PRODUCT DATASHEET
OT 50/120…277/800 2DIMLT2 P

OT 2DIM IP64 | 0…10 V, AstroDIM – constant current LED drivers

Areas of application

- Street and urban lighting
- Industry
- Suitable for luminaires of protection classes I and II

Product benefits

- 2DIM functionality in one device (AstroDIM, 0…10 V)
- High surge protection: up to 6 kV (in protection class I or II)
- Fast programming without mains voltage
- High efficiency
- Great flexibility due to wide operating temperature range of -40…55 °C
- Protection through double isolation between mains input and LED output
- IP rating: IP64

Product features

- Available with different wattage: 50 W, 100 W, 110 W
- Input voltage: 120…277 V
- Available with output current range: up to 1,400 mA
- Flexible current setting with one additional wire (LEDset2)
- AstroDIM for autonomous dimming with five independent levels (astro mode)
- Isolated 0…10 V interface for unidirectional telemanagement systems
- Constant Lumen Output (CLO)

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– Overtemperature protection with external NTC or LEDset2 interface

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TECHNICAL DATA

Electrical data

Nominal wattage	50.00 W
Nominal output power	50 W [1)]
Nominal voltage	120…277 V
Nominal output voltage	30…115 V
Input voltage AC	108…305 V [2)]
U-OUT (working voltage)	120 V
Nominal current	0.27 A [3)]
Nominal output current	350…800 mA
Inrush current	30 A [4)]
Output current tolerance	±5 % [5)]
Output ripple current (100 Hz)	30 %
Mains frequency	50/60 Hz
Total harmonic distortion	15 % [6)]
Power factor λ	0.95 [7)]
ECG efficiency	86 % [8)]
Device power loss	10 W [9)]
Max. ECG no. on circuit breaker 10 A (B)	11 [10)]
Max. ECG no. on circuit breaker 16 A (B)	17 [10)]
Max. ECG no. on circuit breaker 25 A (B)	28 [10)]
Surge capability (L/N-Ground)	6 kV [11)]
Surge capability (L-N)	6 kV [12)]
Galvanic isolation	SELV
Flickering metric (Pst LM)	≤1

1) Partial load 11…50 W / Not dimmed

2) Permitted voltage range

3) 0.50 A for 120 V_{AC} / At 230 V

4) t_{width} = 250 µs (measured at 50 % I_{peak})

5) Within nominal output current range

6) Max. output power at 230 V_{AC}

7) Minimum/Full load at 230 V/Half load at 230 V

8) At full load, default current and 230 V

9) Maximum

10) Type B

11) EQUI @ 12 Ohm acc. to EN 61547

12) @ 2 Ohm, acc. to EN61547

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Photometrical data

Flickering metric (Pst LM)	≤1
Stroboscope effect metric (SVM)	≤0.4

Dimensions & Weight

Length	168.00 mm
Mounting hole spacing, length	152,0 mm
Width	50.00 mm
Height	30.00 mm
Product weight	490.00 g

Colors & materials

Casing material	Metal
Body material	Metal

Temperatures & operating conditions

Ambient temperature range	-40…+55 °C [1)]
Maximum temperature at tc test point	85 °C [2)]
Max.housing temperature in case of fault	120 °C
Permitted rel. humidity during operation	5…85 % [3)]

1) T_a(max)=50°C for input voltage 120/277V_{AC}

2) Maximum at the Tc-point

3) Non condensing, absolute humidity: 36g/m^3

Lifespan

ECG lifetime	80000 h [1)]

1) At T_{case} = 75°C at T_c point / 10% failure rate

Additional product data

Product remark	No on/off switching of lamps possible via 0...10 V interface

Capabilities

Dimmable	Yes
Dimming interface	2DIM / 1…10 V / AstroDIM
Dimming range	30…100 %
Overheating protection	Yes
Overload protection	Automatic reversible
No-load proof	Yes
Short-circuit protection	Yes
Max. cable length to lamp/LED module	10 m

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Suitable for fixtures with prot. class	I / II

Certificates & Standards

Approval marks – approval	CE / ENEC 15 / UR / CQC
Standards	Acc. to EN 61347-1 / Acc. to EN 61347-2-13 / Acc. to EN 62384 / Acc. to EN 55015:2006 + A1:2007 + A2:2009 / Acc. to EN 61547 / Acc. to FCC 47 part 15 class A / Acc. to IEC 61000-3-2 / Acc. to IEC 61000-3-3 / UL-8750
Protection class	II
Type of protection	IP64

LOGISTICAL DATA

Temperature range at storage	-25…80 °C

EQUIPMENT / ACCESSORIES

- OT Programmer hardware for configuration of 2DIM ECGs necessary
- Programmable via Tuner4TRONIC software

ADDITIONAL PRODUCT INFORMATION

- 800 mA type: Default output current is 700 mA without any resistor connected to the LEDset port.
- 1250 mA type: Default output current is 1000 mA without any resistor connected to the LEDset port.
- 1400 mA type: Default output current is 1000 mA without any resistor connected to the LEDset port.
- The LEDset2 interface is disabled by default and needs to be activated by the programming software. In this case the LEDset2 interface is activated the external thermal protection feature is disabled.
- The driver withstands an input voltage of up to 350 Vac for a maximum of two hours.
- The driver may shut down the load if the input voltage of the load is below the allowed minimum output voltage until the short circuit is removed or the correct load is connected and a power off/on cycle is performed.
- 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, as long as the input voltage of the load is within the declared output voltage range of the driver. In all other cases the driver may shut down the load.
- The driver may shut down in case no load is connected to the driver output until the correct load is connected and a power off/on cycle is performed. Hot-plug of the load or external switching on the secondary side is not allowed.
- The EQUI (housing) 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.
- By default the LEDset / NTCset / Prog+ port is set as NTCset port in resistor based mode with following values: start derating: 6.3 kOhm, end derating 5.0 kOhm, derating level 50 %.
- The default dimming mode is 0…10 V, AstroDIM-PD is disabled.- 0…10 V: 30 % minimum dimming level
- The constant lumen feature is disabled by default.
- If any output level is below the physical min level, the physical min level will be used.
- Dimming down to 14 % of the maximum rated output current could be enabled through the programming software, but the compliance with EN 61000-3-2 must be checked below 30 %.
- The driver is intended for built-in use. The luminaire manufacturer is responsible to prevent direct exposure for example to sunlight, water, snow, ice.
- Time to reach the set output current upon start-up is less than 4 s.
- Programming of the driver via Prog+ and Prog- is only allowed without powering it via L/N.
- For further details please consult the 2DIMLT2 application guide.

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DOWNLOAD DATA

	Documents and certificates	Document name
PDF	User instruction / safety instructions	615705_Instruction sheet OT 50 800 2DIMLT2 P
PDF	Declarations of conformity	646953_CB ENEC Information
PDF	Declarations of conformity	OT 2DIMLT2P CE 3676115 211119
PDF	Declarations of conformity	545682_EC-Conformity OT 50/120-277/xxx 2DIMLT2 P
PDF	Declarations of conformity	725761_Certificate of analysis OT50
PDF	Declarations of conformity	612485_UL Conformity OT 50/120_277/xxx 2DIMLT2 P
PDF	Certificates	600317_ENEC certificate OT 2DIMLT2 P
PDF	Certificates	600316_CB certificate OT 50 2DIMLT2 E
PDF	Certificates	617035_CCC Certificate OT 50/120-277/xxx 2DIMLT2 P
PDF	Certificates	OT 50 2DIMLT2P ENEC 01112 080120
PDF	Certificates	OT 50 2DIMLT2P CB DK91169UL 080120

LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4052899173781	Unpacked 1		490.00 g	
4052899173798	Shipping box 20	368 mm x 338 mm x 85 mm	10492.00 g	10.57 dm^3

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

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