

OPTOTRONIC - 4DIM LT2 IP20

DALI, AstroDIM, StepDIM, MainsDIM – constant current LED drivers



Areas of application

- Street and urban lighting
- Industry
- Suitable for outdoor applications in luminaires with IP > 54
- Suitable for use in outdoor luminaires of protection class I and II

Product family benefits

- 4DIM functionality in one device (StepDIM, AstroDIM, MainsDIM, DALI)
- Very high efficiency
- High surge protection: up to 10 kV (1 pulse) / 8 kV, in protection class I or II
- Low luminous efficacy tolerance through low output current tolerance of $\pm 3\%$
- Great flexibility due to wide operating temperature range of $-40...55\text{ }^{\circ}\text{C}$ or $60\text{ }^{\circ}\text{C}$
- Protection through double isolation between mains input and LED output

Product family features

- Available with different wattage: 40 W, 60 W, 90 W, 165 W
- Input voltage: 120...277 V (40 W), 220...240 V (60 W, 90 W, 165 W)
- Current output range: 70...1,050 mA
- Flexible current setting with one additional wire (LEDset2)
- AstroDIM for autonomous dimming with five independent levels (astro, time mode)
- Allows for energy saving in twilight phases
- MainsDIM function for dimming via reduction of line voltage amplitude
- Isolated DALI interface for bidirectional telemanagement systems
- Standby power consumption: < 0.5 W
- Constant Lumen Output (CLO)
- Overtemperature protection via external NTC

Product family datasheet

Equipment / Accessories

- DALI magic hardware for configuring 4DIM ECGs necessary
- Programmable via Tuner4TRONIC software

Application advice

For more detailed application information and graphics please see product datasheet.

Additional product information

- Default output current is 700 mA without any resistor connected to the LEDset port. As soon as the driver detects one time a resistor value within the resistor range of 2.37 kOhm (1050 mA) and 24.9 kOhm (200 mA) for more than 3 s, the driver activates the LEDset2 mode.
- The driver withstands an input voltage of up to 350 Vac for a maximum of two hours. Shut down of output load might occur in case the supply voltage exceeds the declared input voltage range.
- Shut down of output load happens if the input voltage of the load is below the allowed minimum output voltage of the driver. The driver automatically tries to switch on the load cyclically.
- In case the input voltage of the load exceeds the output voltage range of the driver, it automatically reduces the output current to keep the output voltage controlled to the maximum allowed output voltage.
- The driver automatically reduces the output current in case the maximum allowed output power is exceeded.
- The driver automatically adjusts the output voltage to the maximum output voltage if no load is connected and switches off the load after some seconds. Hot-plug of the load or external switching on the secondary side is not allowed.
- The driver is protected against temporary overheating by automatic reduction of the output current down to 30 % and then switches off.
- The EQUI pin shall be connected to the heat sink of the LED module to improve the surge withstand capability of the system and EMI in critical luminaires.
- Several external NTCs are supported for temperature protection of the LED module or luminaire. The type of NTC can be selected in the programming software in the temperature based mode. By default the resistor based mode is activated with following values: start derating: 6.3 kOhm, end derating 5.0 kOhm, shut off: 4.3 kOhm, derating level 50 %.
- The default dimming mode is StepDIM / AstroDIM / DALI (wiring selection) with following values for:- StepDIM: 100 % on, 50 % dimming level if SD port is active, fade time 180 s- AstroDIM: 100 % on, 50 % dimming level, 6 h dimming duration, start of dimming duration 2 h before the middle of the average switched-on time, fade time 180 s
- The constant lumen feature is disabled by default.
- For MainsDIM dimming mode and for 170 Vac input voltage condition the output power should not exceed 85 % of the maximum declared output power.
- For input voltage of 170...190 Vac, the maximum allowed output power is linear limited starting from 100 % at 190 Vac down to 85 % at 170 Vac, except for the 40 W type.
- If any output level is below the physical min level, the physical min level will be used.
- In case the 3DIM and 4DIMLT2 devices are operated on one common control phase connected to SD input the 3DIM devices needs to have a relay as described in the 3DIM application guide.
- The SD port is suitable for three phase systems with 220...240 Vac, for other input voltages only single phase systems are supported.
- For further details please consult the 4DIMLT2 application guide.

Sales and Technical Support

Sales and Technical Support www.osram.com

Product family datasheet

Ecodesign regulation information:

Intended for use with LED modules.

The forward voltage of the LED light source shall be within the defined operating window of the control gear in all operating conditions including dimming if applicable.

Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centres and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.

Disclaimer

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.