

OTi 50/120...277/1A4 DX L

OPTOTRONIC Intelligent - DEXAL | Indoor ECG for LED modules and dimmers



Areas of application

- Linear lighting for office, education, industry, storage areas and retail
- DEXAL, easy connection to different partner BMS systems
- Suitable for luminaires of protection class I

Product benefits

- Versatile DEXAL LED driver up to 50 W due to flexible output characteristic
- Integrated DALI (Version-1) Bus power supply for sensors and wireless radios
- Simplified luminaire design for wireless lighting control system and sensors
- Analytics possibility using luminaire data (power, energy, operating hours)
- Fast programming without mains voltage
- Very high efficiency

Product features

- Input voltage: 120...277 V
- UL Class 2 output, SELV
- Available with output current range: up to 1,400 mA
- Constant Lumen Output (CLO)
- Overtemperature protection via external NTC
- End-of-life indication
- DALI Version-1 compatible (Part -101,-102 and -207)

Technical data

Electrical data

Nominal input voltage	120...277 V
Mains frequency	50...60 Hz
Input voltage AC	108...305 V ¹⁾
Current set	Programmable
Total harmonic distortion	< 10 % ²⁾
Power factor λ	> 0.95 ³⁾
ECG efficiency	88 % ⁴⁾
Device power loss	6.5 W
Power loss in stand-by mode	<0.5 W
Inrush current	30 A ⁵⁾
Max. ECG no. on circuit breaker 10 A (B)	10
Max. ECG no. on circuit breaker 16 A (B)	16
Max. ECG no. on circuit breaker 25 A (B)	27
Surge capability (L/N-Ground)	2 kV
Surge capability (L-N)	1 kV
Nominal output voltage	10...56 V
U-OUT (working voltage)	60 V
Nominal output current	600...1400 mA
Output current tolerance	±5 %
Output ripple current (100 Hz)	< 1 %
Nominal output power	15...50 W
Galvanic isolation	SELV
Galvanic isolation primary/secondary	3 kV ⁶⁾
DEXAL Supply Voltage	12 V
DEXAL Peak Supply Current	125 mA

¹⁾ Permitted voltage range

²⁾ At full load

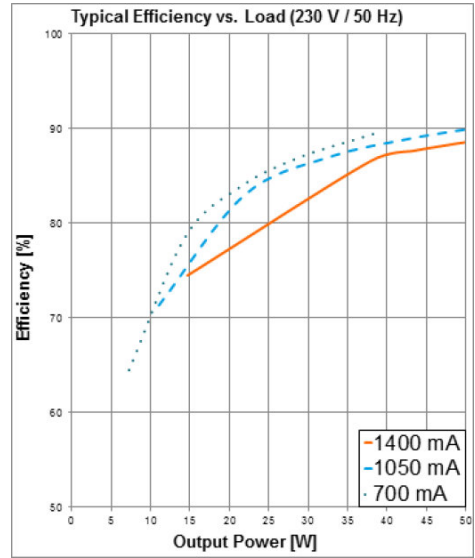
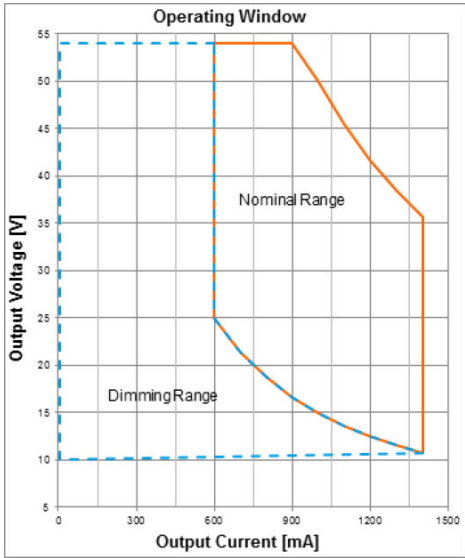
³⁾ Full load at 230 V

⁴⁾ At full load and 230 V

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

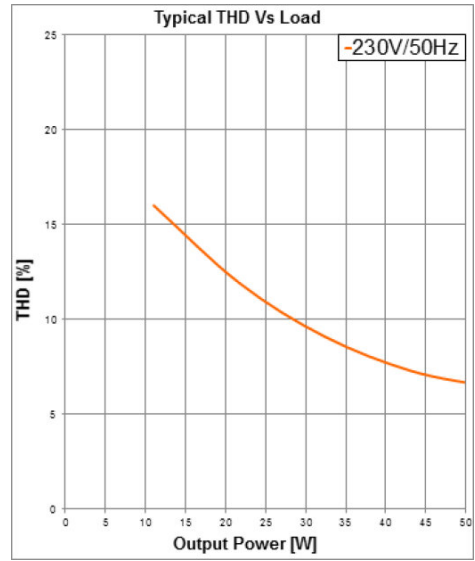
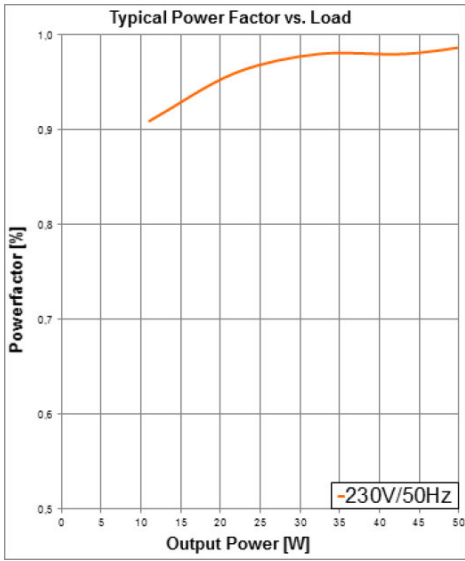
⁶⁾ SELV

Product datasheet



Operating Window

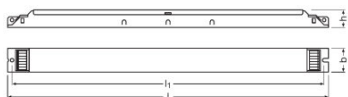
Typical Efficiency v Load 230 V 50 Hz



Typical Power Factor v Load

Typical THD v Load

Dimensions & weight



Length	360.0 mm
Width	30.0 mm
Height	25.4 mm
Mounting hole spacing, length	350.0 mm
Product weight	300.00 g
Cable cross-section, input side	0.5...1.5 mm ² ¹⁾
Cable cross-section, output side	0.5...1.5 mm ² ¹⁾
Wire preparation length, input side	8.5...9.5 mm
Wire preparation length, output side	8.5...9.5 mm

¹⁾ Solid or flexible leads

Colors & materials

Casing material	Metal
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Temperatures & operating conditions

Ambient temperature range	-30...+50 °C
Maximum temperature at tc test point	75 °C ¹⁾
Max.housing temperature in case of fault	110 °C
Permitted rel. humidity during operation	5...85 %

¹⁾ Maximum at the Tc-point

Lifespan

ECG lifetime	50000 h ¹⁾
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¹⁾ At maximum T_c = 75°C / 10% failure rate

Expected Lifetime

Product name				
OTi 50/120...277/1A4 DX L	ECG ambient temperature [ta]	50	40	-
	Temperature at tc-point [°C]	75	65	-
	Lifetime [h]	50000 ¹⁾	75000 ¹⁾	-

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

Additional product data

Product remark	The default dimming mode is DEXAL - linear dimming. For DALI Luminaires the DEXAL mode needs to be switched to DALI mode by the programming software./By default the NTC port is enabled with following values: start derating: 6.3 kOhm, end derating 5.0 kOhm, derating level 50 %./The lowest output current is 6 mA and the minimum percentage of dimming is dependent on the programmed nominal output current of the driver./The metal housing must be grounded via the fixation holes. Disconnect power before service./DEXAL Port has basic insulation to mains./1400 mA type: Default output current is 1050 mA
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Capabilities

Programming interface	Prog+
Dimmable	Yes
Dimming interface	DALI / DEXAL
Dimming range	1...100 %
Dimming method	Analog and PWM dimming ¹⁾
Constant lumen function	Programmable
Overheating protection	Automatic reversible
Overload protection	Automatic reversible
Short-circuit protection	Automatic reversible
No-load proof	Yes
Max. cable length to lamp/LED module	-
Suitable for fixtures with prot. class	I
Suitable for emergency lighting	No
Type of connection, output side	Push terminal

¹⁾ < 450 mA PWM, > 450 mA amplitude dimming

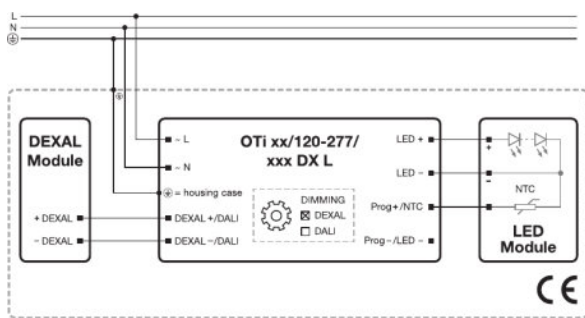
Certificates & standards

Approval marks – approval	CE / CB
Standards	Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 55015, CISPR 15/Acc. to EN 61547/Acc. to IEC 62386-101/Acc. to IEC 62386-101:Ed1/Acc. to IEC 62386-207:Ed1
Type of protection	IP20

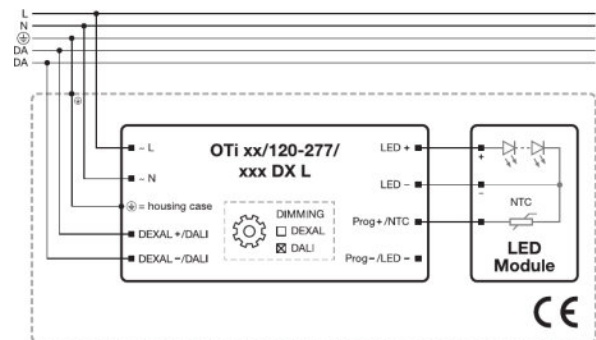
Logistical data

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

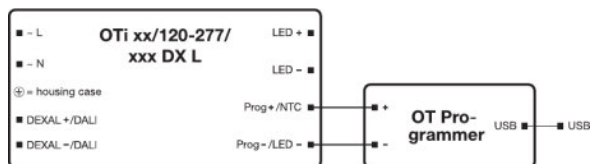


Wiring diagram



Wiring diagram

Product datasheet







Wiring diagram

Equipment / Accessories

- OT Programmer hardware for configuration of DEXAL ECGs necessary
- Programmable only via OT Programmer software

Download Data

File	
	Brochures DEXAL Intra-luminaire, bi-directional interface (EN)
	Certificates CB Test Certificate DK-56190-A1-UL
	Declarations of conformity EU Declaration of Conformity 3611078
	Product movie Dexal (EN)

Product datasheet

ISOLATION	Input / Mains	SD	EQUI	DALI	LEDset	LED Output	Case
Input / Mains	-	-	-	Basic	-	SELV	Basic
SD	-	-	-	-	-	-	-
EQUI	-	-	-	-	-	-	-
DALI	Basic	-	-	-	-	Supplementar y	Supplementar y
LEDset	-	-	-	-	-	-	-
LED Output	SELV	-	-	Supplementar y	-	-	Basic
Case	Basic	-	-	Supplementar y	-	Basic	-

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899345836	OTi 50/120...277/1A4 DX L	Shipping carton box 20	376 mm x 174 mm x 141 mm	9.22 dm ³	6281.00 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.