

OT 50/120...277/700 P5

OPTOTRONIC Outdoor | Constant current LED drivers



Areas of application

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

Product benefits

- High surge protection: up to 6 kV (L-N) / 6 kV (L/N-PE)
- High efficiency and reliability
- Great flexibility due to wide operating temperature range of -40...50 °C or 55 °C
- High IP protection (IP65)

Product features

- Available with different wattage: 50 W, 100 W, 180 W, 250 W
- Input voltage: 120...277 V
- Output current: 700 mA
- Overtemperature protection

Technical data

Electrical data

Nominal voltage	120...277 V
Input voltage AC	108...305 V ¹⁾
Nominal current	0.25 A ²⁾
Mains frequency	50...60 Hz
Power factor λ	0.95/0.90 ³⁾
Total harmonic distortion	10 %
Device power loss	7.5 W ⁴⁾
Inrush current	50 A ⁵⁾
Max. ECG no. on circuit breaker 10 A (B)	8 ⁶⁾
Max. ECG no. on circuit breaker 16 A (B)	13 ⁶⁾
Max. ECG no. on circuit breaker 25 A (B)	20 ⁶⁾
Surge capability (L/N-Ground)	6 kV
Surge capability (L-N)	6 kV ⁷⁾
Nominal output power	50 W ⁸⁾
ECG efficiency	87 % ⁹⁾
Nominal output voltage	24...74 V
U-OUT (working voltage)	80 V
Nominal output current	700 mA ¹⁰⁾
Output current tolerance	±5 %
Galvanic isolation	SELV

1) Permitted voltage range

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

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

4) Maximum / At 230 V_{AC}

5) $t_{width} = 200 \mu s$ (measured at 50 % I_{peak})

6) Type B

7) @ 2 Ohm, acc. to EN61547

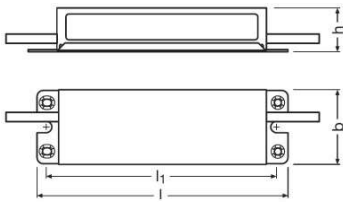
8) Partial Load 17...50 W

9) At full load and 230 V

10) ±5%

Product datasheet

Dimensions & weight



Length	168.0 mm
Width	50.0 mm
Mounting hole spacing, length	152.0 mm
Height	30.0 mm
Product weight	500.00 g
Cable cross-section, input side	0.5 mm ²
Cable cross-section, output side	0.5 mm ²
Wire preparation length, input side	10 mm
Cable/wire length, output side	280 mm ¹⁾
Cable/wire length, input side	280 mm ¹⁾

¹⁾ ± 30 mm

Temperatures & operating conditions

Ambient temperature range	-40...+55 °C
Maximum temperature at tc test point	80 °C ¹⁾
Max.housing temperature in case of fault	120 °C

¹⁾ Maximum at the T_c-point

Lifespan

ECG lifetime	80000 h ¹⁾
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¹⁾ At T_{case} = 70°C at T_c point / 10% failure rate

Expected Lifetime

Product name				
OT 50/120...277/700 P5	ECG ambient temperature [ta]	55	50	45
	Temperature at tc-point [°C]	80	75	70
	Lifetime [h]	50000 ¹⁾	65000 ¹⁾	80000 ¹⁾

Product datasheet

1) Max. 10% failure rate at t_c max and input voltage 230 V_{AC}

Capabilities

Suitable for fixtures with prot. class	I
NTC input	No
Dimmable	No
Number of channels	1

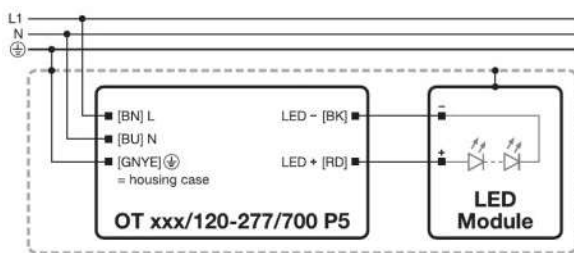
Certificates & standards

Type of protection	IP65
Standards	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to IEC 62384/Acc. to CISPR 15/Acc. to IEC 61547/Acc. to FCC 47 part 15 class B/Acc. to IEC 61000-3-2/Acc. to IEC 61000-3-3
Approval marks – approval	CE / CQC

Logistical data

Temperature range at storage	-25...80 °C
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Wiring Diagram






Wiring diagram

Product datasheet

Additional product information

- 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.
- The driver may increase the output current up to a maximum of 1.5 A in case the input voltage of the load is lower than the allowed minimum output voltage until the short circuit is removed or the correct load is connected. Make sure the system is safely operated, if this event might occur.
- 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.
- Hot-plug of the load or external switching on the secondary side is not allowed.
- The protective earth (GNYE/PE wire, housing) has to be connected to the heat sink of the LED module to improve the capability of the system to withstand a surge and EMI in critical luminaires.
- Time to reach the set output current upon start-up is less than 2 s.
- The driver is intended for built-in use. The luminaire manufacturer is responsible to prevent direct exposure for example to sunlight, water, snow, ice.

Download Data

File
 Certificates 607415_CB Certificate OT 50120-277700 P5
 Declarations of conformity 727242_EC OT
 CAD data 3-dim 730736_CAD data OT 50

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899259003	OT 50/120...277/700 P5	Shipping carton box 20	456 mm x 263 mm x 217 mm	26.02 dm ³	11061.00 g

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.

Disclaimer

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