

## OTi 50/120...277/1A4 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 <sup>1)</sup>
Current set	Programmable
Total harmonic distortion	< 10 % <sup>2)</sup>
Power factor $\lambda$	> 0.95 <sup>3)</sup>
ECG efficiency	88 % <sup>4)</sup>
Device power loss	6.5 W
Power loss in stand-by mode	<0.5 W
Inrush current	30 A <sup>5)</sup>
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
Default output current	1400 mA
Output current tolerance	±5 %
Output ripple current (100 Hz)	< 1 %
Nominal output power	15...50 W
Galvanic isolation	SELV
DEXAL Supply Voltage	12 V
DEXAL Peak Supply Current	125 mA

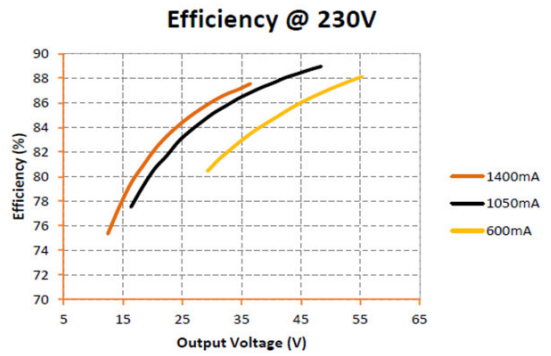
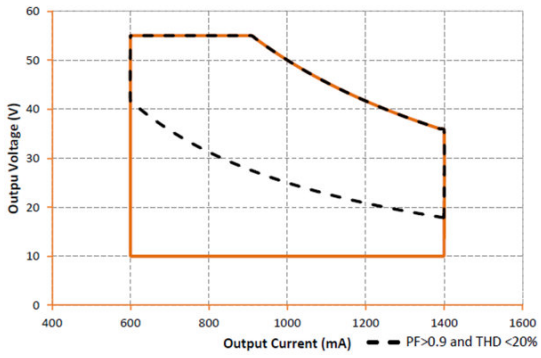
<sup>1)</sup> Permitted voltage range

<sup>2)</sup> At full load

<sup>3)</sup> Full load at 230 V

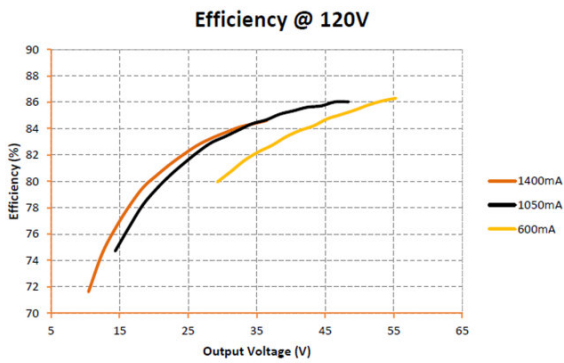
<sup>4)</sup> At full load and 230 V

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

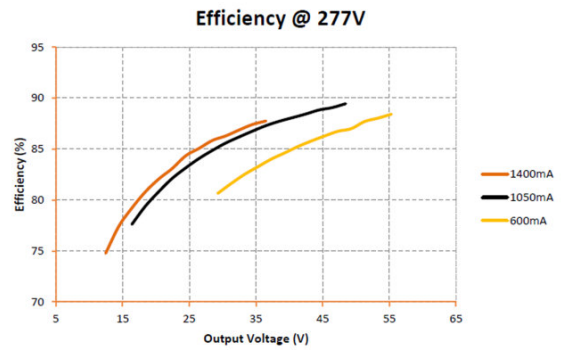


Operating Window

Typical Efficiency v Load 230 V 50 Hz

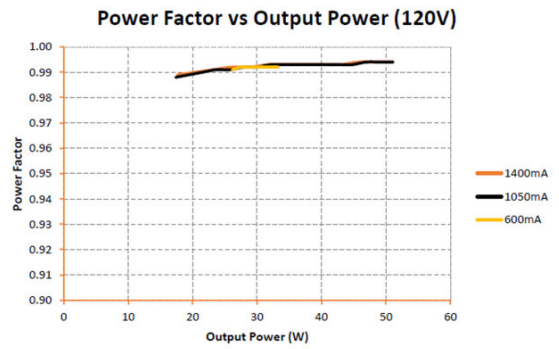
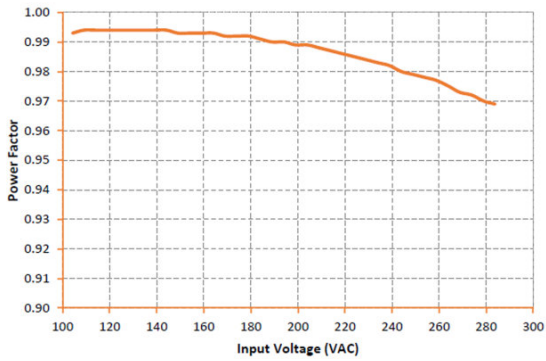


Typical Efficiency v Load 120 V 60 Hz



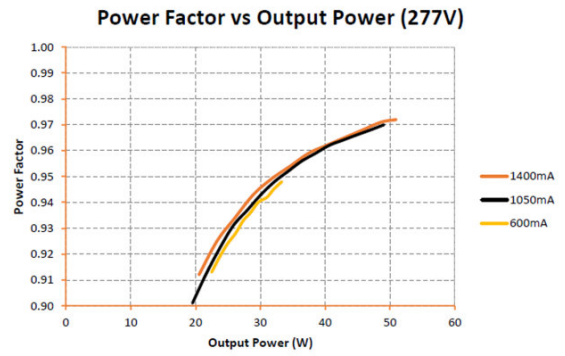
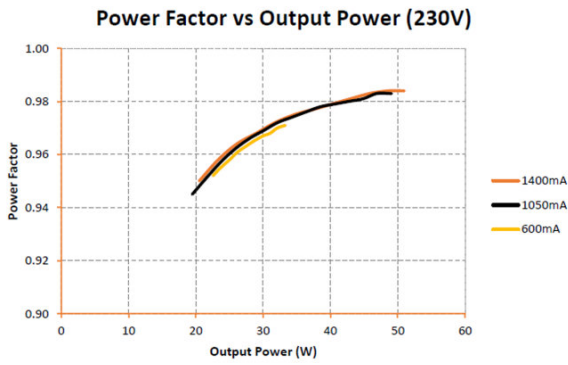
Typical Efficiency v Load 277 V 60 Hz

# Product datasheet



Typical Power Factor v Load

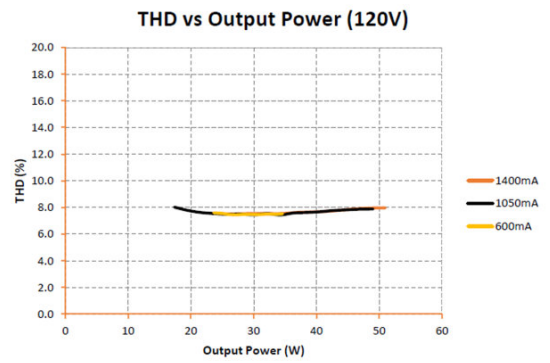
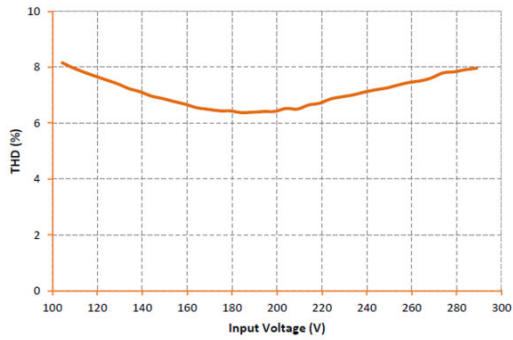
Typical Power Factor v Load



Typical Power Factor v Load

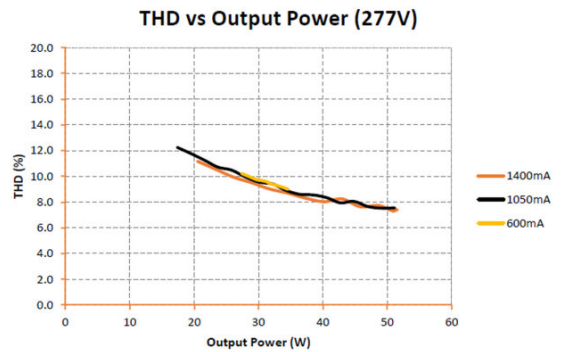
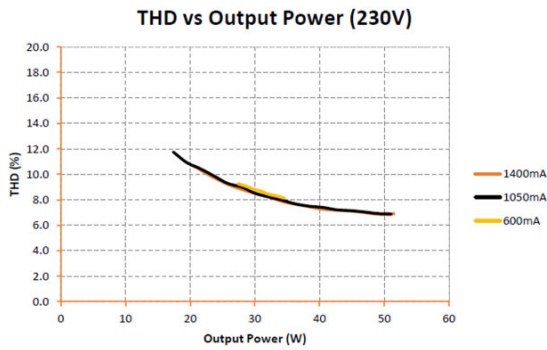
Typical Power Factor v Load

# Product datasheet



Typical THD v Load

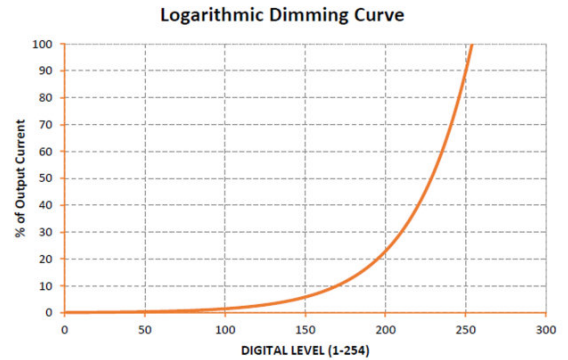
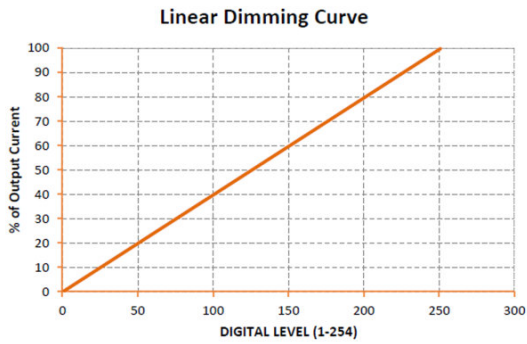
Typical THD v Load



Typical THD v Load

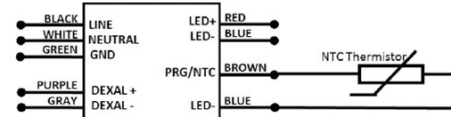
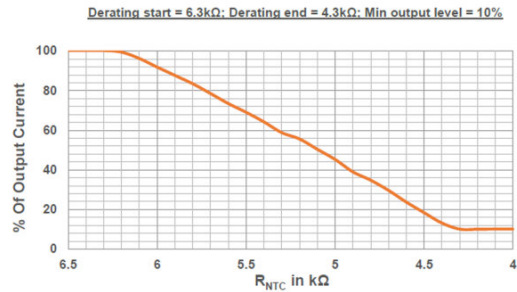
Typical THD v Load

# Product datasheet



0-10 V Control Input

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 <sup>2</sup> 1)

## Product datasheet

<b>Cable cross-section, output side</b>	0.5...1.5 mm <sup>2</sup> <sup>1)</sup>
<b>Wire preparation length, input side</b>	8.5...9.5 mm
<b>Wire preparation length, output side</b>	8.5...9.5 mm
<b>Length</b>	360.0 mm
<b>Width</b>	30.0 mm
<b>Height</b>	25.4 mm

<sup>1)</sup> Solid or flexible leads

### Colors & materials

<b>Casing material</b>	Metal
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### Temperatures & operating conditions

<b>Ambient temperature range</b>	-30...+50 °C
<b>Maximum temperature at tc test point</b>	75 °C <sup>1)</sup>
<b>Max.housing temperature in case of fault</b>	110 °C
<b>Temperature range at storage</b>	-25...80 °C
<b>Permitted rel. humidity during operation</b>	5...85 % <sup>2)</sup>

<sup>1)</sup> Maximum at the T<sub>c</sub>-point

<sup>2)</sup> Maximum 56 days/year at 85 %

### Lifespan

<b>ECG lifetime</b>	50000 h <sup>1)</sup>
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<sup>1)</sup> At maximum T<sub>c</sub> = 75°C / 10% failure rate / At T<sub>c</sub> = 65°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 <sup>1)</sup>	75000 <sup>1)</sup>	-

<sup>1)</sup> Max. 10% failure rate at tc max and input voltage 230 V<sub>AC</sub>

### Additional product data

## Product datasheet

<b>Product remark</b>	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

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

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

### Programming

<b>Tuner4TRONIC</b>	Yes
<b>Tuner4TRONIC Field App</b>	No
<b>Programming device</b>	DALI

### Programmable features

<b>Operating Current</b>	Yes
<b>Tuning Factor</b>	No
<b>Constant Lumen</b>	Yes
<b>Lamp Operating Time</b>	Yes
<b>End of Life</b>	Yes



## Product datasheet

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 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

Commodity code	850440829000
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### 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
 User instruction DEXAL Intra-luminaire, bi-directional interface (EN)
 Brochures Technical application guide DEXAL LED drivers (EN)
 Brochures Smart Building Component Brochure

## Product datasheet



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
4052899345836	OTi 50/120...277/1A4 DX L	Shipping carton box 20	376 mm x 174 mm x 141 mm	9.22 dm <sup>3</sup>	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.

### Data privacy

This OSRAM driver can be configured using the Tuner4TRONIC software. This requires registering on [www.myosram.com](http://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.

## Product datasheet

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### Disclaimer

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