

OPTOTRONIC® Programmable LED Driver with DEXAL® Technology



The OPTOTRONIC LED Programmable Driver with DEXAL Technology, is a non-proprietary, intra-luminaire interface, based on DALI-2 communications, 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
- DALI-2 and D4i certified
- DEXAL interface based on DALI-2 communication
- 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 120-277VAC
 - 50/60H
- UL Class 2 output for safe operation

Product Offering

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

Configuration Overview



Application Information

Applications

- Indirect/direct
- Linear
- Recessed troffer

Specifications and Certifications



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 #
30W	120-277V _{AC} 50/60Hz	0.31 @ 120V 0.14 @ 277V	>0.9	<20%	ANSI C62.41 Category A 2.5KV	>85%	Dry & Damp	E320395
50W	120-277V _{AC} 50/60Hz	0.52 @ 120V 0.22 @ 277V	>0.9	<20%	ANSI C62.41 Category A 2.5KV	>85%	Dry & Damp	E320395
85W	120-277V _{AC} 50/60Hz	0.83 @ 120V 0.36 @ 277V	>0.9	<20%	ANSI C62.41 Category A 2.5KV	>85%	Dry & Damp	E320395

Ordering Information

Item Number	NAED	Ordering Abbreviation	Total Output Power	Output Current Range	Default Current	Output Voltage Range (V _{oc})	Dimming Interface ²	Dimming Range ³	LED Thermal Protection
OTi30									
*2743Y8	78033	OTi30/120-277/1A0 DX L	30W	150-1050mA ¹ (programmable)	700mA	10-56V	DEXAL	1-100%	Yes
OTi50									
*2743Y9	78034	OTi50/120-277/1A4 DX L	50W	600-1400mA ¹ (programmable)	1050mA	10-56V	DEXAL	1-100%	Yes
OTi85									
*2743WF	57432	OTi85/120-277/2A3 DX L	85W	700-2300mA (programmable)	1400mA	10-55V	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	NAED	Ordering Abbreviation	Description	Required Accessory
*274A17	51645	OT Programmer	USB Programming Tool	Yes
*2747CR	51647	OTLinearHandheldPRGtool	Programming Tool	No
*2743V1	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)	-20°C to 50°C (-4°F to 122°F)
Storage Temperature	70°C Max (150°F)
Maximum Relative Humidity	85% (Non-condensing)

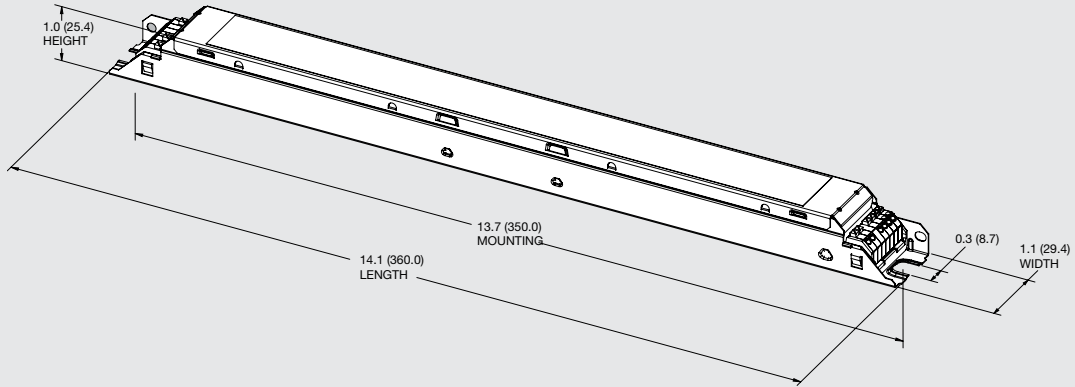
Dimmer/Sensor Compatibility

Manufacturer	Part Number
Lutron Electronics	Vive Integral Fixture Control (DFCSJ-OEM-OCC/RF)
Enlighted Inc.	FS-D22 (Two-wire fixture mount sensor)
Magnum Energy Solutions	Mx-OPUS-MLD/MLDHB
NEDAP Light Controls	Luxon IOT Node
Casambi	CBU-DCS
Digital Lumens, Inc.	45678

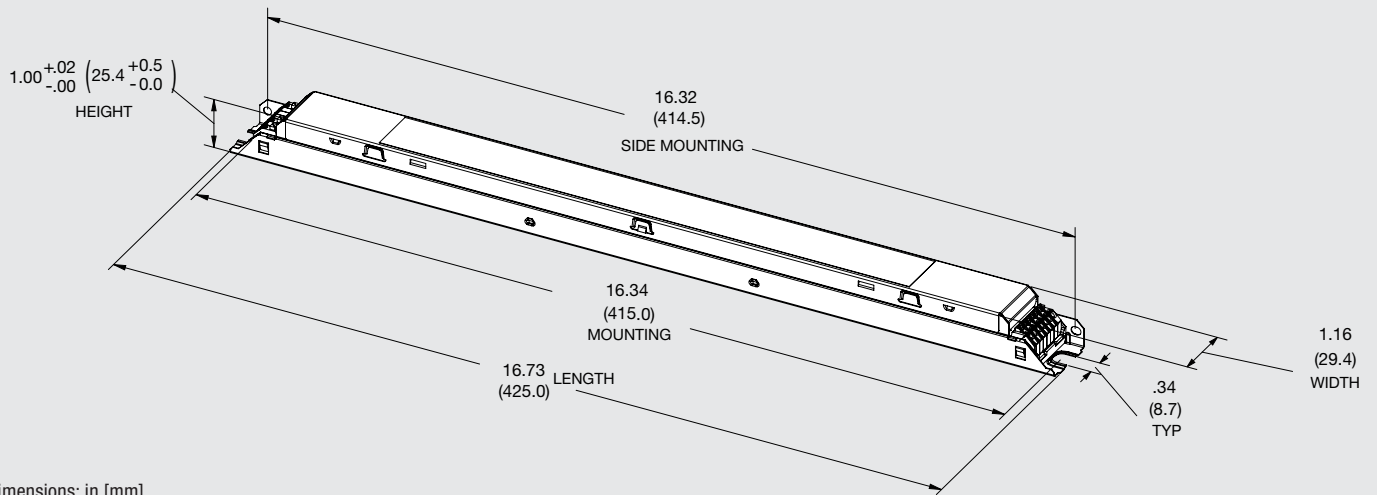
Note: The absence of a dimmer from this chart does not necessarily imply incompatibility. Please reference the dimmer manufacturer's installation.

Assembly Diagram

OTi30W and OTi50W

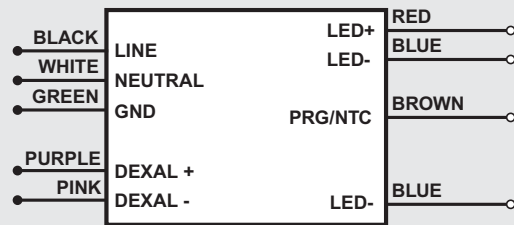


OTi85W



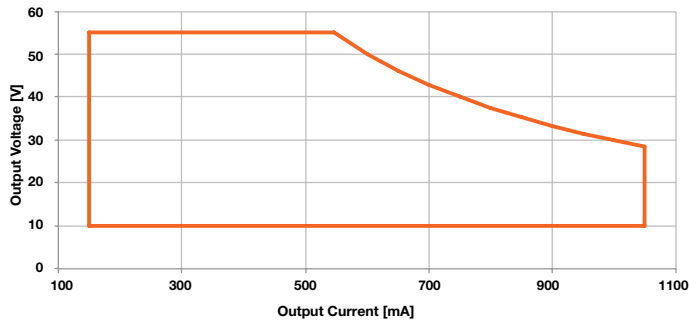
Dimensions: in [mm]

Wiring Diagram

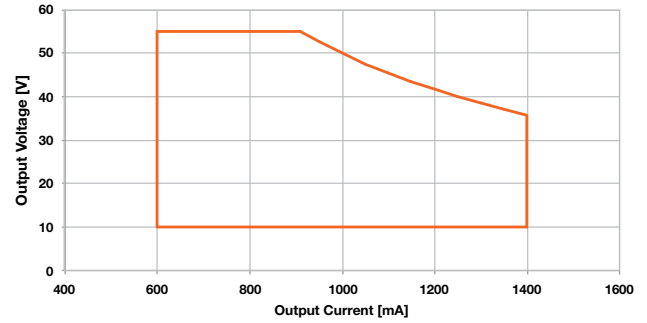


Operating Range

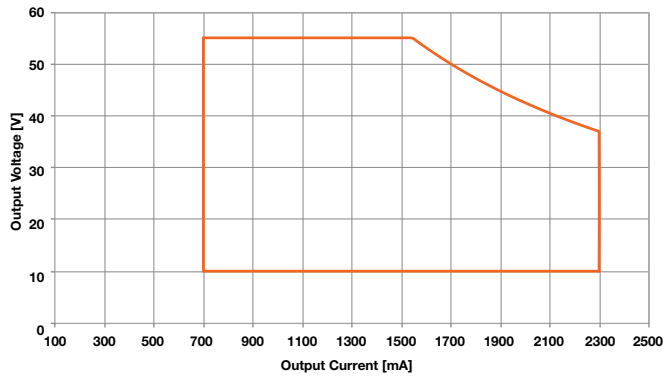
OTi30W



OTi50W



OTi85W



Packaging

OTi30W and OTi50W

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

eldoLED OPTOTRONIC® Products are covered by a 5-year limited warranty. Complete warranty terms can be found at: <https://www.eldoled.com/legal/terms-and-conditions>

eldoLED

One Lithonia Way
Conyers, GA 30012
United States

+1 877 353 6533

nasupport@eldoLED.com

www.eldoLED.com

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Specifications subject to change without notice. Actual performance may differ as a result of end-user environment and application.