

OPTOTRONIC® Driver with DEXAL™ Technology

An intra-luminaire, bi-directional digital communications interface



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.

DEXAL is compatible with a growing list of industry leading light management systems:



Key Features & Benefits

- 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
- Programming doesn't require powering up or connecting the power supply to AC line voltage
- Specification grade dimming down to 1%
- Dim-to-off
- Soft start
- Slim form factors
- Input voltage:
 - Universal 120-277V_{AC} 50/60Hz
- UL Class 2 output for safe operation

Product Offering

Maximum Power	Minimum Dimming	Output Current Range
85W	1%	700 - 2300mA
50W	1%	600 - 1400mA
30W	1%	150 - 1050mA

Configuration Overview



Application Information

- Indirect/direct
- Linear
- Recessed troffer

Configurable Features



Specifications and Certifications



Light is OSRAM

OSRAM

Electrical Specifications

Maximum Output Power (W)	Nominal Input Voltage (V _{AC})	Maximum Input Current (A)	Power Factor	THD	Line Transient	Efficiency	Environmental Rating	UL File #
85W	120-277V _{AC} 50/60 Hz	0.83 @ 120V _{AC} 0.36 @ 277V _{AC}	>0.9	<20%	ANSI C62.41 Cat.A 2.5kV	>85%	Dry & Damp	E320395
50W	120-277V _{AC} 50/60 Hz	0.52 @ 120V _{AC} 0.22 @ 277V _{AC}	>0.9	<20%	ANSI C62.41 Cat.A 2.5kV	>85%	Dry & Damp	E320395
30W	120-277V _{AC} 50/60 Hz	0.31 @ 120V _{AC} 0.14 @ 277V _{AC}	>0.9	<20%	ANSI C62.41 Cat.A 2.5kV	>85%	Dry & Damp	E320395

Ordering Information

Item Number	Ordering Abbreviation	Total Output Power	Output Current Range	Default Current	Output Voltage Range (V _{DC})	Dimming Interface ²	Dimming Range ³	LED Thermal Protection
OTi85								
57432	OTi85/120-277/2A3 DX L	85W	700-2300mA (programmable)	1400mA	10-55V	DEXAL	1-100%	Yes
OTi50								
78034	OTi50/120-277/1A4 DX L	50W	600-1400mA (programmable)	1050mA	10-56V	DEXAL	1-100%	Yes
OTi30								
78033	OTi30/120-277/1A0 DX L	30W	150-1050mA ¹ (programmable)	700mA	10-56V	DEXAL	1-100%	Yes

1. Output current below 450mA is in PWM (not applicable for 85W)

2. 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. For specific compatibility questions, please contact your OSRAM Digital Lighting Systems representative.

3. The minimum output current for both LED drivers is 6mA.

Ordering Guide

OTi	85	/	120-277	/	1A0	DX	L
OPTOTRONIC® Intelligent	Output Wattage 85 = 85W 50 = 50W 30 = 30W		Input Voltage		Output Current (Max) 2A3 - 2300mA 1A4 - 1400mA 1A0 - 1050mA	DEXAL	L = Linear

Accessories



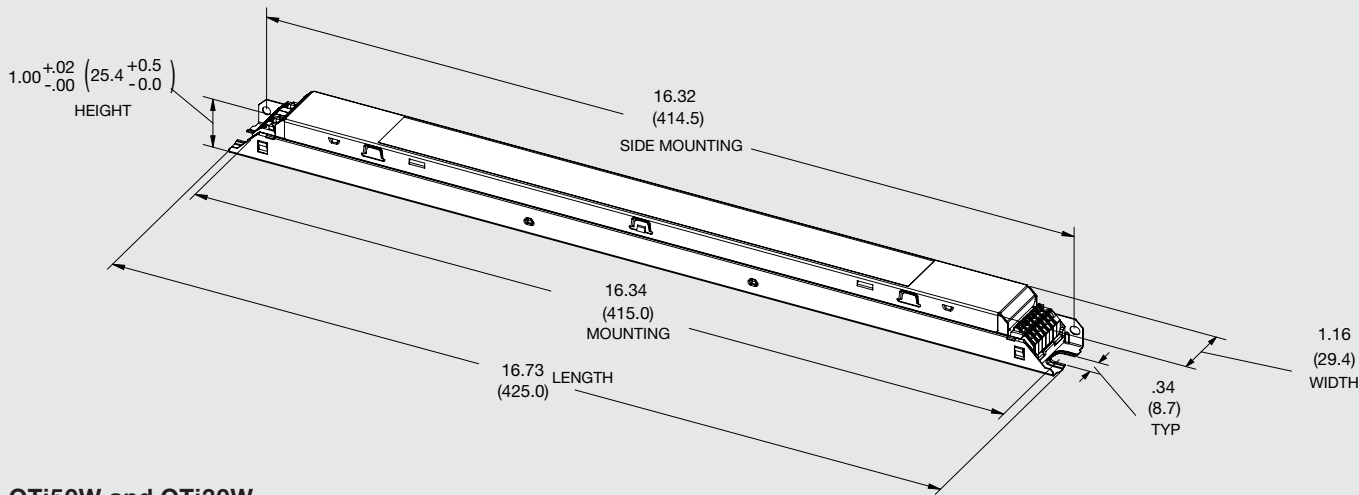
Item Number	Ordering Abbreviation	Description	Required Accessory
51645	OT Programmer	USB Programming Tool	Yes
51647	OTLinearHandheldPRGtool	Programming Tool	No
51648	OTLinearAutoPRGTool	Programming Tool	No

Minimum and Maximum Ratings

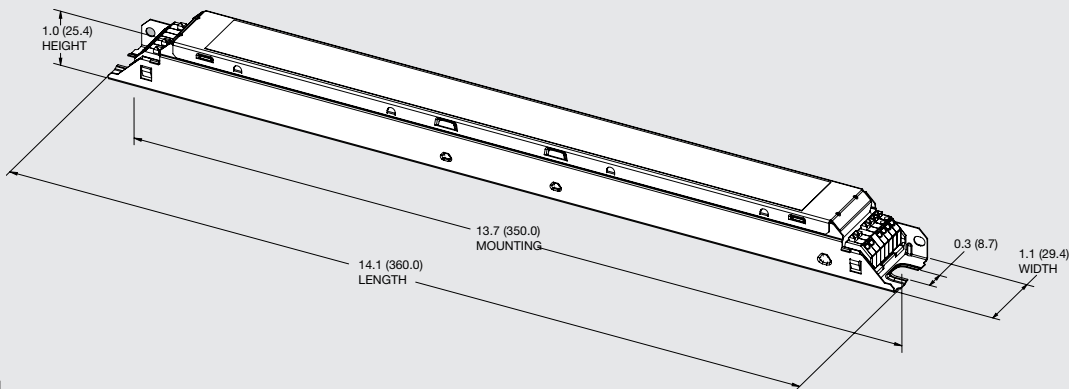
Parameter	Values
Input Voltage Range	108 - 305V _{AC}
Maximum Case Temperature (T _c point)	90°C (194°F)
Maximum Case Temperature for 5 year Life and Warranty	75°C (165°F) for 30/48/50W, 80°C (176°F) for 85W
Ambient Operating Temperature (reference)	-30°C to 50°C (-22°F to 122°F)
Storage Temperature	70°C Max (150°F)
Maximum Relative Humidity	85% (Non-condensing)

Assembly Diagram

OTi85W

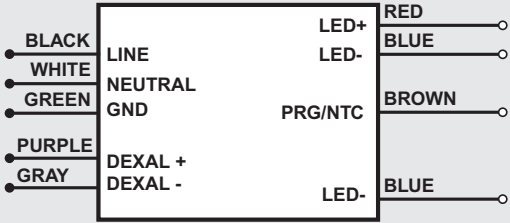


OTi50W and OTi30W

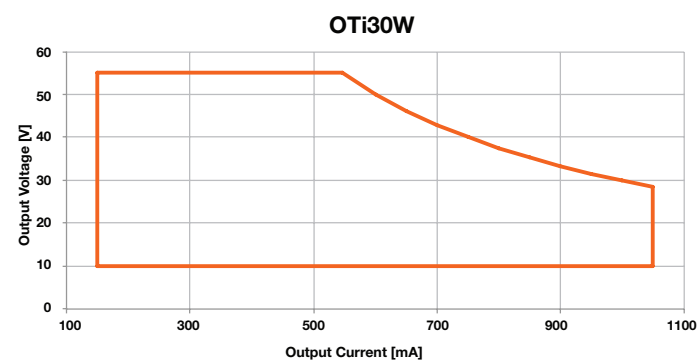
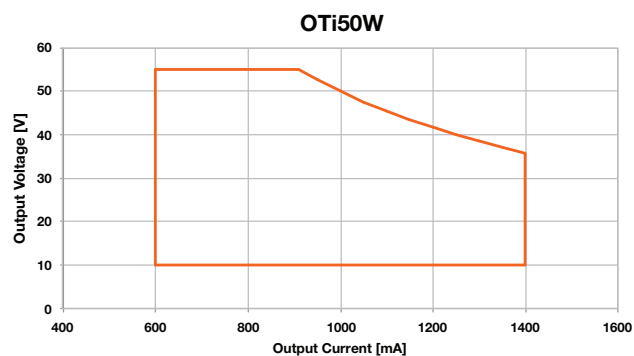
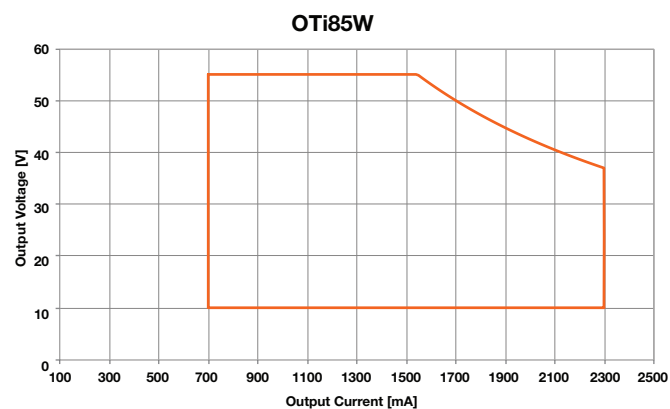


Dimensions: in [mm]

Wiring Diagram



Operating Range



Packaging

OTi50W and OTi30W

Quantity: 20 pieces per case

Weight: 0.7 lbs ea./13.85 lbs per case (approx.)

OTi85W

Quantity: 10 pieces per case

Weight: 0.904 lbs ea./9.04 lbs per case (approx.)

Warranty

OPTOTRONIC® Products are covered by our LED Module, OPTOTRONIC Power Supply or Control Warranty. For additional warranty information or to download the warranty registration form visit www.osram.us/warranty.

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ECS299R4 11-19

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