

OTi 30/120...277/1A0 DX L

OPTOTRONIC Intelligent | – DEXAL SELV



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 family 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 family 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	0/50/60 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	4.2 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	150...1050 mA
Default output current	1050 mA
Output current tolerance	±5 %
Output ripple current (100 Hz)	< 1 %
Nominal output power	10...30 W
Galvanic isolation	SELV
DEXAL Supply Voltage	12 V
DEXAL Peak Supply Current	125 mA

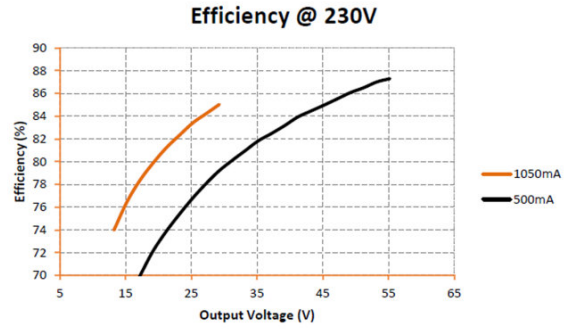
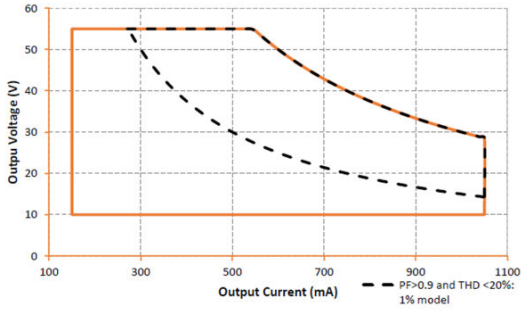
¹⁾ Permitted voltage range

²⁾ At full load

³⁾ Full load at 230 V

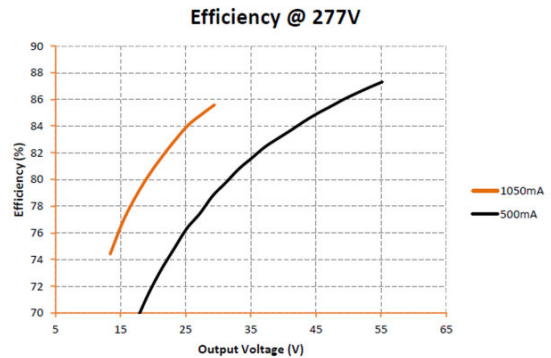
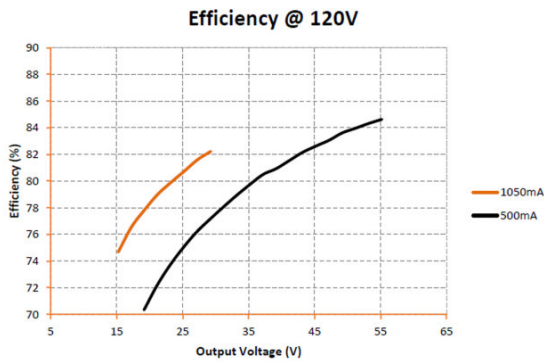
⁴⁾ At full load and 230 V

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



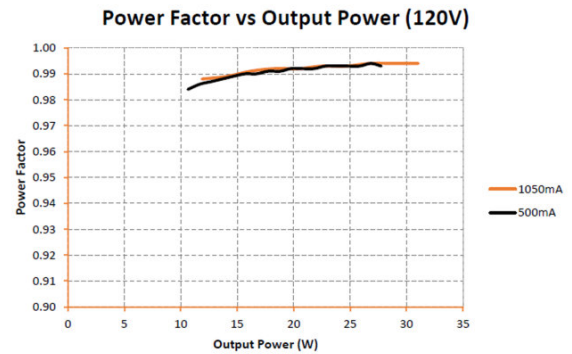
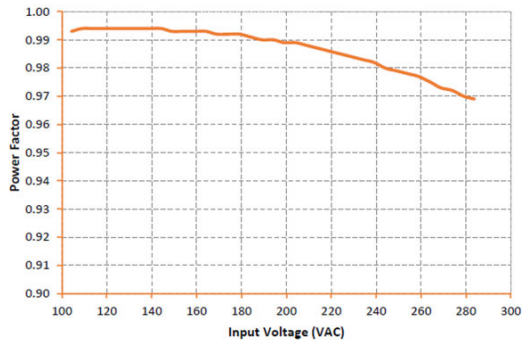
Operating Window

Typical Efficiency v Load 230 V 50 Hz



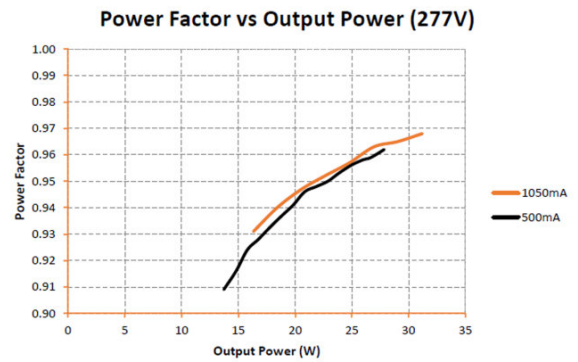
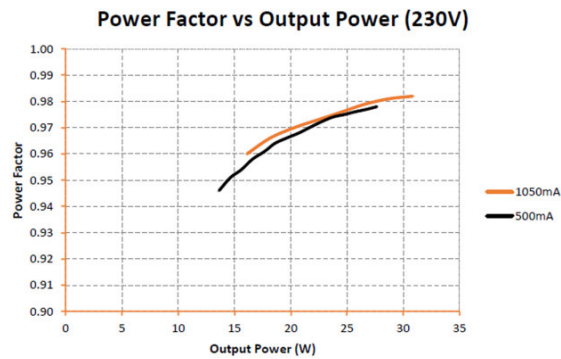
Typical Efficiency v Load 120 V 60 Hz

Typical Efficiency v Load 277 V 60 Hz



Typical Power Factor v Load

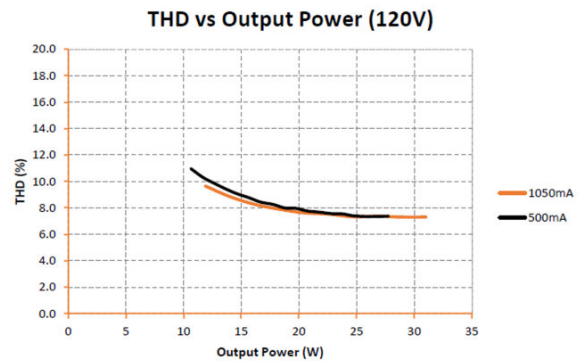
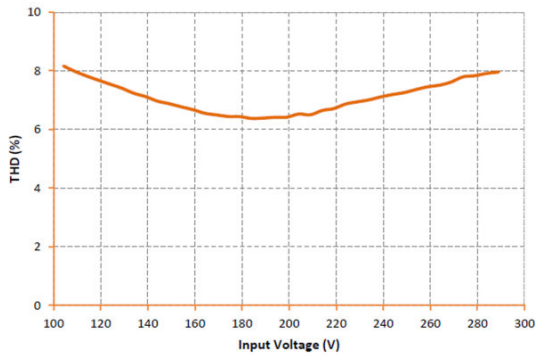
Typical Power Factor v Load



Typical Power Factor v Load

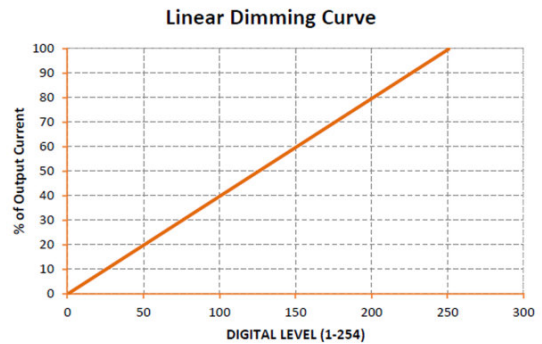
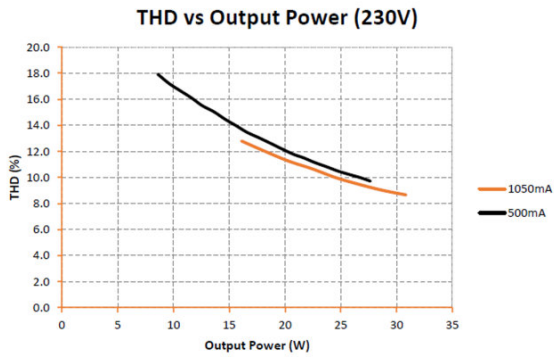
Typical Power Factor v Load

Product datasheet



Typical THD v Load

Typical THD v Load



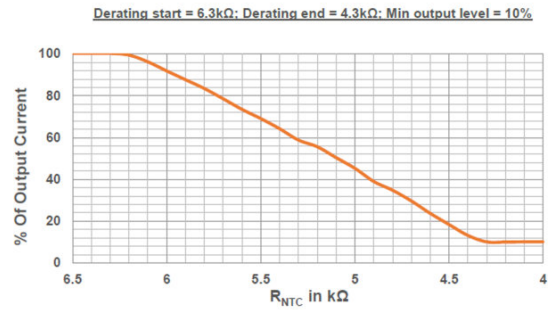
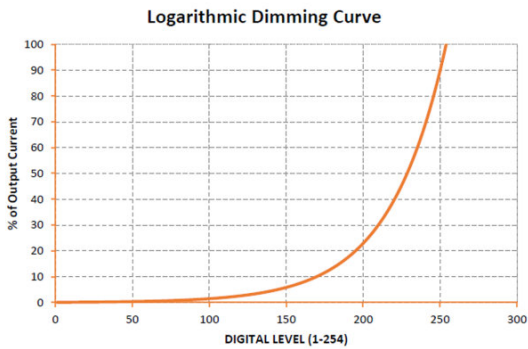
Typical THD v Load

0-10 V Control Input



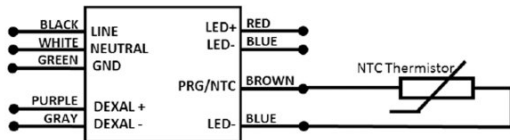
Intelligent LED Solutions, Unit 2, Berkshire Business Centre, Berkshire Drive, Thatcham, Berkshire, RG19 4EW
 Telephone: +44 (0)1635 294606 Email: info@i-led.co.uk Web: www.i-led.co.uk
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0-10 V Control Input

LED Thermal Protection perc. of Out Curr



LED Thermal Protection - Wiring Diagram

Dimensions & weight

Mounting hole spacing, length	350.0 mm
Product weight	300.00 g
Cable cross-section, input side	0.5...1.5 mm ² 1)



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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
Length	360.0 mm
Width	30.0 mm
Height	25.4 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
Temperature range at storage	-25...80 °C
Permitted rel. humidity during operation	5...85 % ²⁾

¹⁾ Maximum at the T_c-point

²⁾ Maximum 56 days/year at 85 %

Lifespan

ECG lifetime	50000 h ¹⁾
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¹⁾ At maximum T_c = 75°C / 10% failure rate / At T_c = 65°C / 10% failure rate

Expected Lifetime

Product name				
OTi 30/120...277/1A0 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



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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./1050 mA type: Default output current is 700 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, input side	Push terminal
Type of connection, output side	Push terminal

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

Programming

Tuner4TRONIC	Yes
Tuner4TRONIC Field App	No
Programming device	DALI

Programmable features

Operating Current	Yes
Tuning Factor	No
Constant Lumen	Yes
Lamp Operating Time	Yes
End of Life	Yes



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Thermal Protection	Yes
Driver Guard	No
DALI Settings	No
DEXAL Power Supply Unit	Yes
Emergency Mode	No
DALI-2 Luminaire Data	No
Configuration Lock	No
Soft Switch Off	No
Dim to Dark	No
TouchDIM + Sensor	No
Corridor Functionality	No

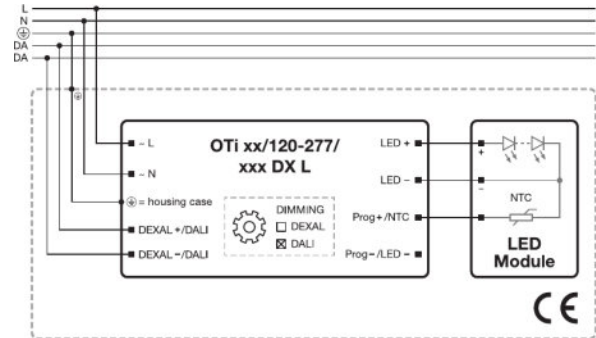
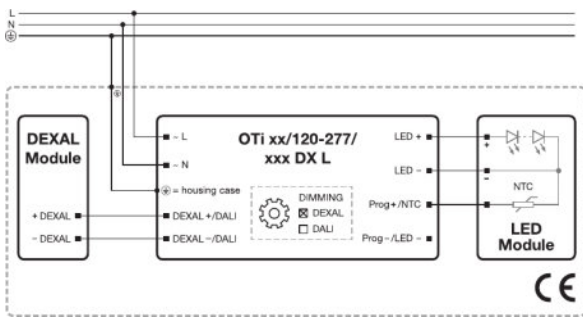
Certificates & standards

Approval marks – approval	CE / CB
Standards	Acc. to IEC 61347-1/Acc. to IEC 61347-2-13/Acc. to EN 55015, CISPR 15/Acc. to EN 61547/Acc. to IEC 62386-101/Acc. to IEC 62386-102:Ed1/Acc. to IEC 62386-207:Ed1
Type of protection	IP20

Logistical data

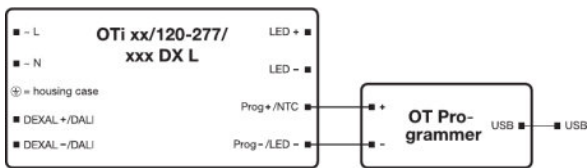
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Wiring Diagram



Wiring diagram

Wiring diagram



Wiring diagram

Product datasheet








Equipment / Accessories

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

Additional product information

- The DEXAL interface is polarity sensitive, even if the DEXAL bus power supply in the driver is turned off. Therefore the polarity of all connected drivers should not be mixed.

Download Data

File
 Product Datasheet OTi30 DEXAL 1A0 DX L (EN)
 Product Datasheet DEXAL Technology Datasheet
 Brochures Technical application guide DEXAL LED drivers (EN)
 Brochures Smart Building Component Brochure
 CAD data 3-dim 3D CAD Model: OTi50 and OTi30 DEXAL Drawings
 Product movie DEXAL Overview Video
 Video Overview of DEXAL Technology

ISOLATION	Input / Mains	DALI	LED Output	Case
Input / Mains	-	Basic	SELV	Basic
DALI	Basic	-	Supplementary	Supplementary
LED Output	SELV	Supplementary	-	Basic
Case	Basic	Supplementary	Basic	-

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899345829	OTi 30/120...277/1A0 DX L	Shipping carton box 20	376 mm x 174 mm x 141 mm	9.22 dm ³	6281.00 g



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Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
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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.

Data privacy

This OSRAM driver can be configured using the Tuner4TRONIC software. This requires registering on www.myosram.com and downloading the Tuner4TRONIC software from the Internet. The Tuner4TRONIC software enables users to access and view the operational data of a luminaire or driver via the corresponding programming interfaces. A password key (Config Lock) must be set up in the driver via the Tuner4TRONIC software in order to control which users can access and view operational data. Follow the instructions for password setup. To grant an external person or company rights to access or view operational data, you can assign password keys. In this case, however, you are responsible for ensuring that the third party concerned takes notice of the information described here. However, OSRAM can read out operating data from devices for maintenance and service purposes even when a password key has been assigned. In individual cases, OSRAM will also use its access rights in order to optimize or improve driver hardware and driver functions. In accordance with data privacy principles, any user of operating data (luminaire manufacturers, third parties with access rights) must ensure that personal data (e.g. name, address, location IDs) are only merged with the prior written consent of the person (end user) concerned. The respective user of the operating data is responsible for providing evidence of consent.

Disclaimer

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