

## OPTOTRONIC Driver with DEXAL Technology

57432 / OTi85/120-277/2A3 DX L



The OSRAM OPTOTRONIC LED Programmable Driver with DEXAL Technology, is a non-proprietary, intra-luminaire interface that enables bi-directional communications between the driver and the fixture integrated component. It provides exact luminaire-specific data, including diagnostics, to light management systems. Fixture manufacturers can design smart fixtures and streamline the configuration process by leveraging DEXAL as a standard bi-directional communications interface.



### Product family features

- Two-way communication and power between driver and fixture integrated components
- Helps streamline luminaire configuration and manufacturing process (one driver can support multiple LMS)
- Enables exact luminaire-specific data including: - Power consumption - Temperature profile - Operating hours - Diagnostics
- OEM Programmable with 1mA resolution to perfectly match LED load and maximize performance
- Integrated OEM programmable features include: - Constant lumen maintenance - End-of-life indication - LED thermal protection - Dim-to-off - Soft start
- Programming doesn't require powering up or connecting the power supply to AC line voltage
- Specification grade dimming down to 1%
- Slim form factors
- Input voltage: - Universal 120-277 V<sub>AC</sub> 50/60H
- UL Class 2 output for safe operation

### Areas of application

- Indirect/direct
- Linear
- Recessed troffer

# Product datasheet

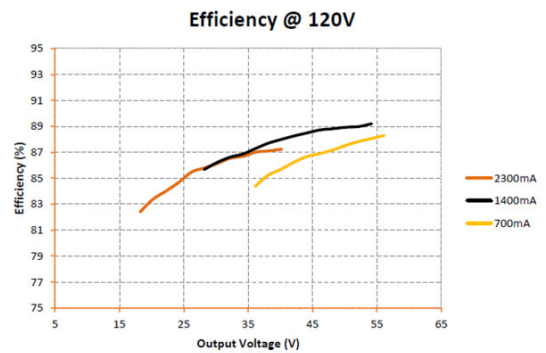
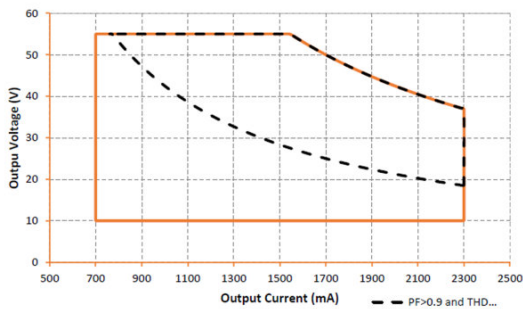
## Technical data

### General product information

Product Name	OTi851202772A3DXL 10/CS 1/SKU
Ordering Abbreviation	OTi85/120-277/2A3 DX L
Brand Name	OSRAM
General Description	85W DEXAL driver for Indoor linear applications
Programmable Features	Output Current/Dimming: Linear & Log./DEXAL/LED thermal protection/Constant lumen output/End-of-life indicator
Programming Tool	51645 & 51647/51648
Type	Constant Current, Class2
Product Number	57432

### Electrical data

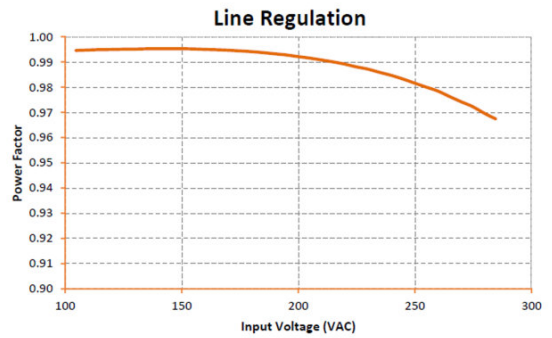
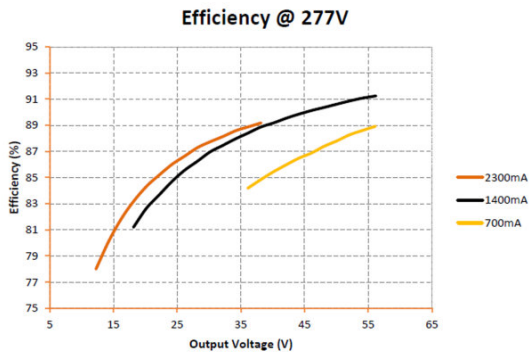
Nominal Total Max Wattage	85 W
Nominal Voltage	120-277 V



OTi85 DEXAL Driver Operating Range

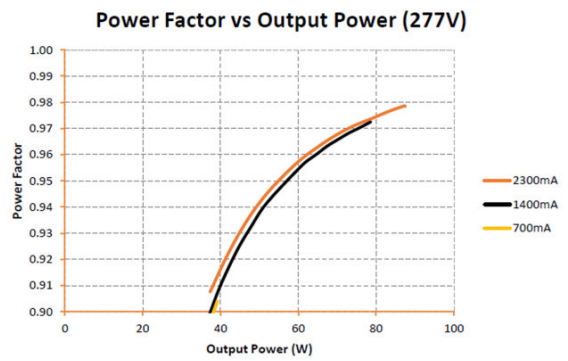
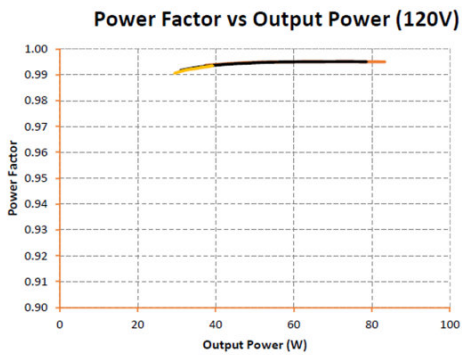
OTi85 DEXAL Driver Efficiency 120V

# Product datasheet



OTi85 DEXAL Driver Efficiency 277V

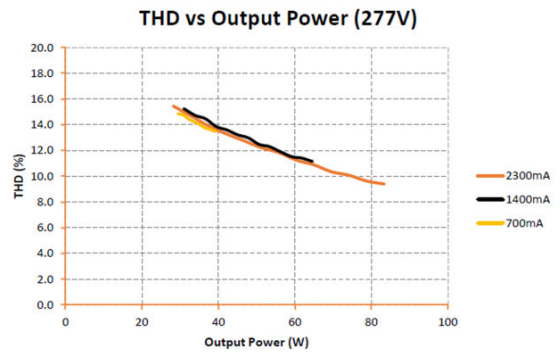
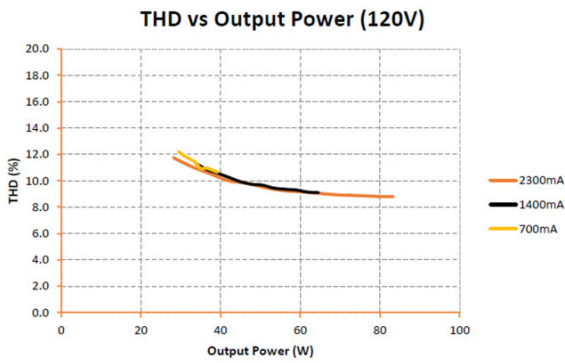
OTi85 DEXAL Driver PF vs Input



OTi85 DEXAL Driver PF vs Output 120V

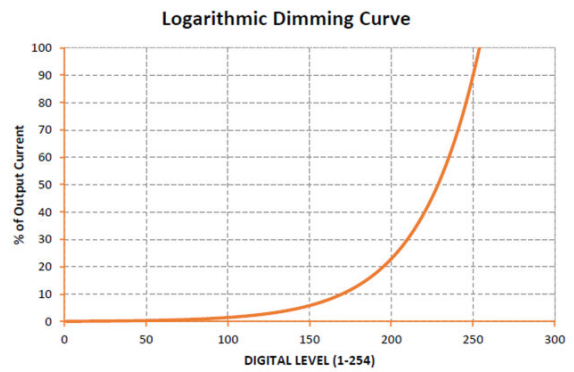
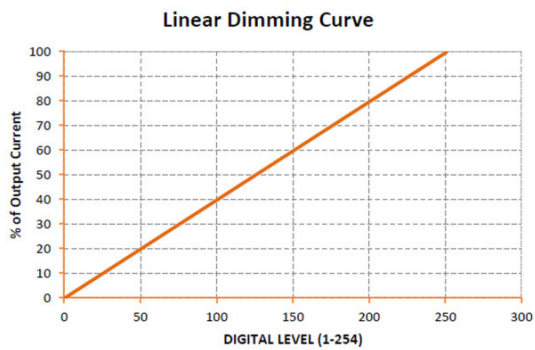
OTi85 DEXAL Driver PF vs Output 277V

# Product datasheet



OTi85 DEXAL Driver THD vs Output 120V

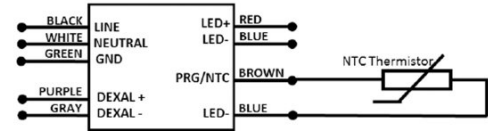
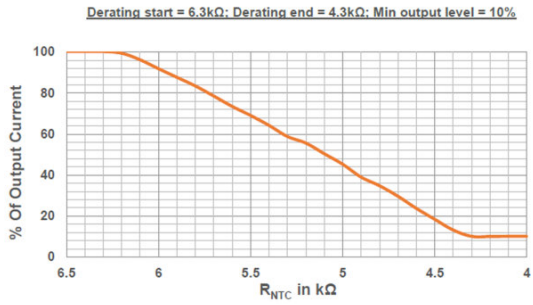
OTi85 DEXAL Driver THD vs Output 277V



OTi85 DEXAL Driver Dimming Curve

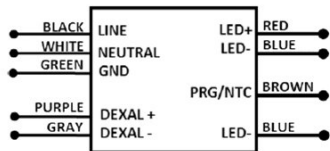
OTi85 DEXAL Driver Logarithmic Dimming Curve

# Product datasheet



OTi85 DEXAL Driver LED Thermal Protection NTC Output Current Chart1

OTi85 DEXAL Driver LED Thermal Protection Wiring Diagram



OTi85 DEXAL Driver Wiring Diagram

## Electrical specifications - Dimming

Dimming Control	DEXAL (Digital Dimming) <sup>1)</sup>
Dimming Range	1-100% <sup>2)</sup>

## Product datasheet

<b>Dimming Type</b>	Analog
<b>Standby Power</b>	0.17W(120V) 0.35W(277V) <sup>3)</sup>

<sup>1)</sup> The default mode for the interface is DEXAL. This combines the power and communication on the single bus. In this mode, the polarity of the interface is sensitive. For applications employing DALI systems (wired or wireless), the power supply on the interface can be turned off via the programming software. This makes the interface non-polarized. CAUTION: More than one power supply present

<sup>2)</sup> The minimum output current for both LED drivers is 6mA.

<sup>3)</sup> This does not include the sensor power in DEXAL mode.

### Electrical specifications - Input

<b>Efficiency @ Full load 120V</b>	≥87%
<b>Efficiency @ Full load 277V</b>	≥89%
<b>Frequency Range (Hz)</b>	50 – 60 Hz (+/- 10%)
<b>Input Current (A) 120V</b>	0.83
<b>Input Current (A) 277V</b>	0.36
<b>Input Voltage (VAC)</b>	120V-277V (+/- 10%)
<b>Inrush Current (Apk, T@50% of Apk) 120V</b>	33.1, 170μs
<b>Inrush Current (Apk, T@50% of Apk) 277V</b>	79.6, 150μs
<b>Power Factor @ Full load 120V</b>	>0.95
<b>Power Factor @ Full load 277V</b>	>0.95
<b>THD @ Full load 120V</b>	<10%
<b>THD @ Full load 277V</b>	<15%

### Electrical specifications - LED thermal protection (NTC)

<b>NTC Value Active Range</b>	≤25kΩ <sup>1)</sup>
<b>Temperature Derating start</b>	User defined

<sup>1)</sup> External NTC cannot leave the fixture. The PRG/ NTC control circuit terminals or lead wires are not isolated.

### Electrical specifications - Output

<b>LED Power-Up Time</b>	<1sec
<b>Line Regulation</b>	<3%
<b>Load Regulation</b>	<3%
<b>Max. Output Power (W)</b>	85W
<b>Output Current (mA)</b>	700-2300mA (1mA step)
<b>Output Ripple Current</b>	<20% @ 1400mA
<b>Output Short-Circuit Protection</b>	Yes, non-latching
<b>Output Voltage (VDC)</b>	10-56VDC
<b>Over Load Protection</b>	Yes, non-latching
<b>Over Temperature Protection</b>	Foldback at 95°C
<b>Over Voltage Protection</b>	Yes, non-latching

### Environmental specifications

## Product datasheet

<b>Ambient Operating Temperature</b>	-30°C to 50°C
<b>Case Temperature (Tc)</b>	85°C (50kHrs) <sup>1)</sup>
<b>EMI Compliance</b>	FCC Part 15 Class A
<b>Max. Relative Humidity (%)</b>	85% non-condensing
<b>Max. Storage Temp.</b>	70°C
<b>Sound Rating</b>	Class A
<b>Transient Protection</b>	NEMA SSL 1 - 2010 / Non-Roadway 2.5KV
<b>UL Environmental Rating</b>	Dry & Damp
<b>UL File number</b>	E320395

<sup>1)</sup> The lowest output current is 6mA and the minimum percentage of dimming is dependent on the programmed output current of the driver.

### Packaging Information

Item number	EAN/UPC	Packaging	Quantity	Outside dimensions l x w x h	Gross weight
57432	4052899552753	Unpacked (SKU)	1	16.7 in x 1.2 in x 1 in	0.9 lb
57432	4052899552760	Shipping box (Case)	10	18 in x 6.2 in x 2.4 in	9.3 lb

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.

### Accessories Optional

Product name	Accessory name	Item number	EAN/UPC
OTi85/120-277/2A3 DX L	OT PROGRAMMER	51645	▶ 4052899209640

### Disclaimer

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