

OPTOTRONIC Linear Programmable LED Drivers

79632 / OTi 48/120-277/2A0 DIM L



The OPTOTRONIC programmable dimmable family consists of highly efficient linear constant current LED power supplies. One click programming through the OPTOTRONIC programmer allows OEMs to configure the output current with 1mA resolution. Also fully customizable by customers are the end of life indicator, LED thermal protection and the constant lumen maintenance features. The OPTOTRONIC programmer does not require the power supply to be powered up or connected to AC line voltage while programming. The power supplies are available with built-in 0-10V dimming protocol with models available in 1% to 10%. The auxiliary output has the capability to power various sensors and is optimized for the OSRAM Connected Lighting Module (CLM).



Product family features

- 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% or 10% on 0-10V dimmers
- Available optional auxiliary output to power 12 V, 20 V, and 24 V low power applications
- Slim form factors
- Input voltage: - Universal 120-277 V_{AC} 50/60Hz - 347 V_{AC} 50/60 Hz
- UL Class 2 output for safe operation

Areas of application

- Indirect/direct
- Linear
- Recessed troffer

Product datasheet

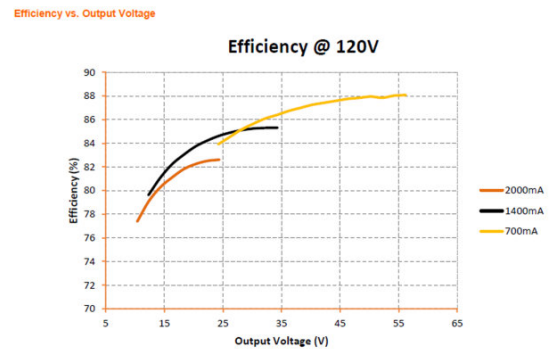
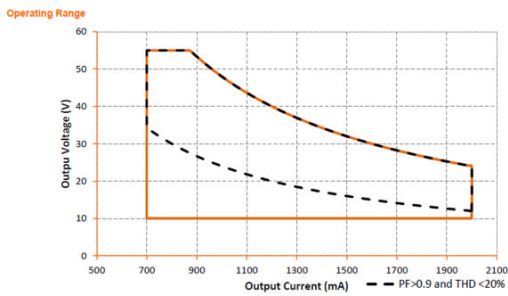
Technical data

General product information

Product Name	OTI481202772A0DIML 10/CS 1/SKU
Ordering Abbreviation	OTi 48/120-277/2A0 DIM L
Brand Name	OSRAM
General Description	48-Watt Linear programmable constant current LED power supply. 0-10VDimmable
Programmable Features	Output current/Dimming level/Dim-to-off, Soft Start/LED thermal protection/Auxiliary output voltage/Constant lumen output/End-of-life indicator
Programming Tool	51645 & 51647/51648
Type	Constant Current, Class2
Product Number	79632

Electrical data

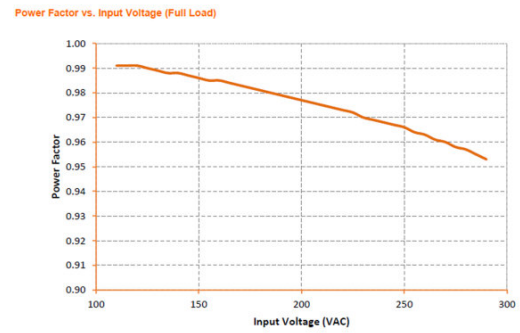
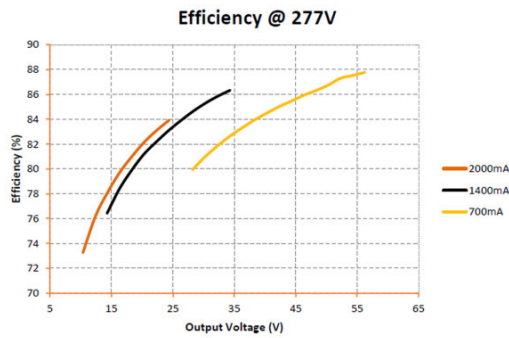
Nominal Total Max Wattage	48 W
Nominal Voltage	120-277 V



OTi48 Linear Driver Operating Range

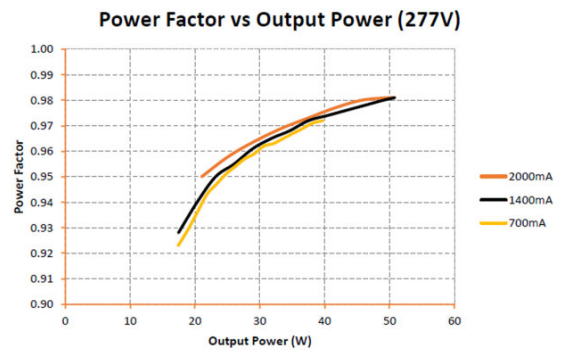
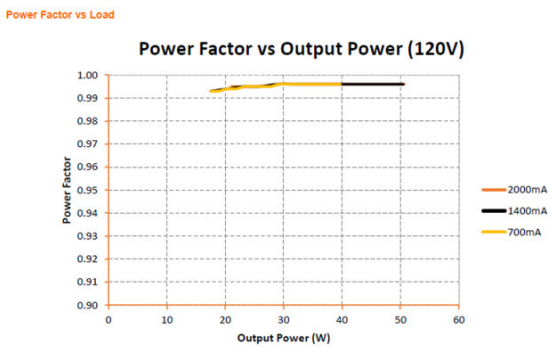
OTi48W Linear Driver Efficiency 120V vs Output Voltage

Product datasheet



OTi48W Linear Driver Efficiency 277V vs Output Voltage

OTi48 Linear Driver Power Factor vs Input Voltage

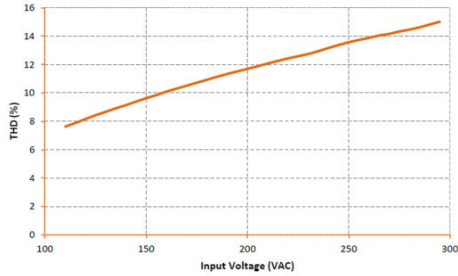


OTi48 Linear Driver Power Factor vs Output Voltage 120V

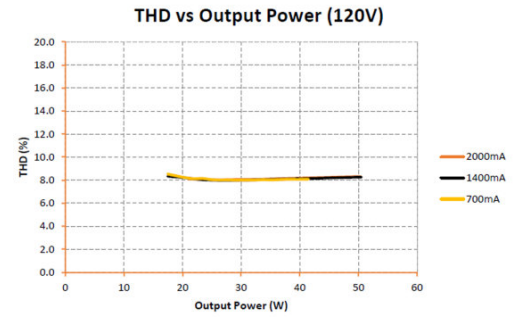
OTi48 Linear Driver Power Factor vs Output Voltage 277V

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THD vs. Input Voltage (Full Load)



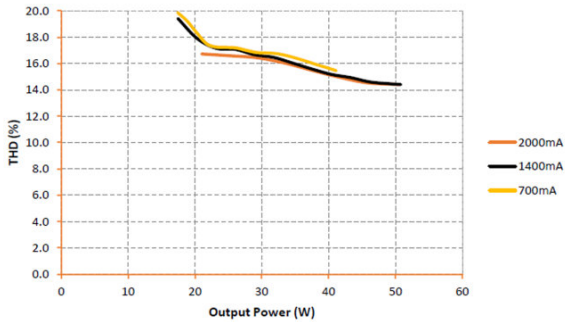
THD vs Load



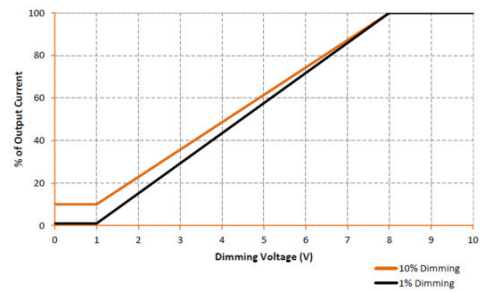
OTi48 Linear Driver THD vs Input Voltage

OTi48 Linear Driver THD vs Output Voltage 120V

THD vs Output Power (277V)



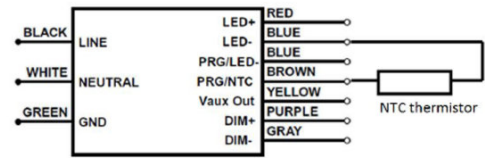
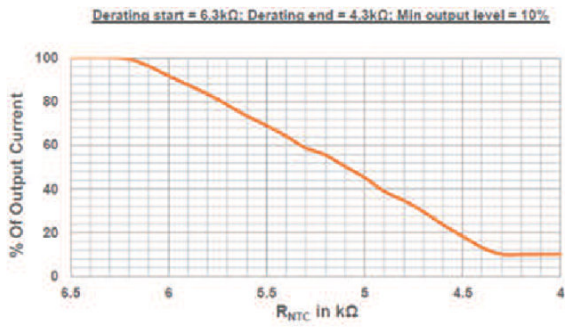
Dimming Curve



OTi48 Linear Driver THD vs Output Voltage 277V

OTi48W Linear Driver Dimming Curve

Product datasheet

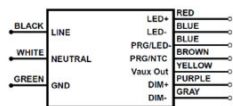


OTi48 Linear Driver LED Thermal Protection Output Current

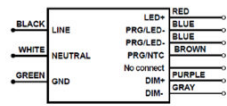
OTi48 Linear Driver LED Thermal Protection Wiring Diagram

Wiring Diagram

Wiring diagram for AUX output models



Wiring diagram for non-AUX output models



OTi48W Wiring Diagram

Dimensions & weight

Ballast Height (in)	1.0000 in
Ballast Length (in)	11.0240 in

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Ballast Width (in)	1.1570 in
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Electrical specifications - Auxiliary output (for AUX models only)

Output Current (mA) Aux Only	40
Output Voltage (VDC) Aux Only	12/20/24V (configurable)
Voltage Regulation	+/- 10%

Electrical specifications - Dimming

Dimming Control	0 – 10V (Isolated) ¹⁾
Dimming Input Isolation [CRM]	2.5kV
Dimming Range	10-100%
Dimming Type	Analog , PWM ($\geq 1\text{kHz}$) ²⁾
Dim-to-Off OFF/ON	0.8V
Source/Sink Current	0.2mA

¹⁾ CAUTION: More than one power supply present

²⁾ The output is in PWM mode under 350mA. The lowest output current is 2mA for 1% dimmable driver models.

Electrical specifications - Input

Efficiency @ Full load 120V	$\geq 85\%$
Efficiency @ Full load 277V	$\geq 85\%$
Frequency Range (Hz)	50 – 60 Hz (+/- 10%)
Input Current (A) 120V	0.52
Input Current (A) 277V	0.23
Input Voltage (VAC)	120V-277V (+/- 10%)
Inrush Current (Apk, T@50% of Apk) 120V	1.25, 55s
Inrush Current (Apk, T@50% of Apk) 277V	2.53, 43s
Power Factor @ Full load 120V	>0.9
Power Factor @ Full load 277V	>0.9
THD @ Full load 120V	<10%
THD @ Full load 277V	<20%

Electrical specifications - LED thermal protection (NTC)

NTC Value Active Range	$\leq 25\text{k}\Omega$ ¹⁾
Temperature Derating start	User defined

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

Electrical specifications - Output

LED Power-Up Time	<1sec
Line Regulation	<5%

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Load Regulation	<5%
Max. Output Power (W)	48W
Output Current (mA)	700-2000mA (1mA step)
Output Ripple Current	<20% @ 2000mA
Output Short-Circuit Protection	Yes, non-latching
Output Voltage (VDC)	10-55VDC ¹⁾
Over Load Protection	Yes, non-latching
Over Temperature Protection	Foldback at 110°C
Over Voltage Protection	Yes, non-latching

¹⁾ Default V Aux is 12V

Environmental specifications

Ambient Operating Temperature	-30°C to 50°C
Case Temperature (Tc)	75°C (50kHrs)/90°C (0kHrs) ¹⁾
EMI Compliance	FCC Part 15 Class A
Max. Relative Humidity (%)	85% non-condensing
Max. Storage Temp.	70°C
Sound Rating	Class A
Transient Protection	NEMA SSL 1 - 2010 / Non-Roadway 2.5KV
UL Environmental Rating	Dry & Damp
UL File number	E320395

¹⁾ Warranty applicable only at 80°C

Packaging Information

Item number	EAN/UPC	Packaging	Quantity	Outside dimensions l x w x h	Gross weight
79632	4052899366428	Unpacked (SKU)	1	11 in x 1.1 in x 1 in	0.5 lb
79632	4052899366435	Shipping box (Case)	10	7.2 in x 3.6 in x 12 in	5.6 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 Mandatory

Product name	Accessory name	Item number	EAN/UPC
OTi 48/120-277/2A0 DIM L	OT PROGRAMMER	51645	▶ 4052899209640

Product datasheet

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