

# OPTOTRONIC®

## Programmable Constant Current Industrial Dimmable LED Drivers



The OPTOTRONIC programmable dimmable family consists of highly efficient, constant current LED drivers for industrial applications. One click programming through the OPTOTRONIC Programmer allows OEMs to configure the output current with 1mA resolution. Also fully customizable by the OEM is an OSRAM proprietary feature called AstroDIM. AstroDIM is autonomous dimming for night time power reduction based on an internal timer that can be set for an entire year.

Our industrial LED drivers are designed for UL Class 2 operation which significantly reduce the complexity of OEM's fixture designs. The drivers are designed in an industry standard form factor with a wide operating range along with best-in-class features including:

- True 1% dimming with Dim to Off
- 6kV native surge protection and 4kV EFT (Extreme Industrial)
- Programmable Aux (12V/20V/24V)
- 1W typical standby power

### Configuration Overview

#### 1. Program Units



### Key Features & Benefits

- OEM programmable with 1mA resolution to perfectly match LED load and maximize performance
- Dimming down to 1% on 0-10V dimmers
- Integrated OEM programmable features include
  - AstroDIM
  - LEDset
  - Constant lumen maintenance
  - LED thermal protection
  - AUX output
  - Dim to Off
- Programming doesn't require powering up or connecting the power supply to AC line voltage
- High levels of line transient protection for outdoor applications (6kV, 4kV EFT)
- UL Damp Rated
- IP66 Rated
- Available in both
  - Universal Input Voltage 120-277V<sub>AC</sub> 50/60Hz
  - 347-480V<sub>AC</sub> 50/60Hz
- UL Class P Listed

The OPTOTRONIC Programmer does not require the driver to be powered up or connected to AC line voltage while programming. The drivers are available in dimming to 1% with built-in 0-10V dimming enabling direct integration and operation with standard dimmers, sensors, as well as energy and light management systems.

Dedicated auxiliary DC output enables easy integration of fixture integrated sensors thus eliminating need of secondary DC supply.

In case of LED module thermal overload, the family's integrated LED thermal protection function allows the driver to reduce the output current. This function is fully customizable by the customer.

### Product Offering

Maximum Power	Input Voltage	Minimum Dimming	Output Current Range
95W	120-277V	1%	700-2750mA
95W	347-480V	1%	700-2750mA

#### 2. Configurable Features



## Application Information

### Applications

- Indoor Industrial fixtures
  - Mid-bay fixtures
  - High-bay fixtures
- Area
- Roadway
- Parking garages

### Specifications and Certifications



## Electrical Specifications

Maximum Output Power (W)	Nominal Input Voltage (V <sub>AC</sub> )	Maximum Input Current (A)	Power Factor	THD	Line Transient	Efficiency	Environmental Rating	UL File #	Type HL
95W	120-277V <sub>AC</sub> 50/60Hz	0.92 @ 120V 0.40 @ 277V	>0.9	<20%	ANSI C62.41 Category B 6kV	≥90%	Dry & Damp	E320395	Yes
95W	347-480V <sub>AC</sub> 50/60Hz	0.32 @ 347V 0.23 @ 480V	>0.9	<20%	ANSI C62.41 Category B 6kV	≥90%	Dry & Damp	E320395	Yes

## Ordering Information

Item Number	Ordering Abbreviation	Total Output Power	Output Current Range	Default Current Setting	Output Voltage Range (V <sub>OC</sub> )	Dimming Control	Dimming Range	LED Thermal Protection <sup>1</sup>	Class P
<b>Input Voltage 120-277V (0-10V)</b>									
57509	OTi95W/UNV/2750C/2DIM+/P6	95W	700-2750mA (programmable)	2700mA	15-54V	0-10V	1-100%	Yes	Yes
57510	OTi95W/UNV/2750C/2DIM+/P6/AUX	95W	700-2750mA (programmable)	2700mA	15-54V	0-10V	1-100%	Yes	Yes
<b>Input Voltage 347-480V</b>									
57511	OTi95W/HV/2750C/2DIM+/P6/AUX	95W	700-2750mA (programmable)	2700mA	15-54V	0-10V	1-100%	Yes	Yes

1. LED thermal protection is programmable.

## Ordering Guide

OT	95W	/	UNV	/	2750C	/	2DIM+	/	P6	/	AUX
OTi=OPTOTRONIC® Intelligent	Output Wattage		Input Voltage UNV=120-277V HV=347-480V		Max. Output Current (mA)		0-10V Dimming AstroDIM		IP66		Vaux

## Accessories



Item Number	Ordering Abbreviation	Description	Required Accessory
51645	OT Programmer	USB Programming Tool	Yes
79360	OTOutdoorPRGTool	Programming Tool for Outdoor Drivers	No

## Minimum and Maximum Ratings

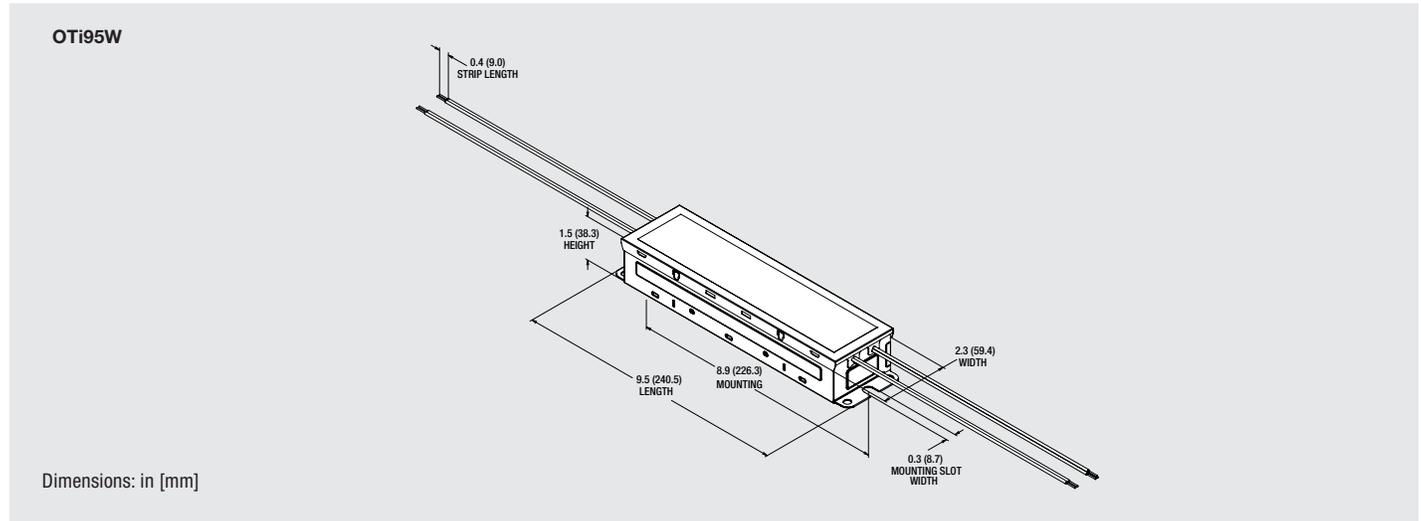
Parameter	Values
Input Voltage Range	108-305V <sub>AC</sub> ; 312-528V <sub>AC</sub>
Maximum Case Temperature (T <sub>c</sub> point)	85°C for OTi95W UNV and HV
Maximum Case Temperature for 5-Year Life and Warranty	85°C for OTi95W UNV and HV
Ambient Operating Temperature (reference)	-40°C to 60°C for OTi95W UNV; -40°C to 55°C for OTi95W HV
Storage Temperature	70°C Max (158°F)
Maximum Relative Humidity	95% (Non-condensing)

## Light Engine Compatibility

Item Number	Ordering Abbreviation	Nominal Drive Current (mA)	Nominal Power (W)	No. of Boards Supported by One Driver (Parallel Connection)	System Level Lumen Output*	OTi95W Outdoor/Industrial LED Driver
59601, 59602, 59603, 59604	PLHSG1-Lin-4000-8xx-559x20	550	25.4	3	12000	Yes
59605, 59606, 59607, 59608	PLHPG1-Lin-4000-8xx-559x20	510	22.2	4	16000	Yes
59609, 59610, 59611, 59612	PLHPG1-Lin-7500-8xx-559x40	955	41.8	2	15000	Yes

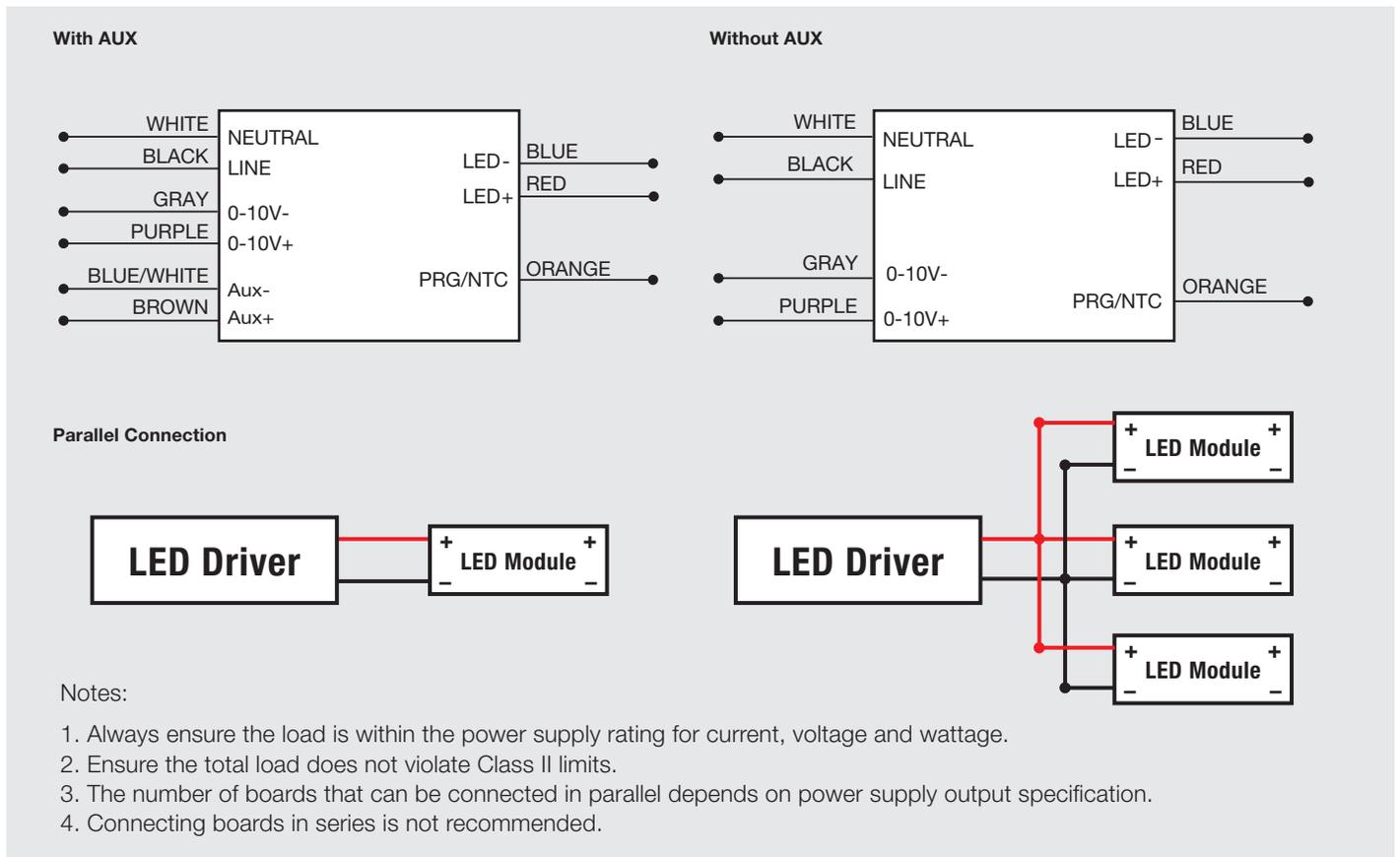
\*Measured at nominal temperature for performance specification at  $T_c = 35^\circ\text{C} \pm 5^\circ\text{C}$

## Assembly Diagram

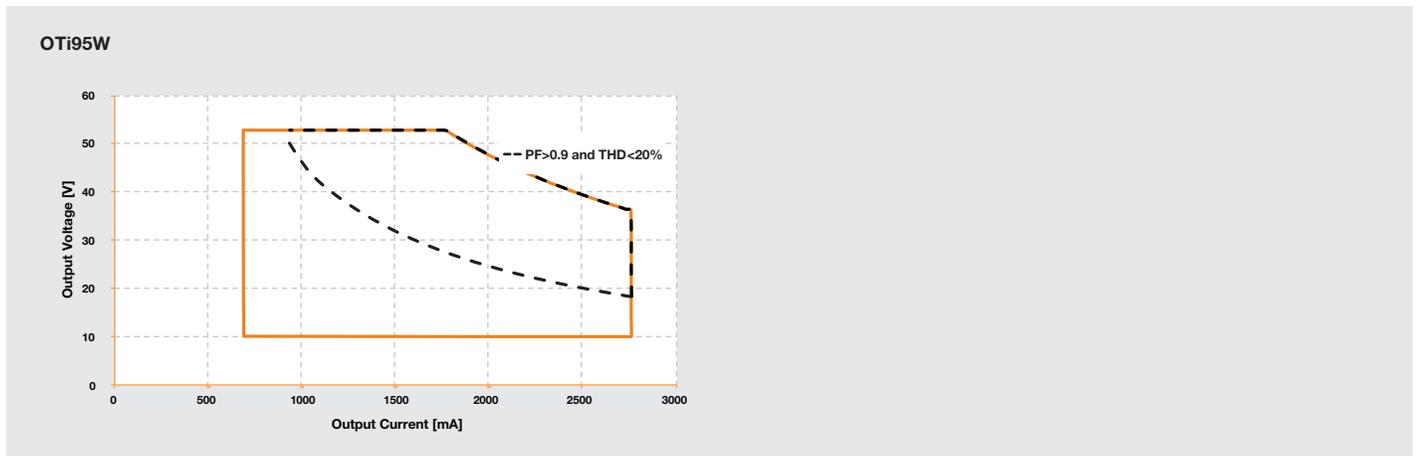


Wiring Diagram for OTi95W

## Wiring Diagram



## Operating Range



## Packaging

OTi95W

Quantity: 10 pieces per case

Weight: 1.98 lbs ea./19.8 lbs

## 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](http://www.osram.us/warranty).

OSRAM SYLVANIA Inc.  
200 Ballardvale Street  
Wilmington, MA 01887 USA  
877-636-5267  
[www.osram.us/ds](http://www.osram.us/ds)

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