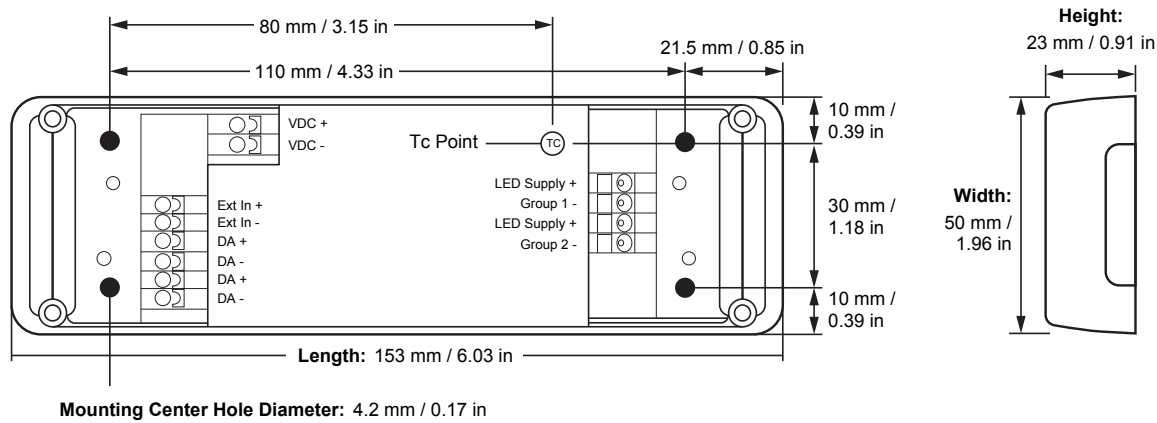
Environmental conditions

Operating ambient temperature (Ta) range -20 °C to +50 °C

Maximum operating case temperature (Tc max) 65 °C

UL Recognized Maximum allowed Tref 57 °C , measured at 8000 mA

LED driver mechanical details



Weight	149 g
Mounting screw	M4

3D mechanical files for this product are available on the eldoLED website.

Packaging

Length x Width x Height	170 x 110 x 156 mm / 6.69 x 4.33 x 6.14 in
Weight	2 kg
Products per box	12 pcs

Connector layout



Wiring specifications

Wire core cross section	0.2 - 1.5 mm ² AWG 24 – 16
Wire strip length	9.0 mm / 0.35 inch

Standards and compliance

UL, recognized component	UL 1310 UL 8750
ENEC safety	EN 61347-1 EN 61347-2-13 (Emergency lighting)
Conducted emissions	EN 55015
Radiated emissions	EN 55015
Electrostatic discharge	EN 61000-4-2
ECodesign 2019/2020: Controlgear + luminaire	Flicker for LED: Pst LM \leq 1.0 at full-load Stroboscopic effect for LED: SVM \leq 0.4 at full load
Restriction of hazardous substances	RoHS3 (Directives 2011/65/EU-2015/863/EU)
SVHC-list substances	REACH Art.33

Certifications



Qualified DALI controllers

Performance	In order to ensure compatibility and performance, eldoLED requires that any DALI controller, used with this eldoLED driver, is fully compliant with the DALI-2 standard as described in IEC 62386-101 Edition 2.0, IEC 62386-102 Edition 2.0 and IEC 62386-207 Edition 1 standards.
Compatibility	The compatibility with other controllers must be tested in advance to the installation. Please contact your eldoLED sales representative for details on how to perform the testing on these controllers by eldoLED. The following DALI controller is already tested by eldoLED and is compatible with this eldoLED driver.

Model	Description	Article number
Lunatone DALI 4Net	Central Control Device for 4 DALI-lines	22176666
Helvar 910 Digidim router	DALI-2 Application Controller (single master)	119057
Helvar 920 Imagine router	DALI-2 Application Controller (single master)	137980

Qualified mains power supplies

Performance

Performance requirements may not be guaranteed on system level. The location, wiring and grounding of the mains switching power supply in the system may influence its performance characteristics. In different environments or applications, the same mains switching power supply may have different outcomes.

Full load performance is guaranteed with maximum cable-length of 0.3 meter for mains switching power supply output cable (2 x 2.08mm²) to the LINEARdrive LED driver and maximum cable-length of 1.0 meter (2 x 1.5mm²) from the LINEARdrive LED driver to the LED load.

Compatibility

The following mains power supplies are already tested by eldoLED and are compatible with this eldoLED driver:

Shutdown

The LINEARdrive 200D LED driver is designed to detect normal shutdown events, i.e. when mains power is disconnected from the power supply unit (PSU) that provides the constant input voltage to the LED driver. To avoid the loss of its settings during shutdown, a LINEARdrive 200D LED driver initiates a last-time write whenever it detects a significant drop in the input voltage. The energy that is stored in the PSU is typically sufficient to complete this last-time write. An improper shutdown may occur, however, if the input voltage to the LINEARdrive 200D LED driver is abruptly cut, for example, by a secondary circuit breaker that is installed between the PSU and the LINEARdrive 200D LED driver. Also, if a single PSU is used to power multiple LINEARdrive 200D drivers and/or other peripheral devices, the input voltage to the LINEARdrive 200D LED driver may drop abruptly, resulting in an improper shutdown and, potentially, loss of LED driver settings.

Voltage rating

Manufacturer

Article number

24V

Meanwell

HLG-240H-24A

12V

Meanwell

HLG-240H-12A

Safety



Risk of electrical shock. May result in serious injury or death. Disconnect power before servicing or installing.



The LED driver may only be connected and installed by a qualified electrician. All applicable regulations, legislation, and building codes must be observed. Incorrect installation of the LED driver can cause irreparable damage to the LED driver and the connected LEDs.

Pay attention when connecting the LEDs: polarity reversal results in no light output and often damages the LEDs.



LED drivers are designed and intended to operate LED loads only. Powering non-LED loads may push the LED driver outside its specified design limits and is, therefore, not covered by any warranty.



eldoLED products are designed to meet the performance specifications as outlined at certain operating conditions in the data sheet. It is the responsibility of the fixture manufacturer to test and validate the design and operation of the system under expected and potential use cases, including faults.



Please observe voltage drop over long cable lengths. Longer cable lengths increase EMI susceptibility.



Product renderings and dimensional drawings are generic for the housing type. Product label, connector type and quantity may vary.

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