

OPTOTRONIC® LED Power Supply

OT50W/CS2100C/UNV/SD/L - Technical Specifications



ELECTRICAL SPECIFICATIONS

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	>0.9
Efficiency @ Full load	> 80%	>80%
Inrush Current (A _{pk})	19.5	47.3

Output

Output Current (mA)	2100mA/ 2000mA/ 1800mA/ 1600mA/ 1400mA
Output Voltage (VDC)	12-36VDC (Power limited)
Output Power (W)	50W (max)
Output Ripple	<25%
LED Power-up time	< 1sec
Load Regulation	<5%
Line Regulation	<5%
Hot-Plug capability	No, Unit latches
Over voltage protection	Yes, non- latching
Over load protection	Yes, cycling required
Output short-circuit protection	Yes, non- latching

GENERAL INFORMATION

Item Number	79378
Input Voltage	120-277VAC
Output Power	50W, Class 2
Output Type	Constant Current, Current selectable

ELECTRICAL SPECIFICATIONS

Dimming

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

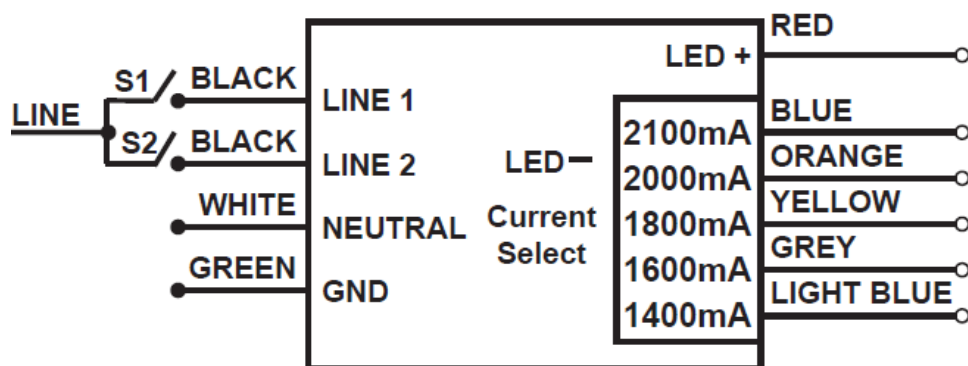
ENVIRONMENTAL SPECIFICATIONS

Ambient Operating Temperature	-40 °C to 50 °C
Case Temperature (T _c)	75°C* 85°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	E320395
EMI Compliance	FCC Part 15 Class A
Sound Rating	Class A

*- Warranty applicable only at 75°C



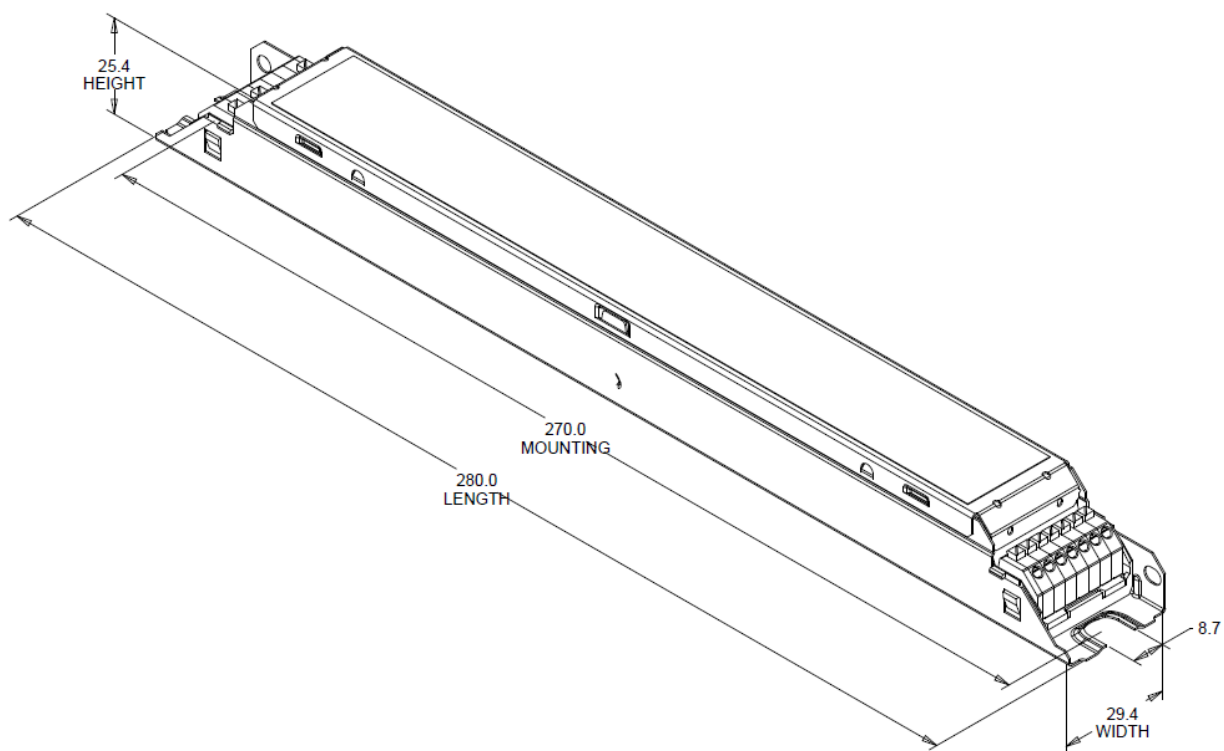
WIRING DIAGRAM



Note 1: S1 and S2 Closed will result in 100% output and S1 or S2 closed will result in 50% output.

Note 2: Maximum suggested remote mounting distance is 32 feet. For additional information on further distances and EMI compliance reference application note LED126.

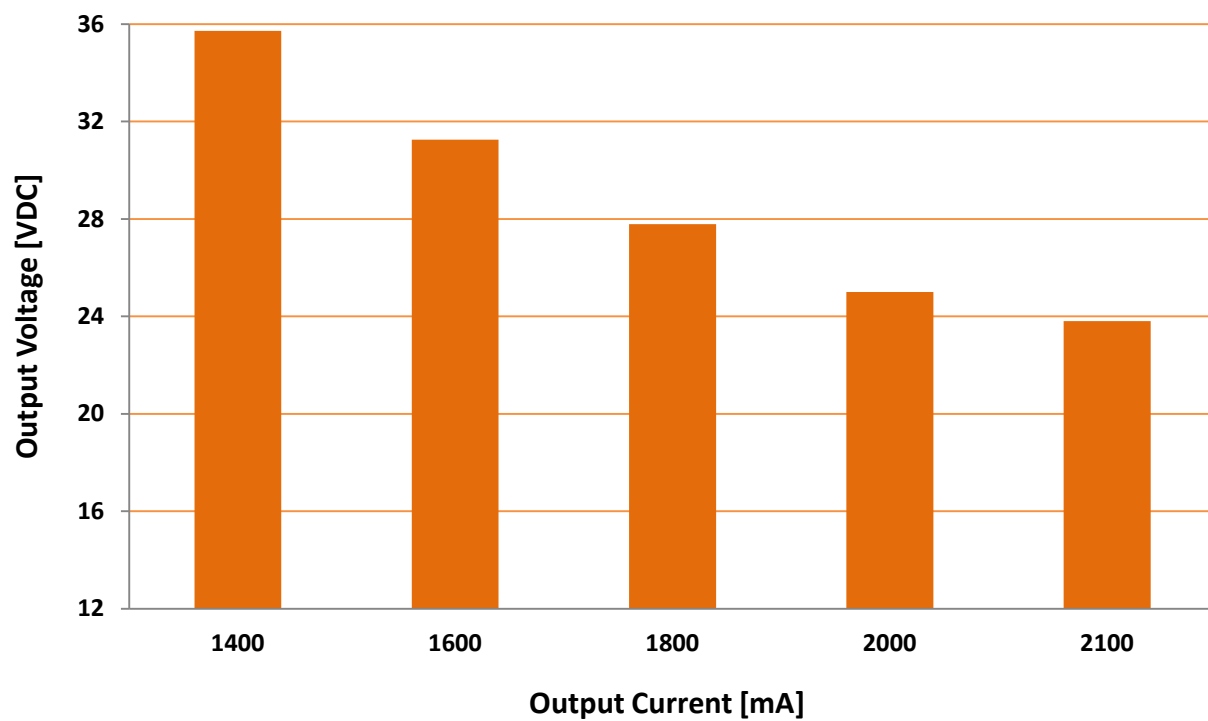
MECHANICAL DIAGRAM



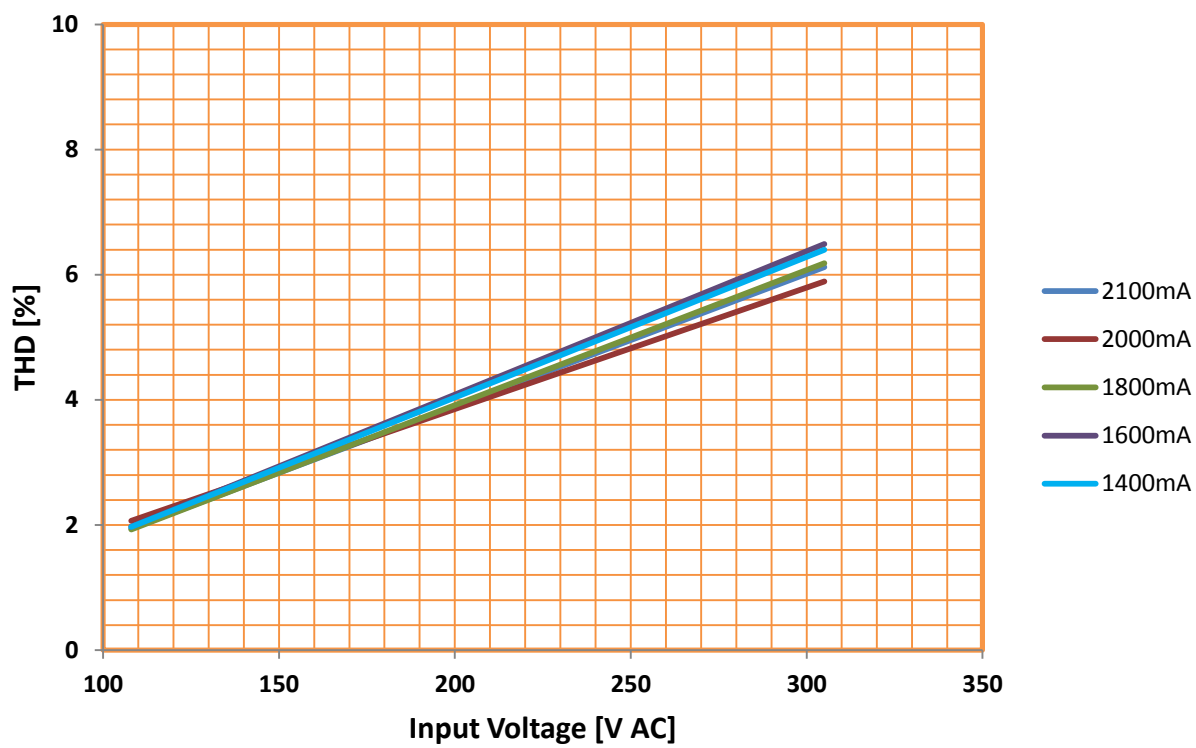
MECHANICAL SPECIFICATIONS

Length	11.02" (280mm)
Width	1.15" (29.4mm)
Height	1.0" (25.4mm)
Mounting Length	10.63" (270mm)

OPERATING RANGE

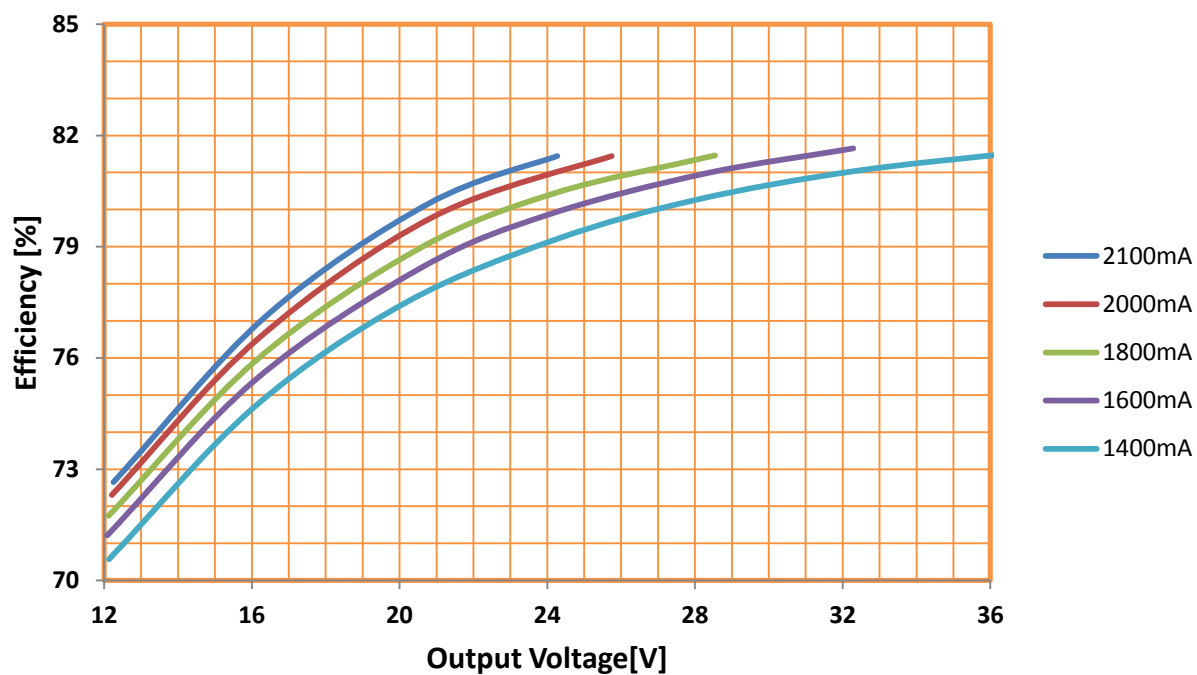


THD VS INPUT VOLTAGE (FULL LOAD)

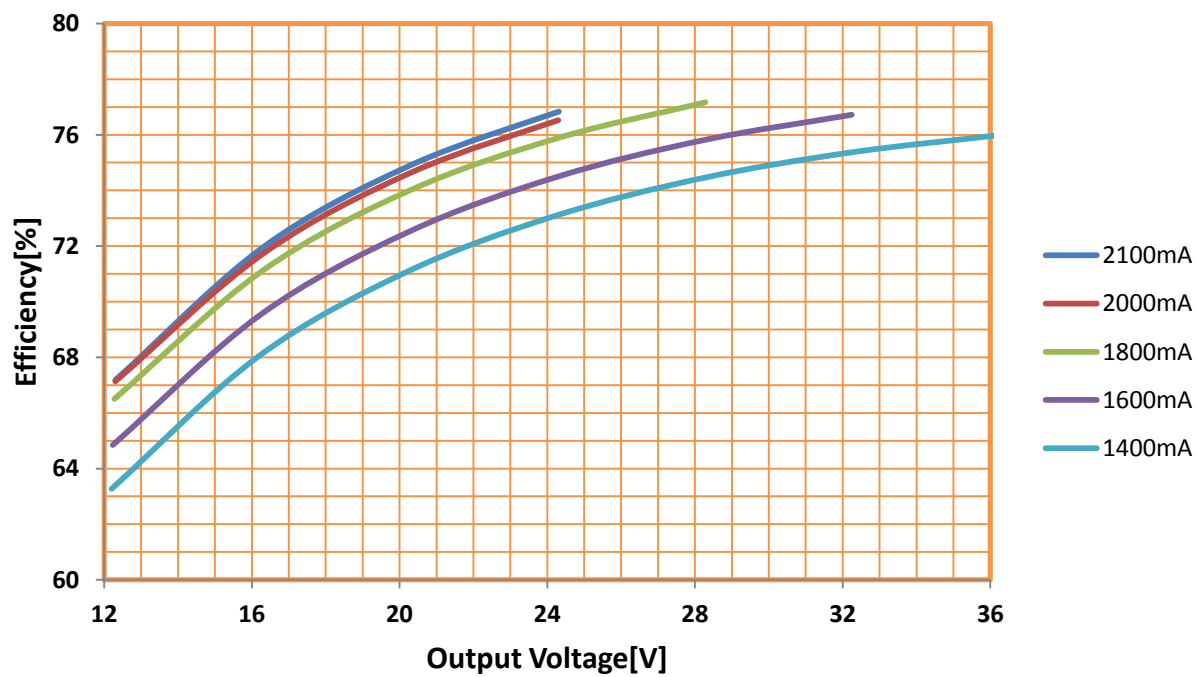


EFFICIENCY VS OUTPUT VOLTAGE @ 120V OPERATION

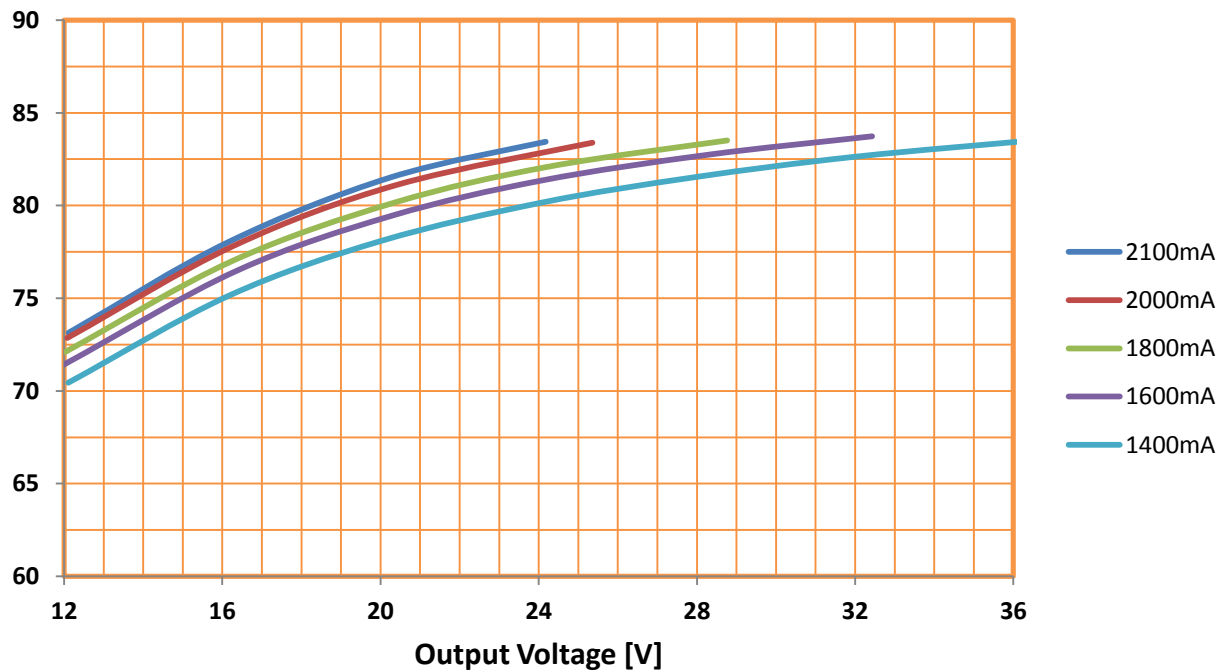
Efficiency @ Full load



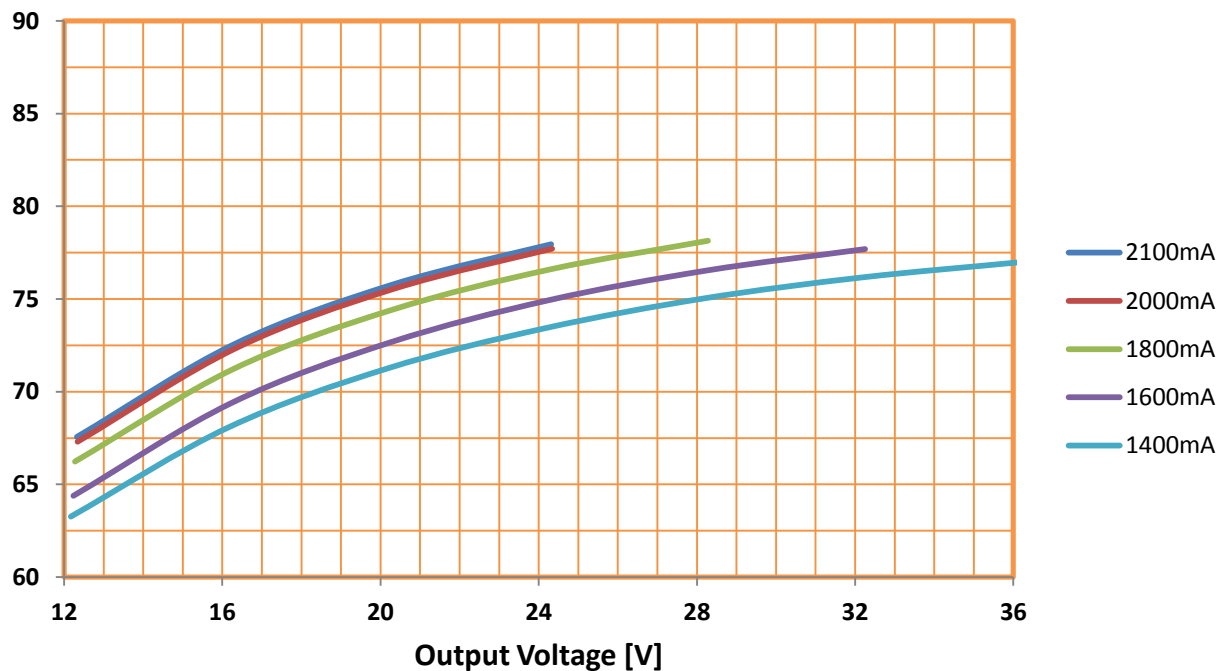
Efficiency @ Step- Dim



Efficiency @ Full load

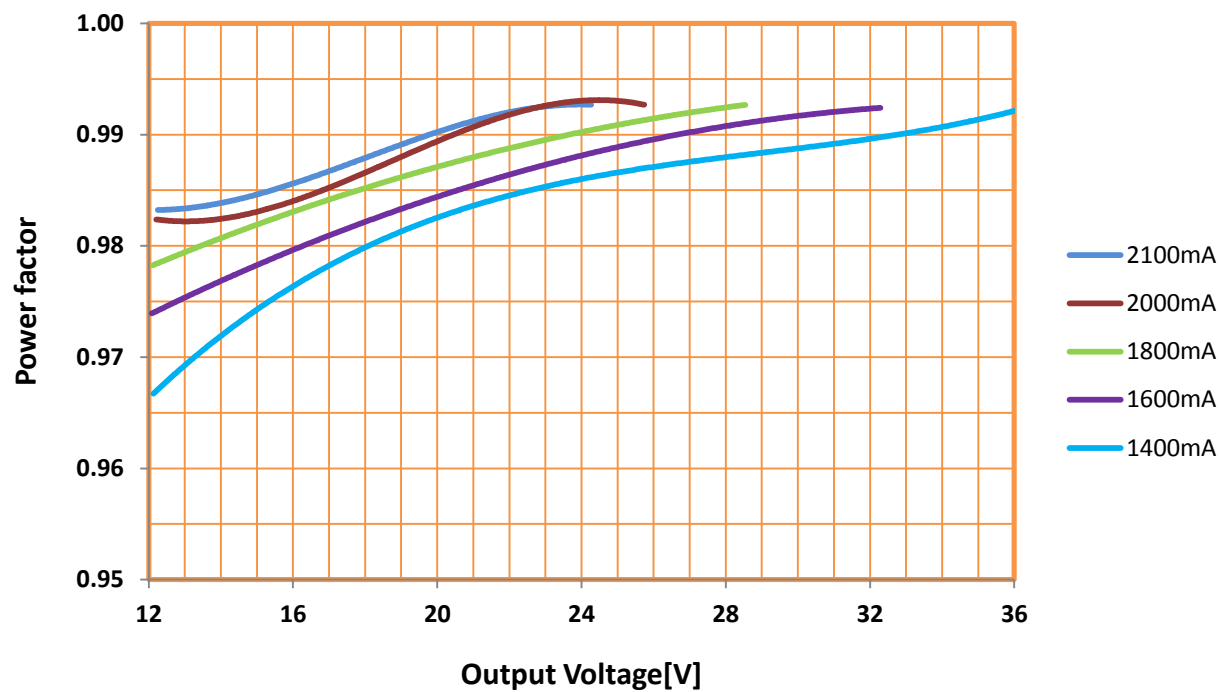


Efficiency @ Step-Dim

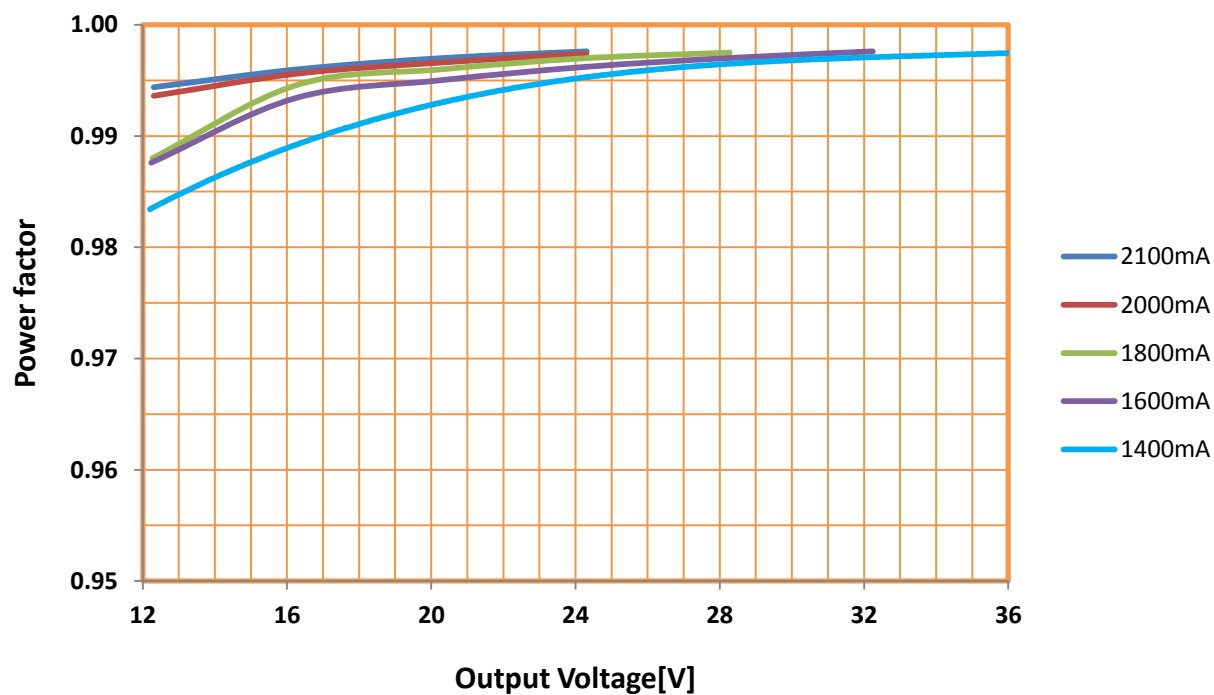


POWER FACTOR VS OUTPUT VOLTAGE @ 120V OPERATION

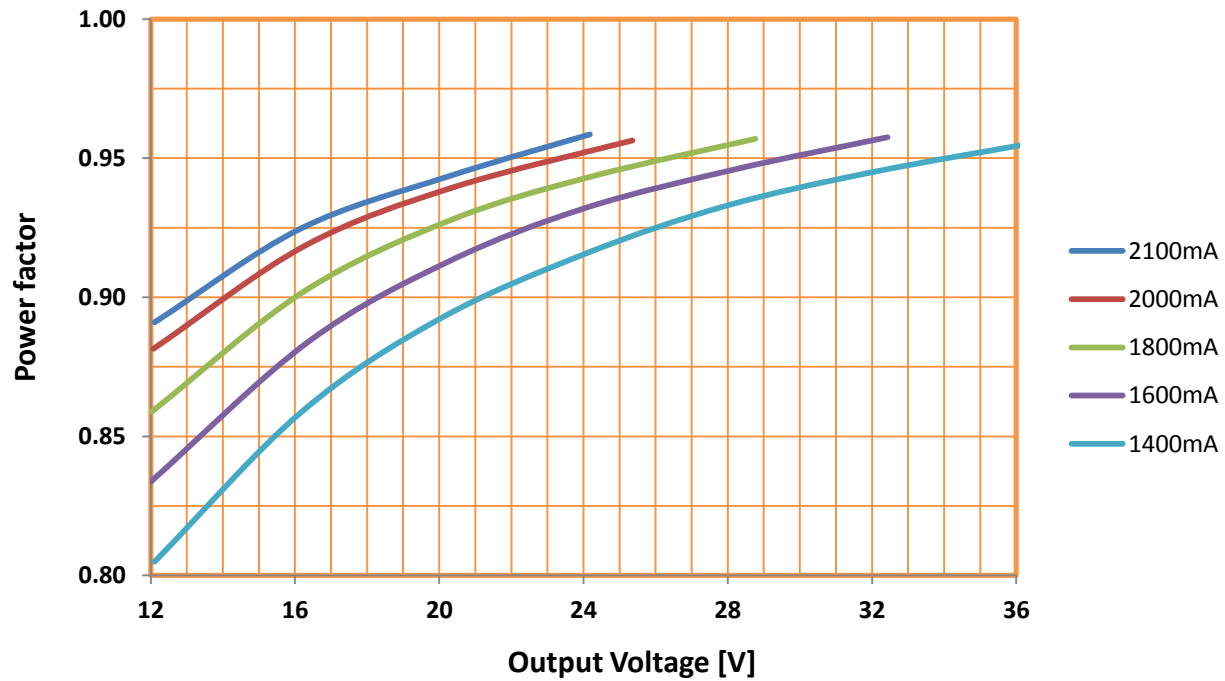
Power factor @ Full load



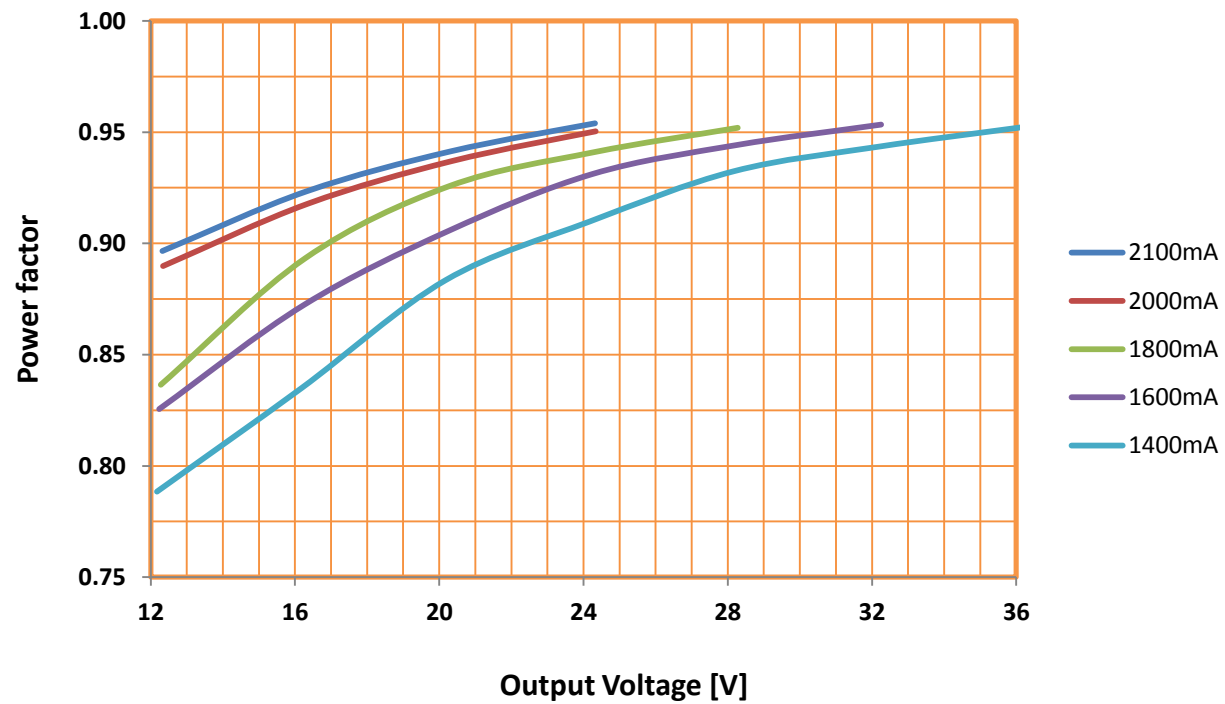
Power factor @ Step- Dim



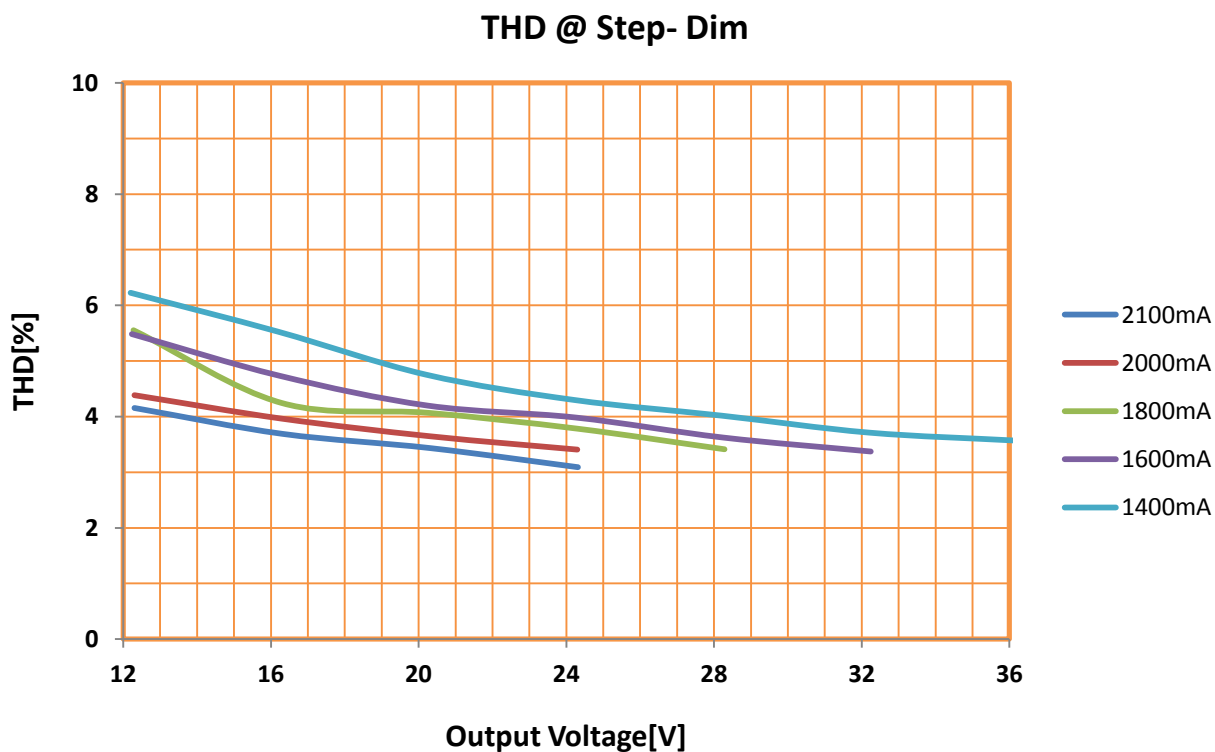
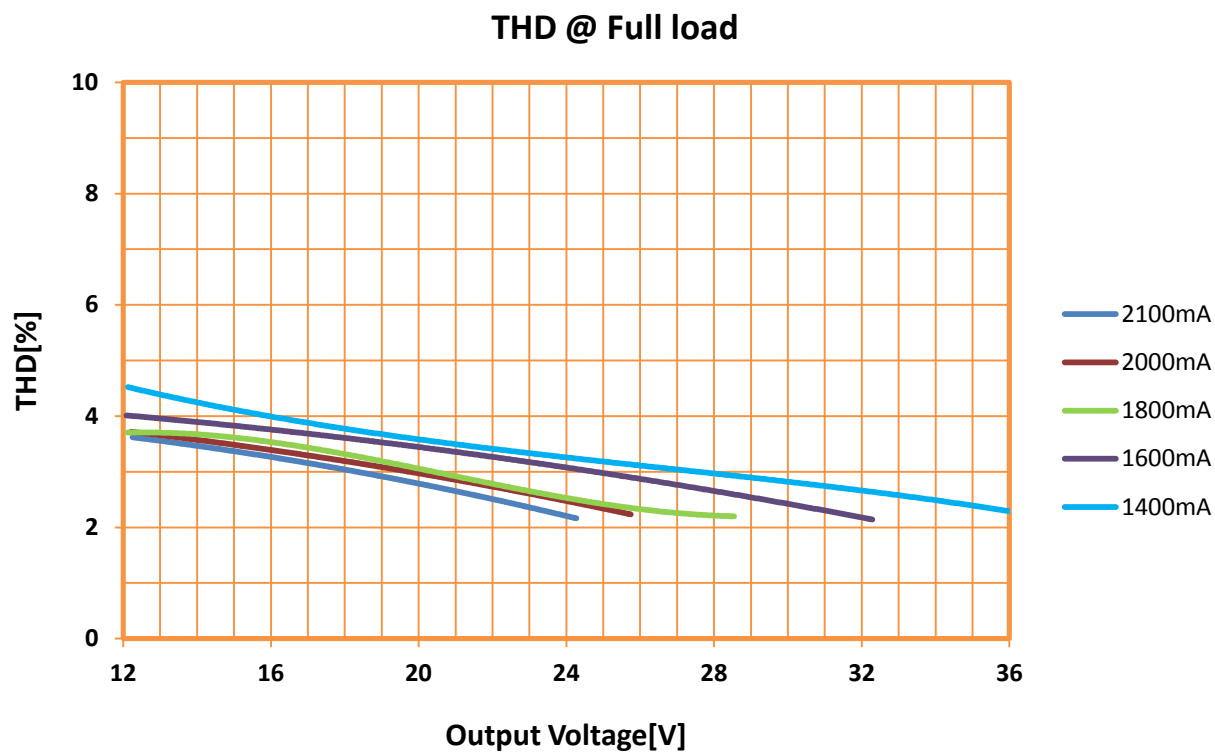
Power factor @ Full load



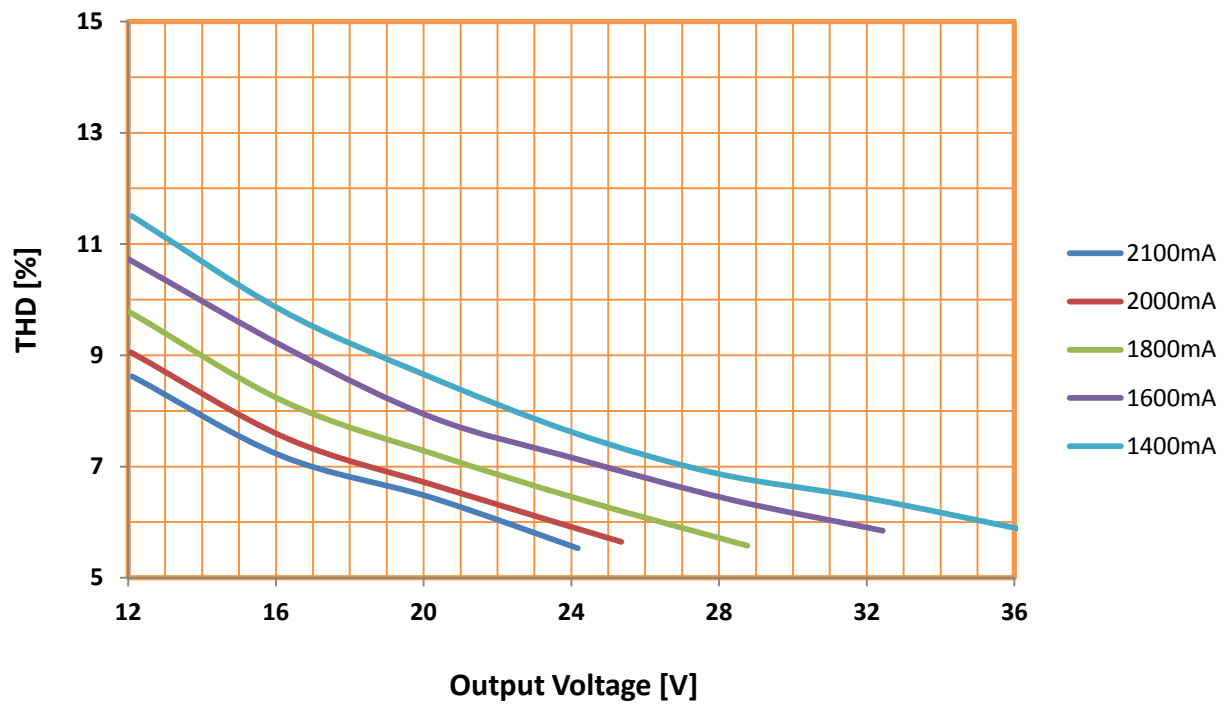
Power factor @ Step-Dim



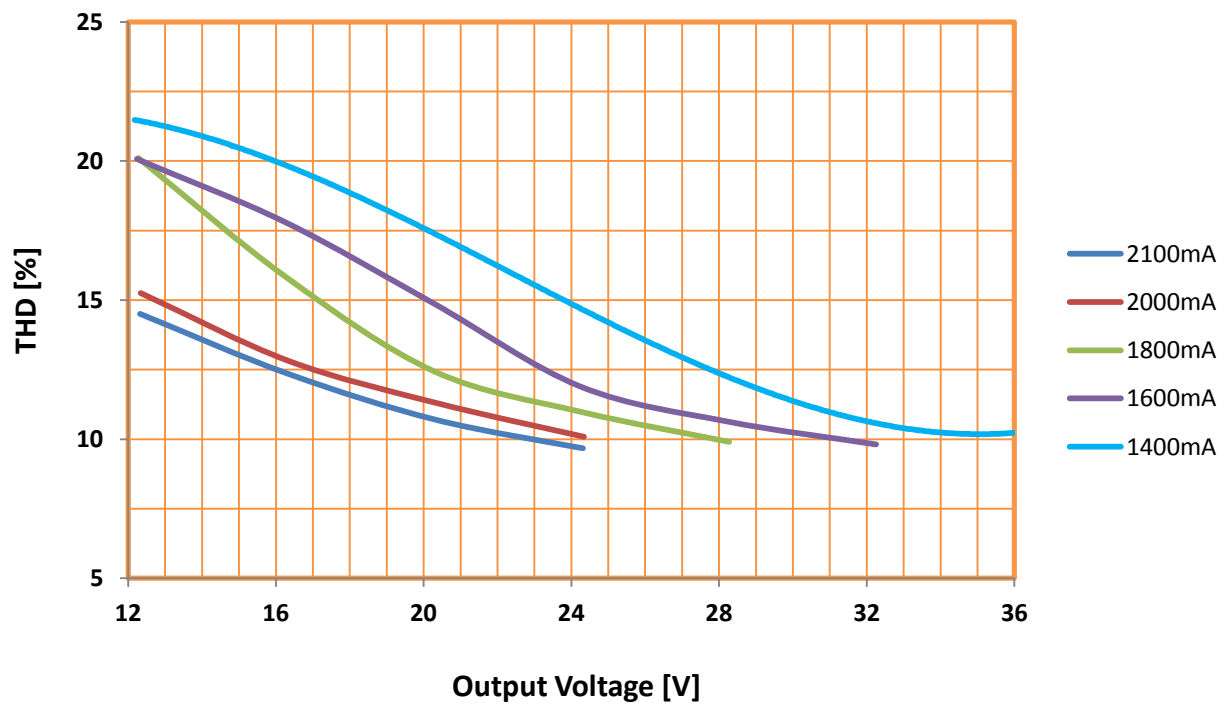
THD VS OUTPUT VOLTAGE @ 120V OPERATION



THD @ Full load



THD @ Step-Dim

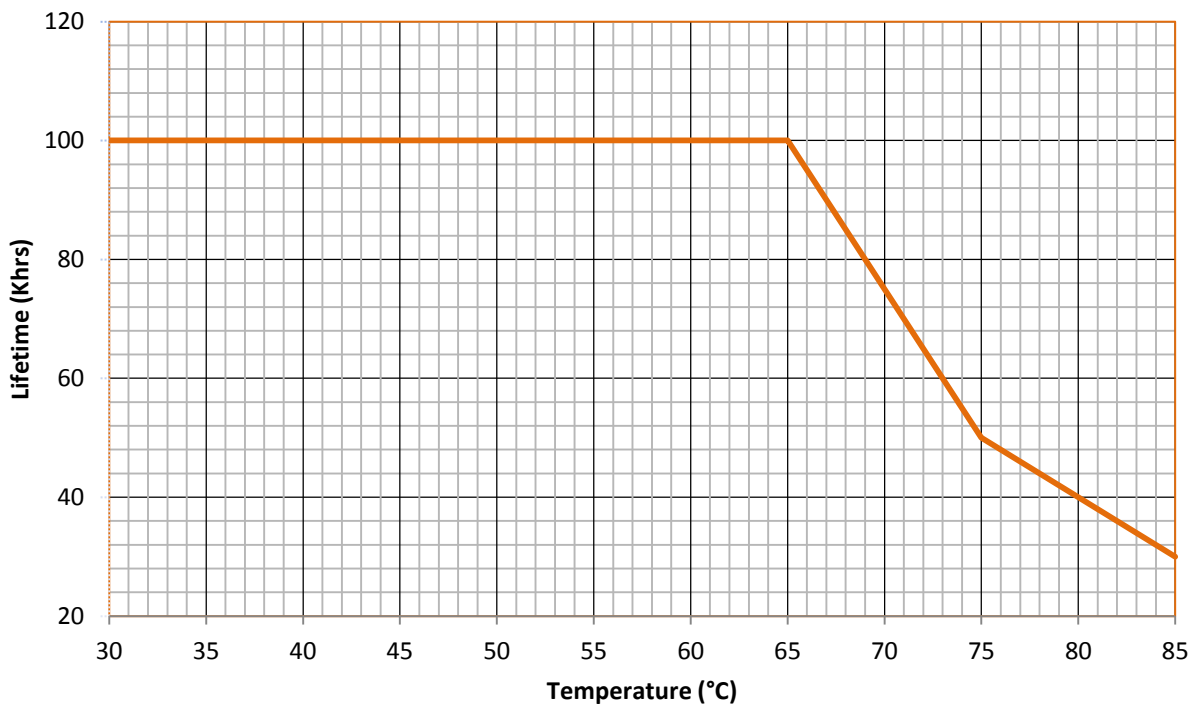


INRUSH CHARACTERISTICS

Vin (V)	Ipeak (A)	T (@ 50% of Ipeak)
120	19.5	120μs
277	47.3	150μs

LIFE TIME VS CASE TEMPERATURE

Driver - Lifetime Vs Case Temperature



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 20 A 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 30V rms (42.4V peak) suitability shall be determined in the cUL end-use applications based on accessibility to the user.

WARRANTY

OPTOTRONIC® products are covered by our LED Module, OPTOTRONIC Power Supply or Control Warranty. For additional details, refer to the latest version of the warranty (LED089) available at www.osramamericas.com/optotronic.