

OPTOTRONIC® OT 50W Step-Dim LED Driver



Electrical Specifications

General Information	'
Item Number	*2743YR (79377)
Model Type	AA57467
Input Voltage	120-277VAC
Output Power	50W, Class 2
Output Type	Constant Current, Current selectable

Find (NAED) as cross reference for new item number i.e. *12345

Environmental	Specifications
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Ambient Operating Temperature	-40°C to 50°C
Case Temperature (Tc)	75°C¹
	90°C (max)
Max. Storage Temp.	70°C
Max. Relative Humidity (%)	85% non-condensing
Transient Protection	ANSI C62.41 Cat. A 2.5kV
UL Environmental Rating	Dry & Damp
UL File number	E333135
EMI Compliance	FCC Part 15 Class A
Sound Rating	Class A

1 - Warranty applicable only at 75°C







Input		
Input Voltage (VAC)	120V-277V (+/- 10%)	
Frequency Range (Hz)	50 - 60 Hz (+/- 10%)	
	120V	277V
Input Current (A)	0.52	0.23
THD @ Full load	<10%	<15%
Power Factor @ Full load	>0.95	>0.95
Efficiency @ Full load	≥80%	≥80%
Inrush Current (Apk, T@10% of Apk)	19.3	47.9

1400mA²/ 1250mA/1050mA/ 800mA/ 700mA 25-51VDC³
(Power limited)
50W
<25%
<1sec
<5%
<5%
Yes, non-latching
Yes, cycling required
Yes, non-latching

- 2 The max output power at 1400mA operation is 47W
- ${f 3}$ The max output voltage at 1400mA operation is 33V

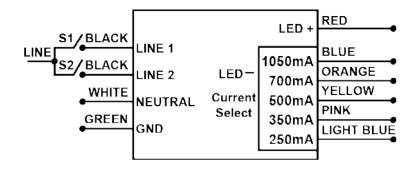
Dimming	
Dimming Control	Step Dim
	 2 Hot wires -100%
	• 1 Hot wire- 50%
Dimming Range	50% / 100% Output current
Dimming Type	Current Reduction

CAUTION: Two power supplies if dimming is connected to non-class 2 circuits.

Ordering Guide

Item Number	Original Item Number	Ordering Description
*2743YR	79377	OT 50W/CS1400C/UNV/SD/L

Wiring Diagram

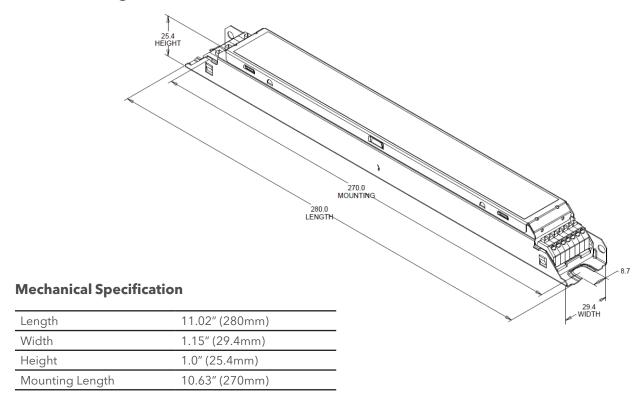


Note: S1 and S2 Closed will result in 100% output and S1 or S2 closed will result in 50% output.

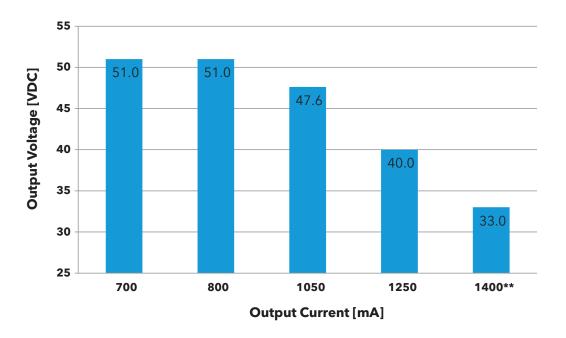
Note: Maximum suggested remote mounting distance is 32 feet.

For additional information on further distances and EMI compliance reference application note LED126.

Mechanical Diagram

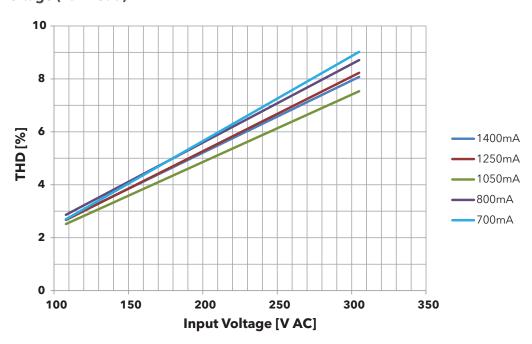


Operating Range

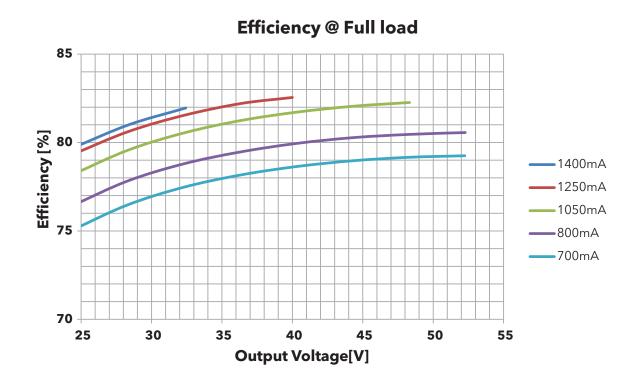


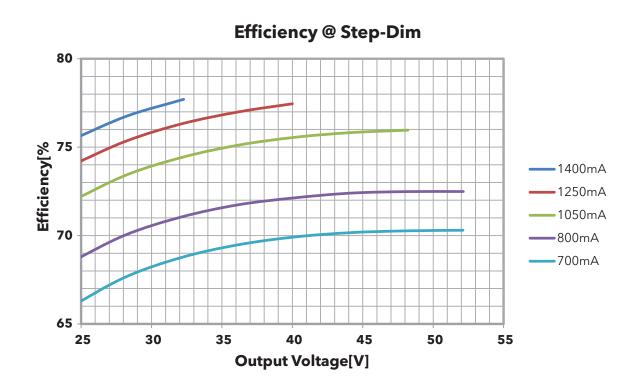
 $[\]ensuremath{^{**}}$ - The max output power at 1400mA operation is 47W and output voltage is 33V.

THD vs. Input Voltage (Full Load)

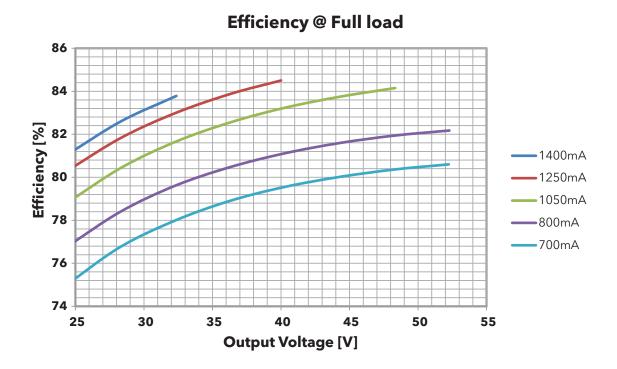


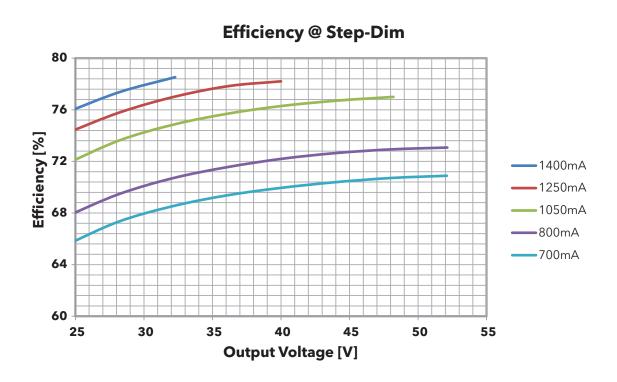
Efficiency vs. Output Voltage @120V Operation



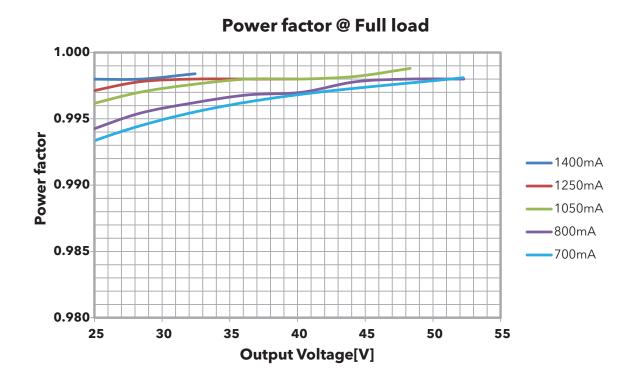


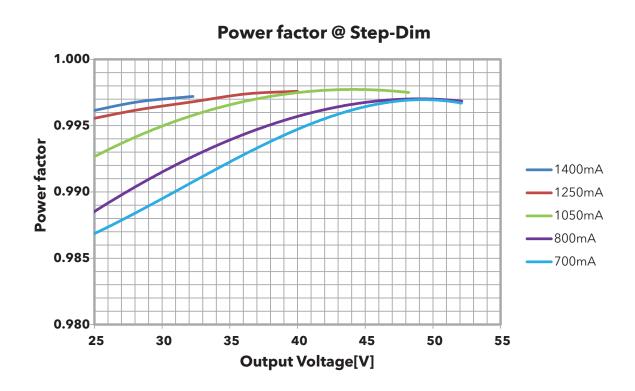
Efficiency vs. Output Voltage @277V Operation



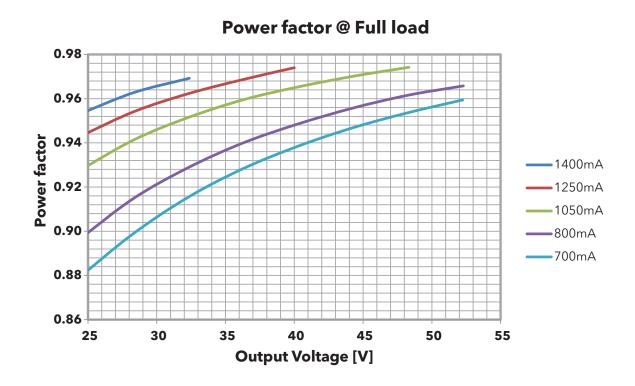


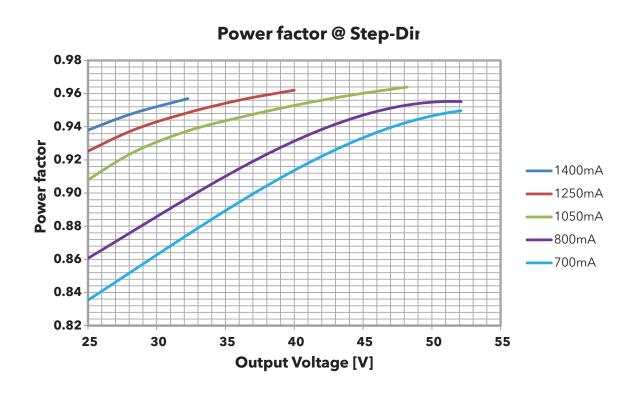
Power Factor vs. Output Voltage @120V Operation



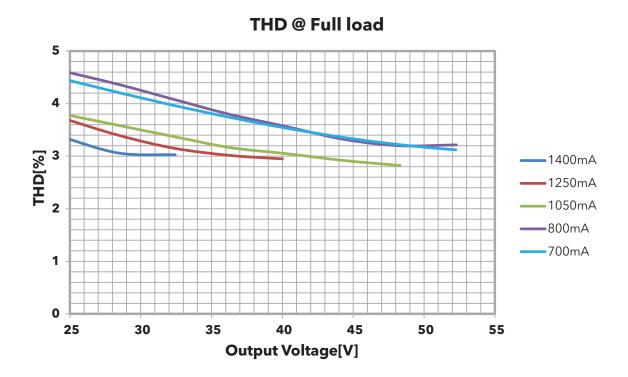


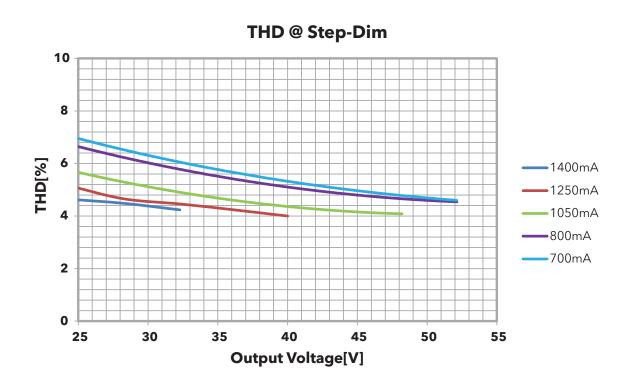
Power Factor vs. Output Voltage @277V Operation



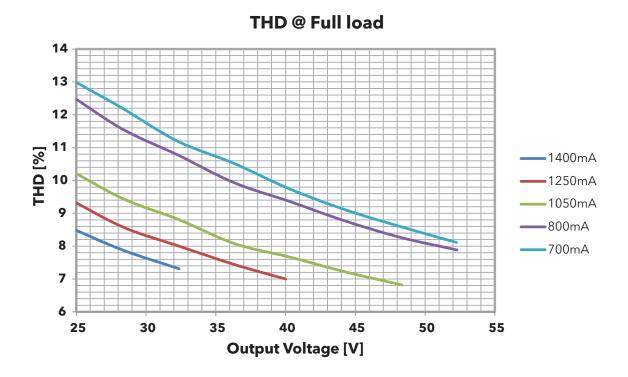


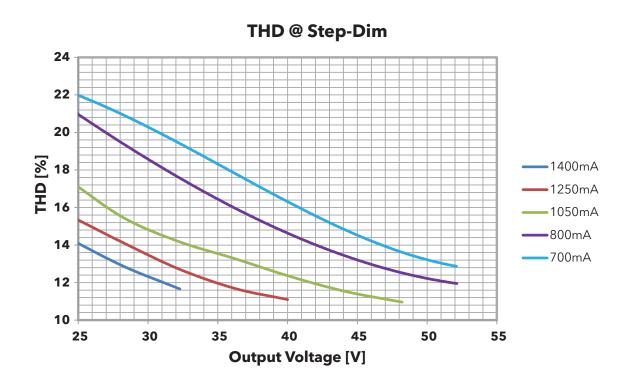
THD vs. Output Voltage @120V Operation





THD vs. Output Voltage @277V Operation





Inrush Characteristics

VIN (V)	Ipeak (A)	T (@50% of Ipeak)
120	19.3	130 µs
277	47.9	150 µs

UL Conditions Of Acceptability (E320395)

Conditions of Acceptability - When installed in the end-product, consideration shall be given to the following:

- The LED driver was evaluated using an electronic LED load resulting in an output rated current and rated power as indicated in the Electrical Ratings Table
- The unit employs a R/C (OBJY2), Class B isolation transformer (L51) on the main PWB. The highest temperature recorded on Model AA55431 the XFRM was 109.5°C, and the TC point on the case was 87°C at an ambient of 48.7°C. The highest temperature recorded on Model AA57467 XFRM was 104°C the TC point on the case was 90.8°C at an ambient of 60.9°C. The need to repeat the Temperature Test shall be determined in end-use product.
- The unit was tested on a 20A branch circuit. If used on a branch circuit greater than this, additional testing may be necessary.
- The PWB spacings for use in Damp locations have been evaluated to UL8750, The Unit is completely potted spacing requirements applied to Table 7.4 Parts Potted or subsequently coated.
- The Leakage current test was conducted between ground terminal, exposed conductive surface and the grounded pole of the supply circuit.
- The products are intended for use in Dry and Damp locations. The use in other environmental locations shall be considered in the end product.
- Leads to be determined in the end product.
- For models with rated output voltages above 30Vrms (42.4V peak) suitability shall be determined in the cUL end-use applications based on accessibility to the user.

Warranty

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

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