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OPTOTRONIC® LED Power Supply
OT50W/CS1400C/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	>0.95
Efficiency @ Full load	> 80%	>80%
Inrush Current (A_{pk})	19.3	47.9
Output		
Output Current (mA)	1400mA(1)/ 1250mA/ 1050mA/ 800mA/ 700mA	
Output Voltage (VDC)	25-51VDC (2) (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	79377
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

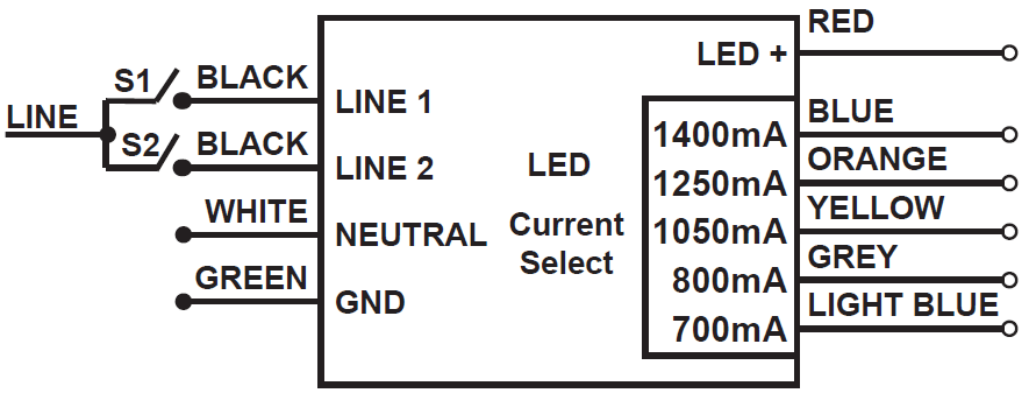
ENVIRONMENTAL SPECIFICATIONS

Ambient Operating Temperature	-40 °C to 50 °C
Case Temperature (Tc)	75°C(3) 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	E320395
EMI Compliance	FCC Part 15 Class A
Sound Rating	Class A

1- The max output power at 1400mA operation is 47W
2- The max output voltage at 1400mA operation is 33V
3- Warranty applicable only at 75°C

OSRAM

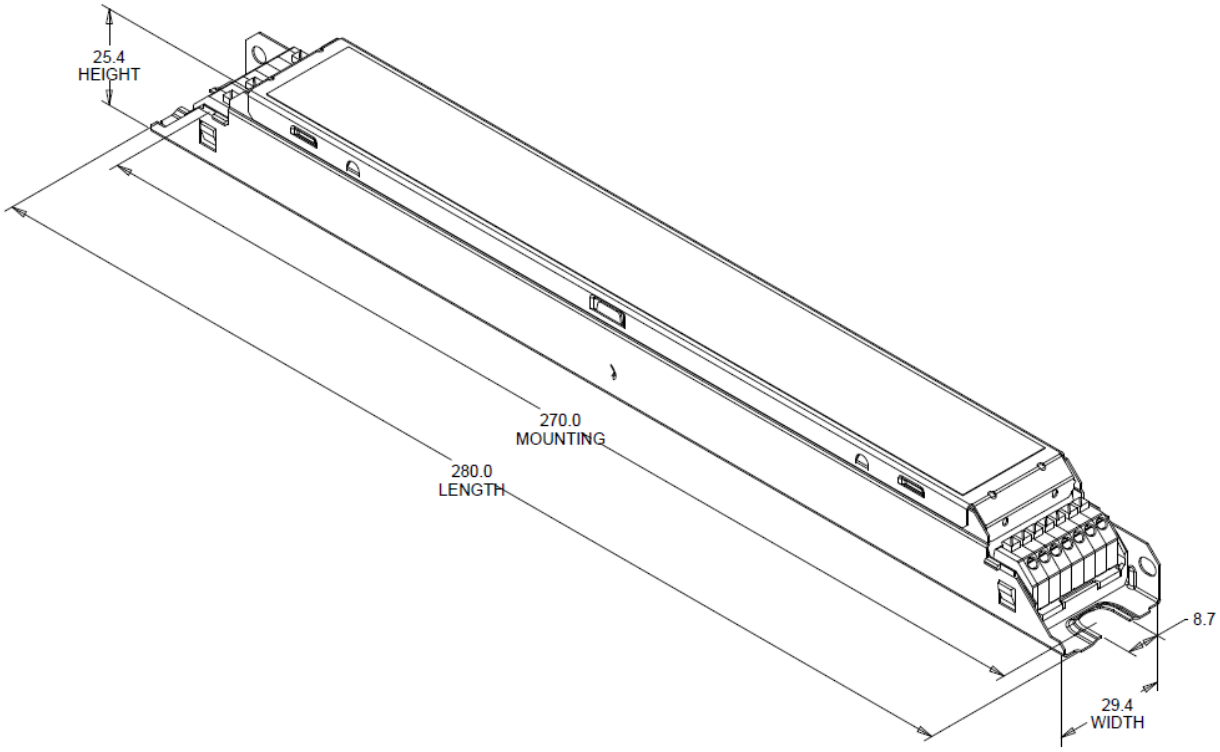
WIRING DIAGRAM



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

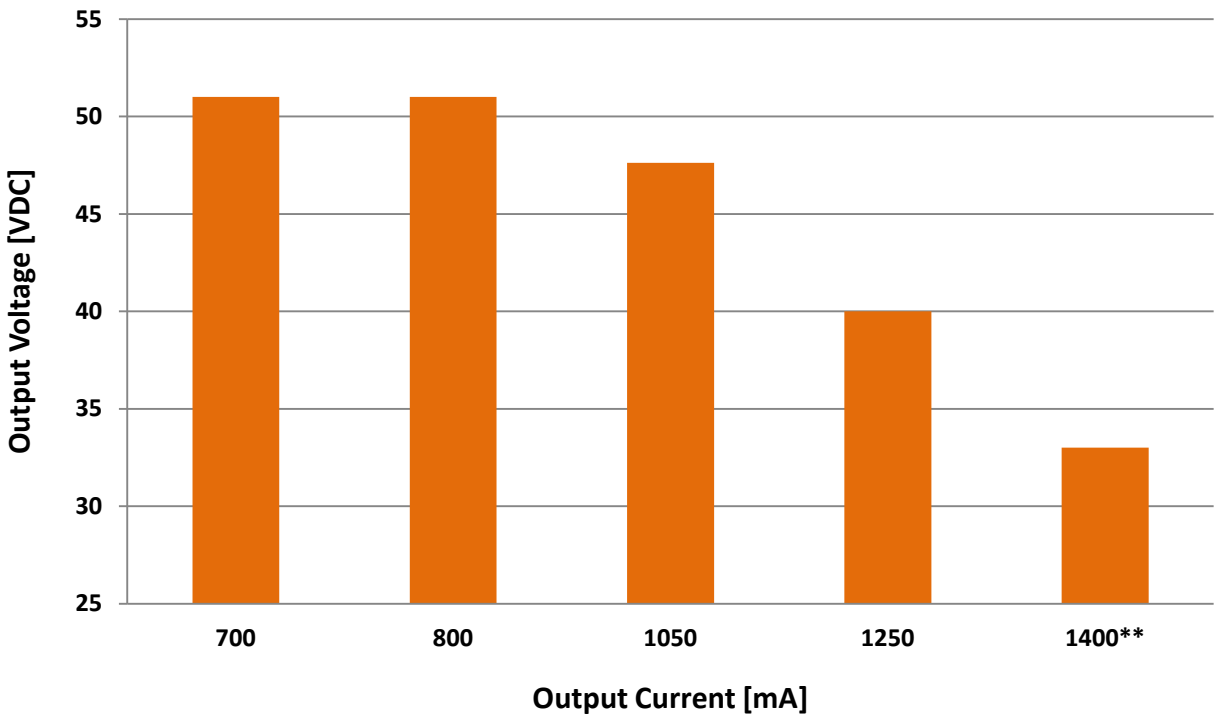
Note 2: Maximum suggested remote mounting distance is 32 feet. For additional information on further distances and EMI compliance reference application note LED126.

MECHANICAL DIAGRAM



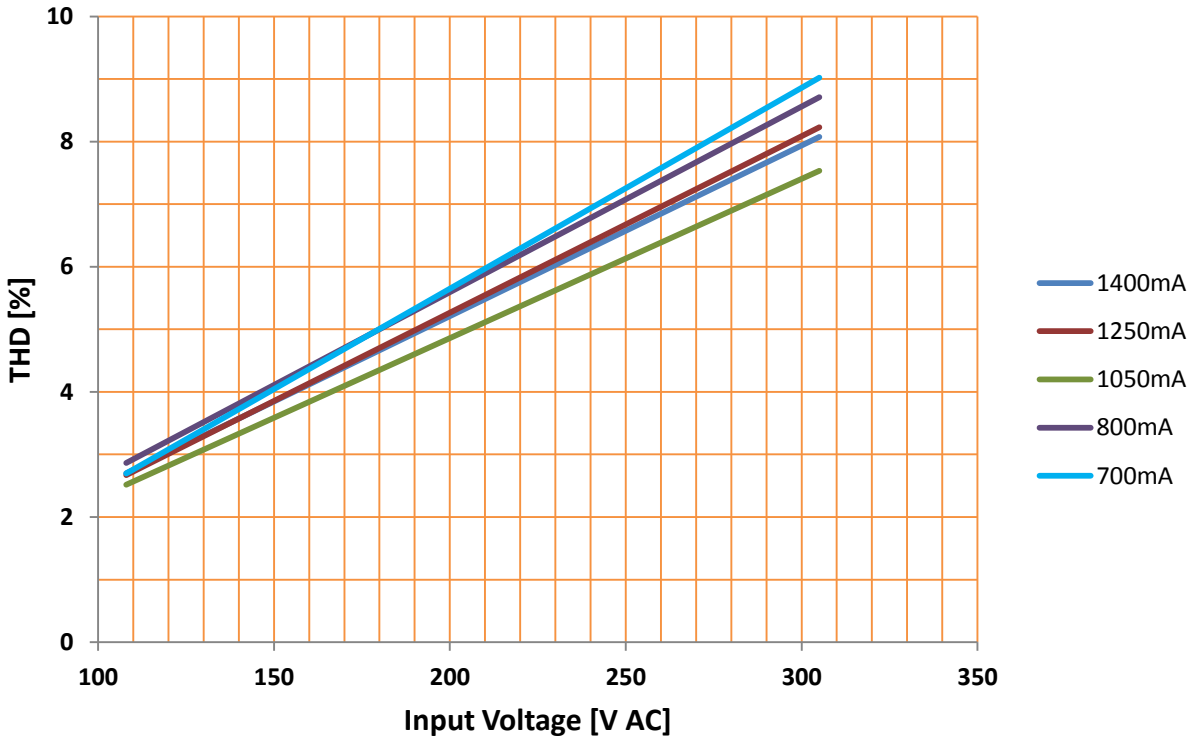
MECHANICAL SPECIFICATIONS	
Length	11.02” (280mm)
Width	1.15” (29.4mm)
Height	1.0” (25.4mm)
Mounting Length	10.63” (270mm)

OPERATING RANGE

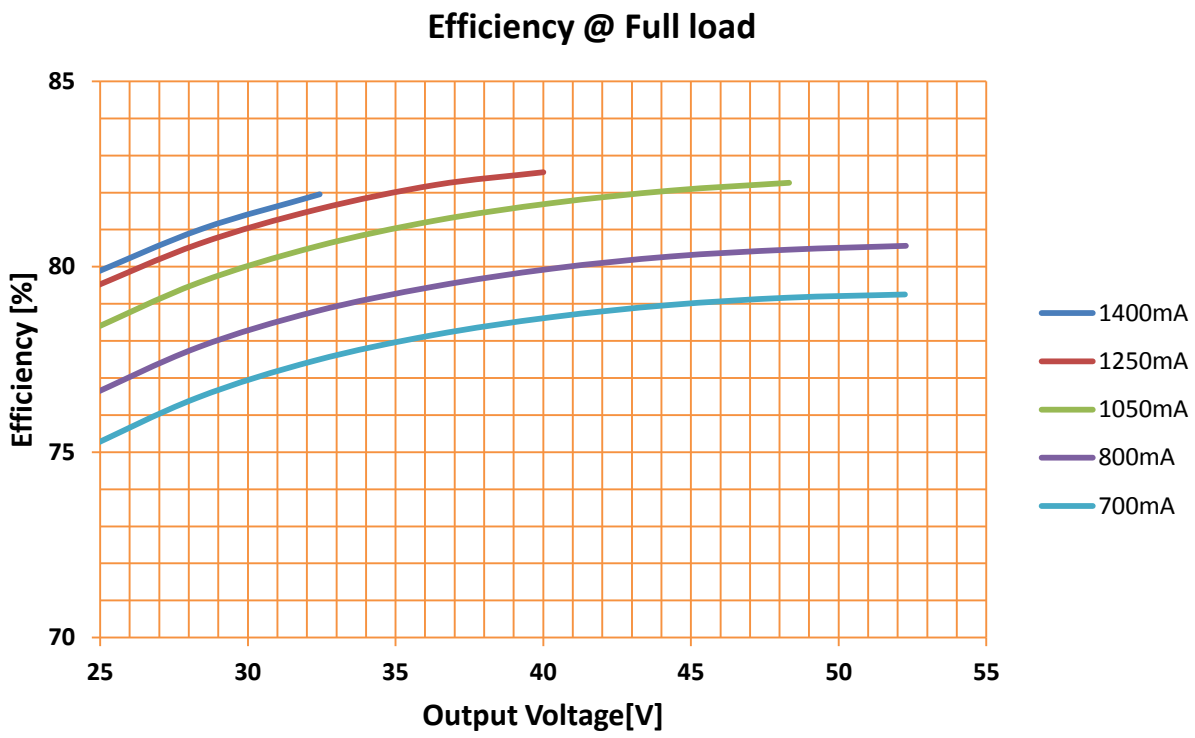


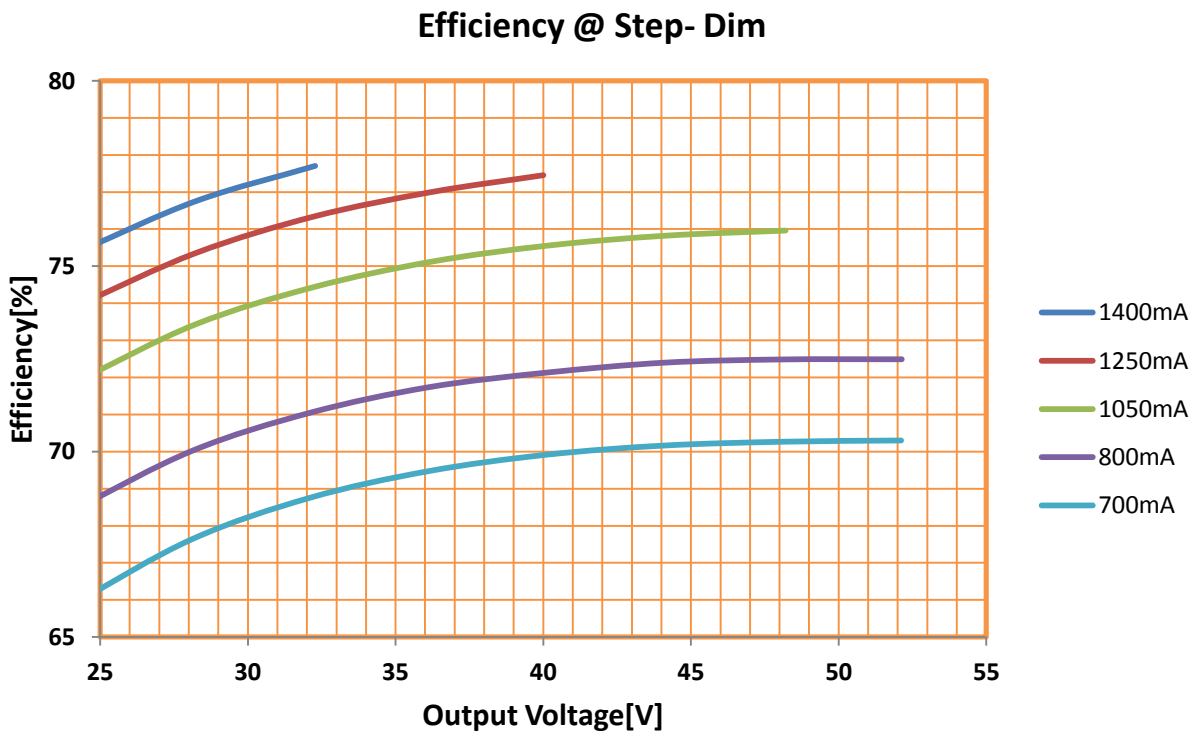
***- The max output power at 1400mA operation is 47W and output voltage is 33V*

THD VS INPUT VOLTAGE (FULL LOAD)

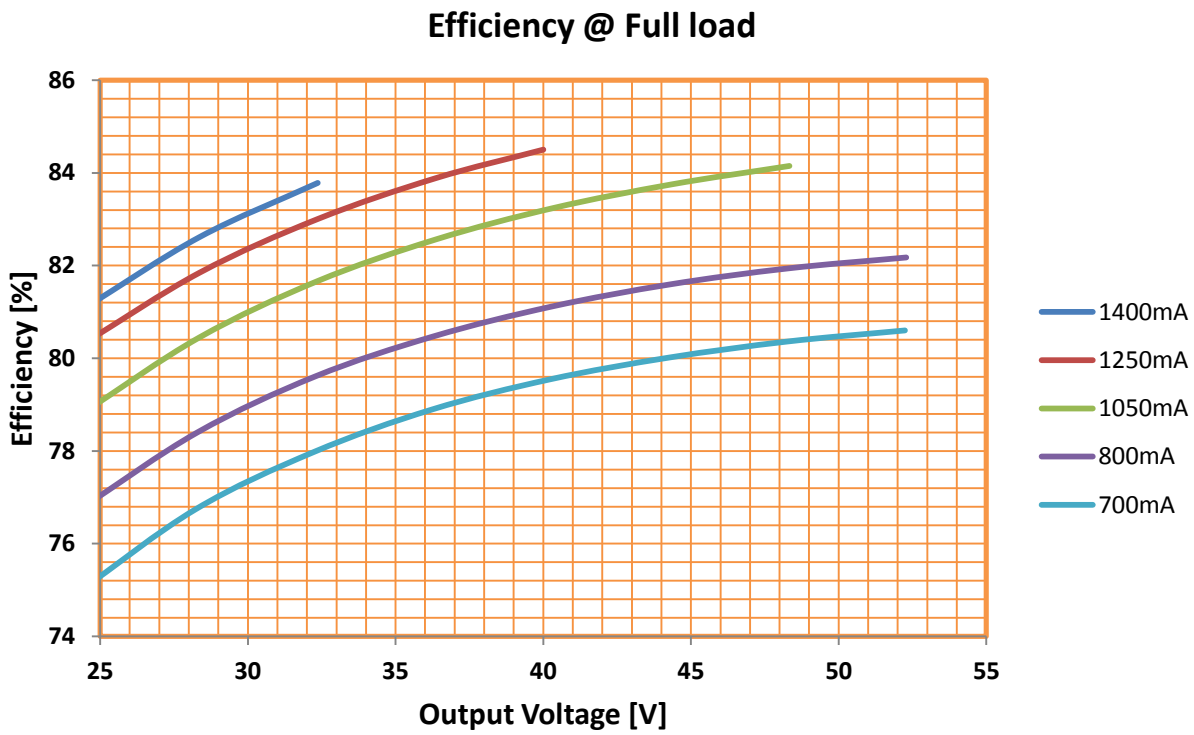


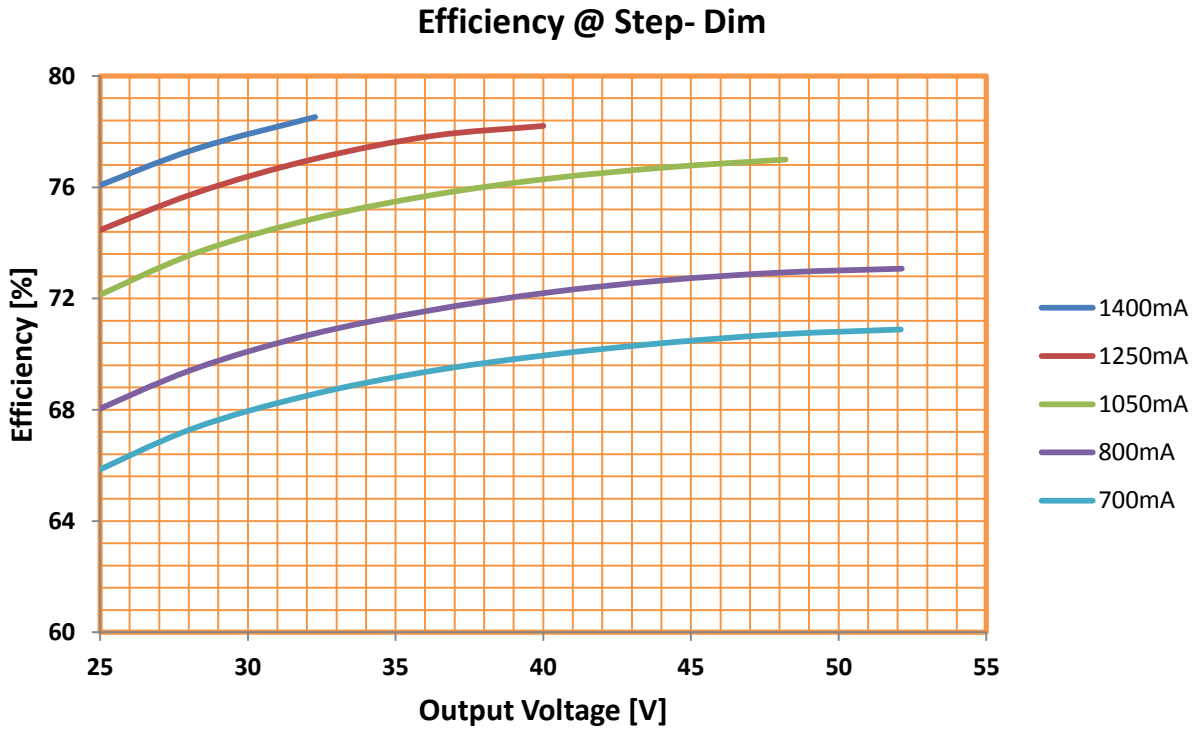
EFFICIENCY VS OUTPUT VOLTAGE @ 120V OPERATION



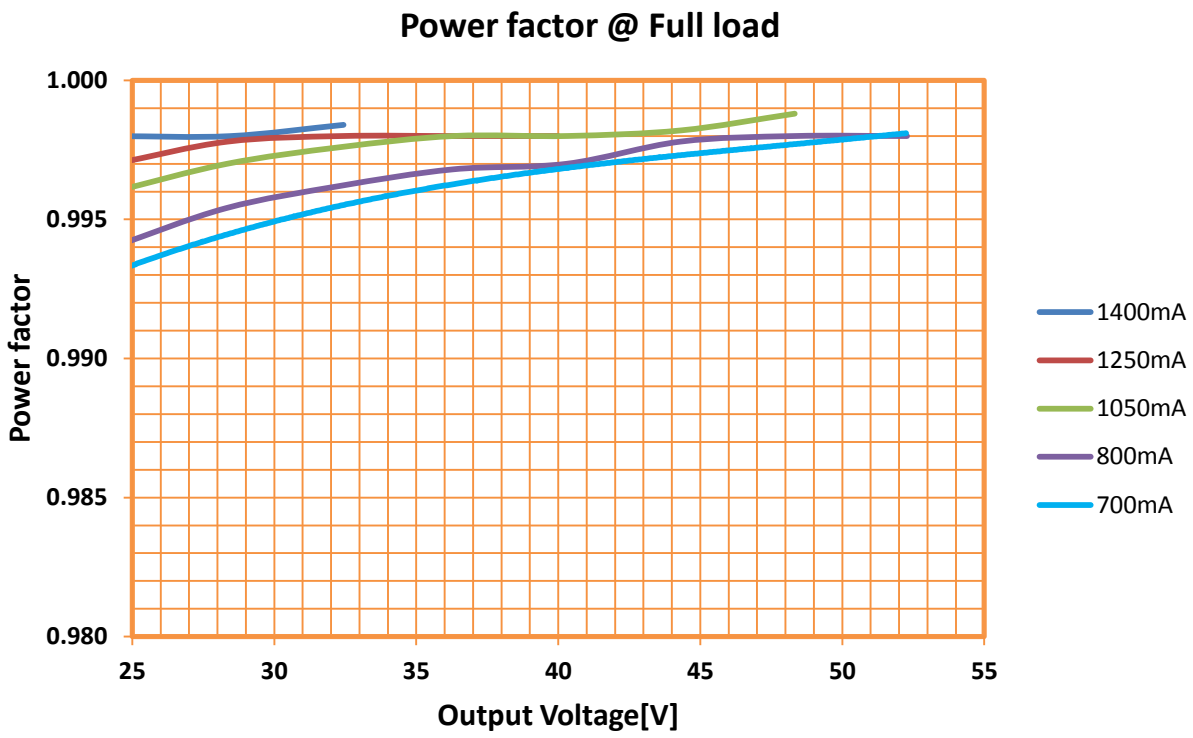


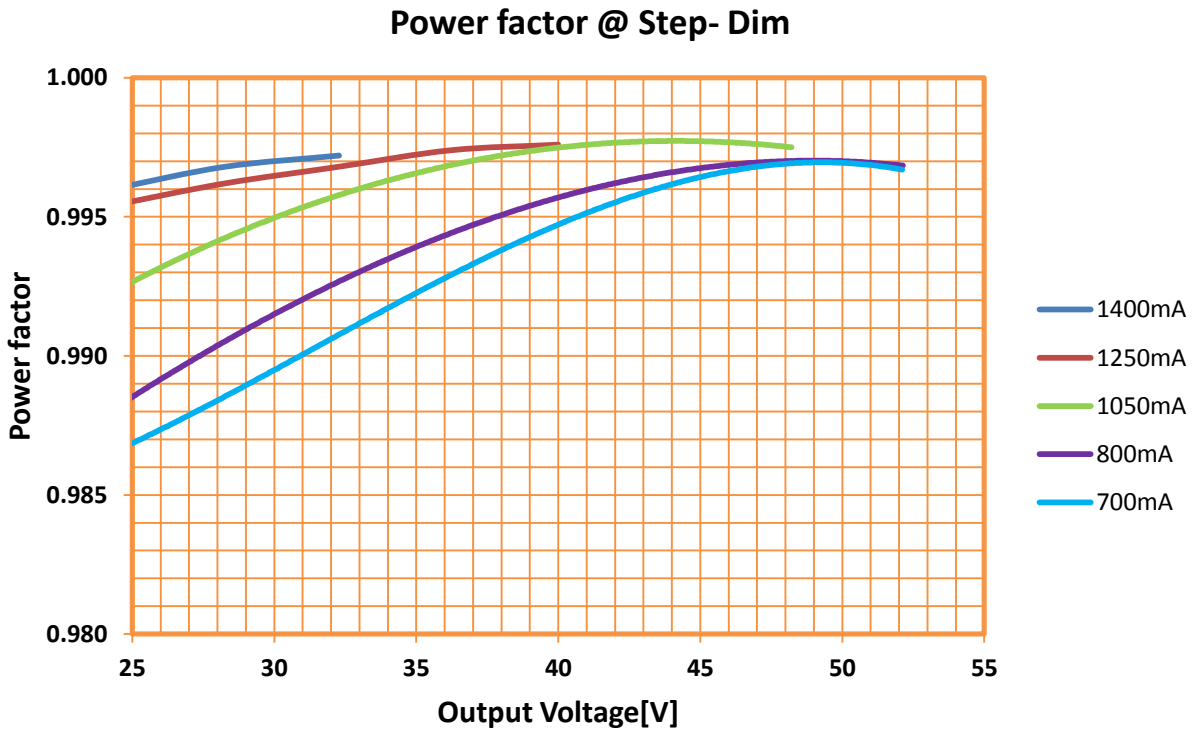
EFFICIENCY VS OUTPUT VOLTAGE @ 277V OPERATION



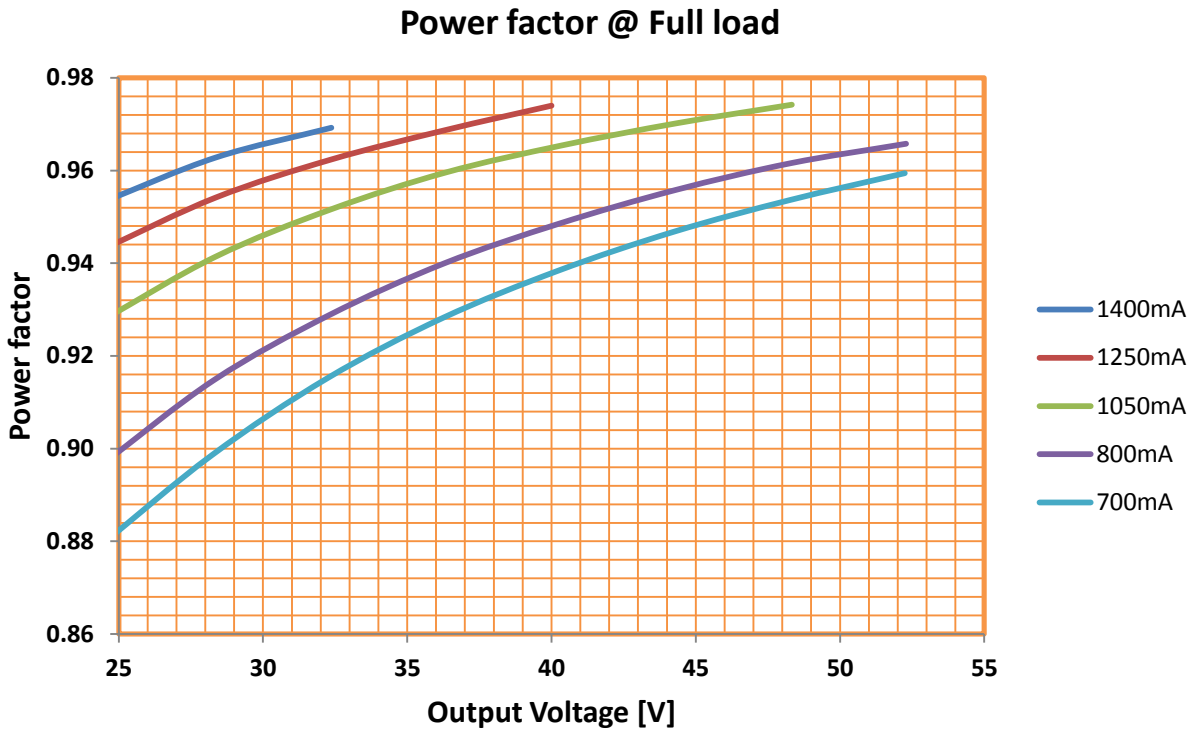


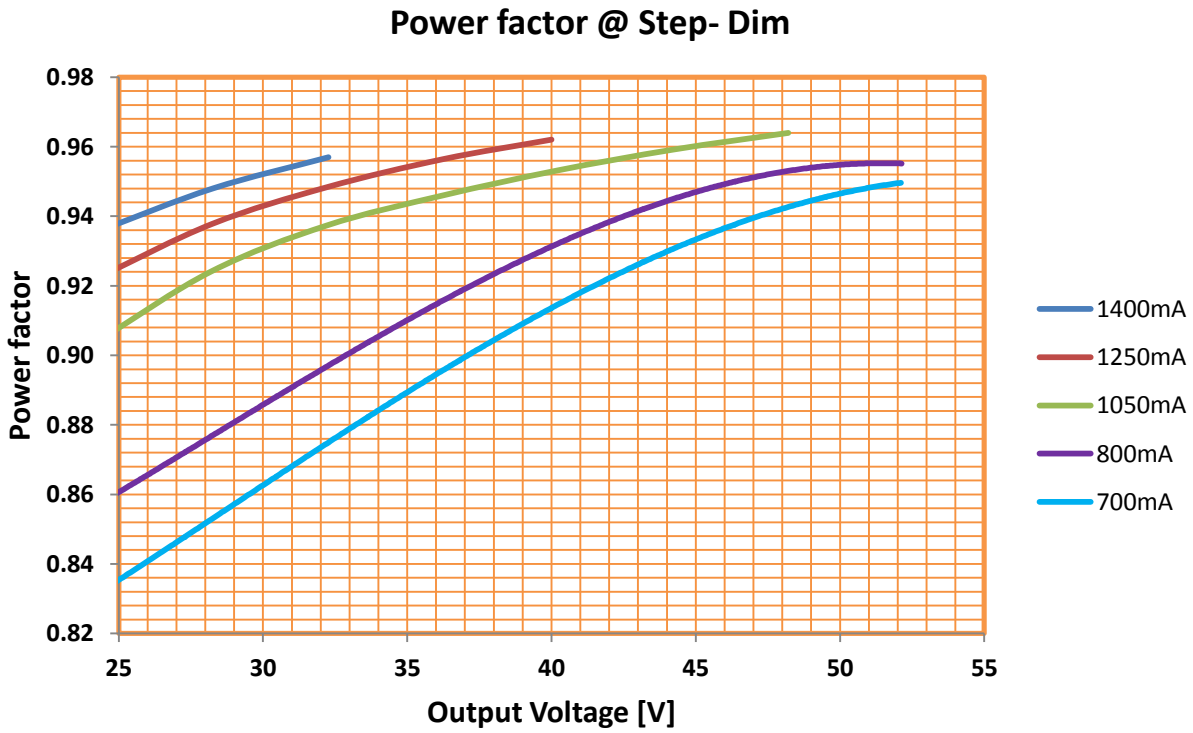
POWER FACTOR VS OUTPUT VOLTAGE @ 120V OPERATION



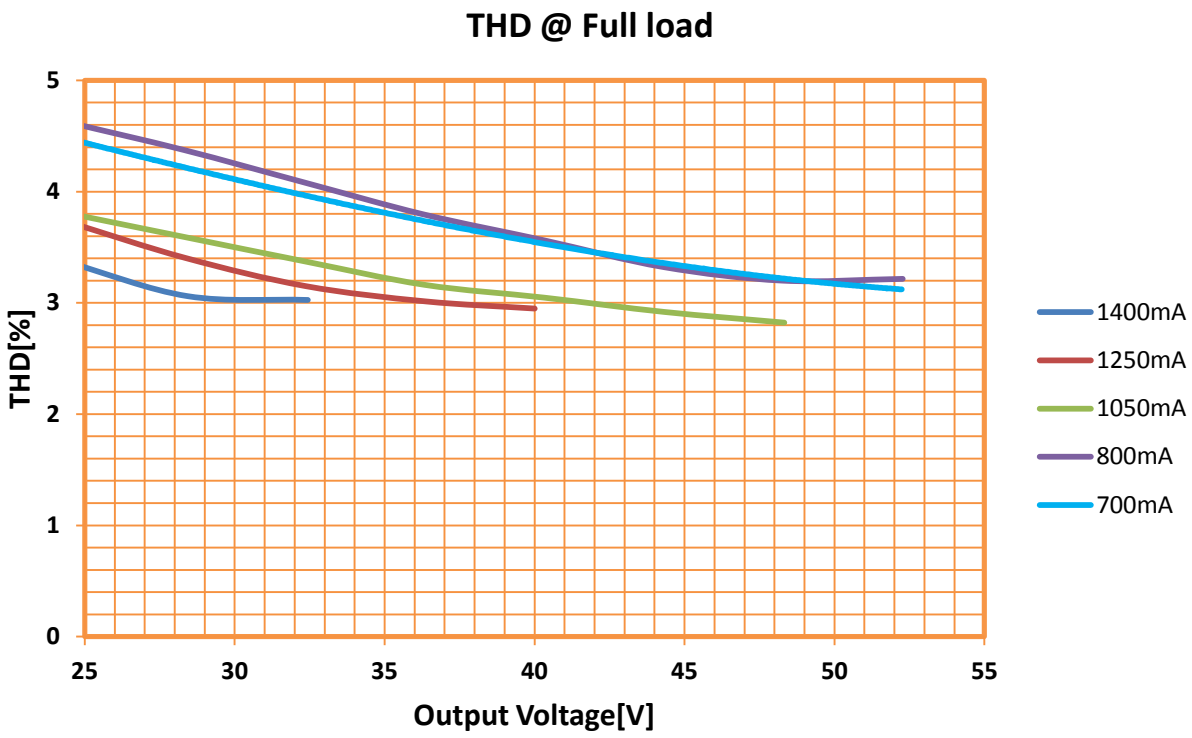


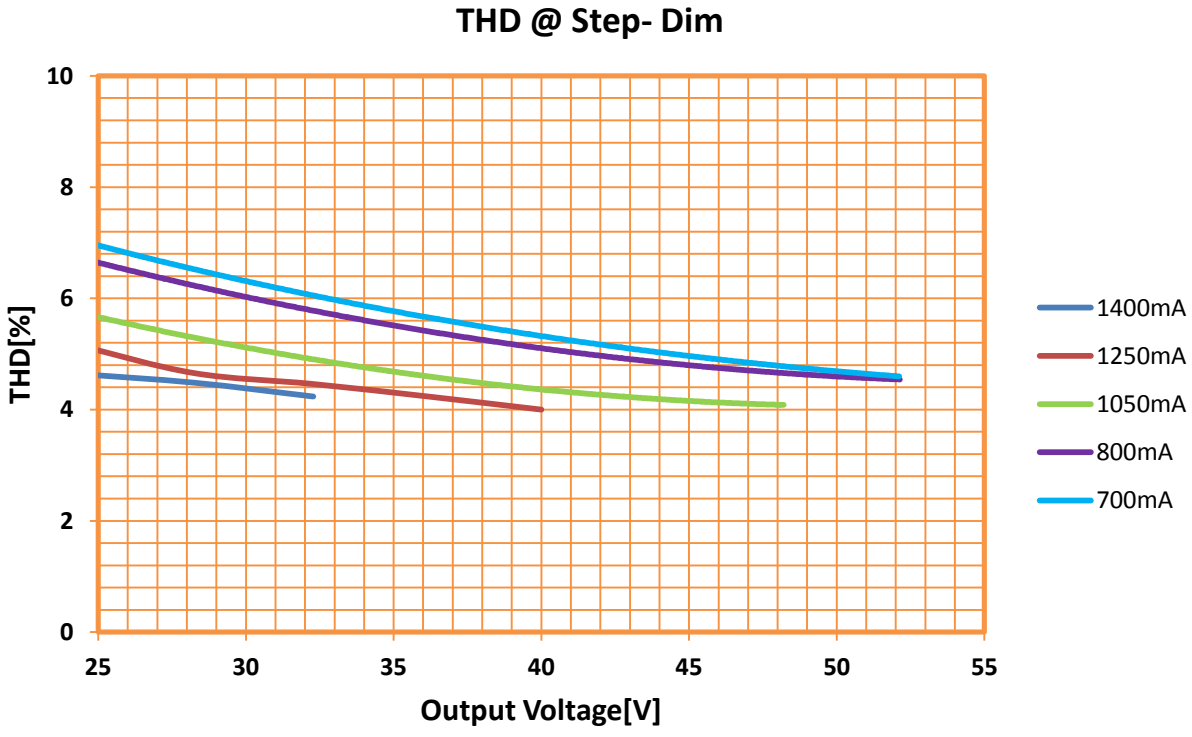
POWER FACTOR VS OUTPUT VOLTAGE @ 277V OPERATION



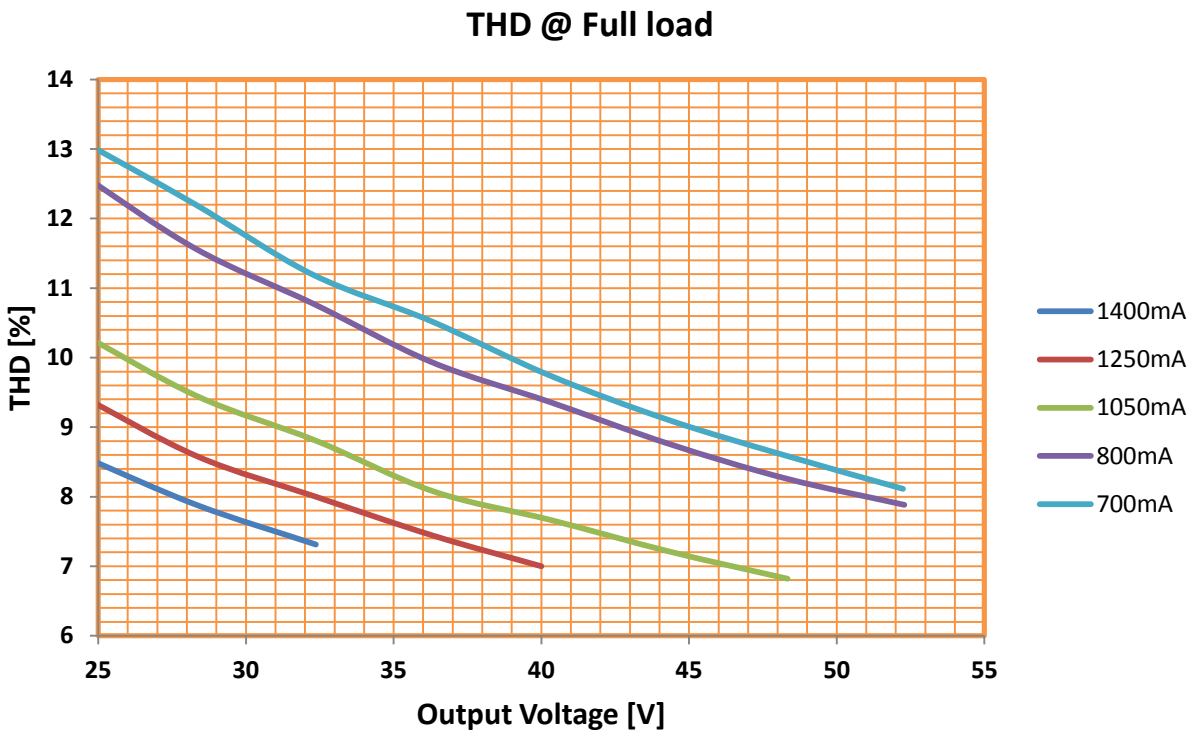


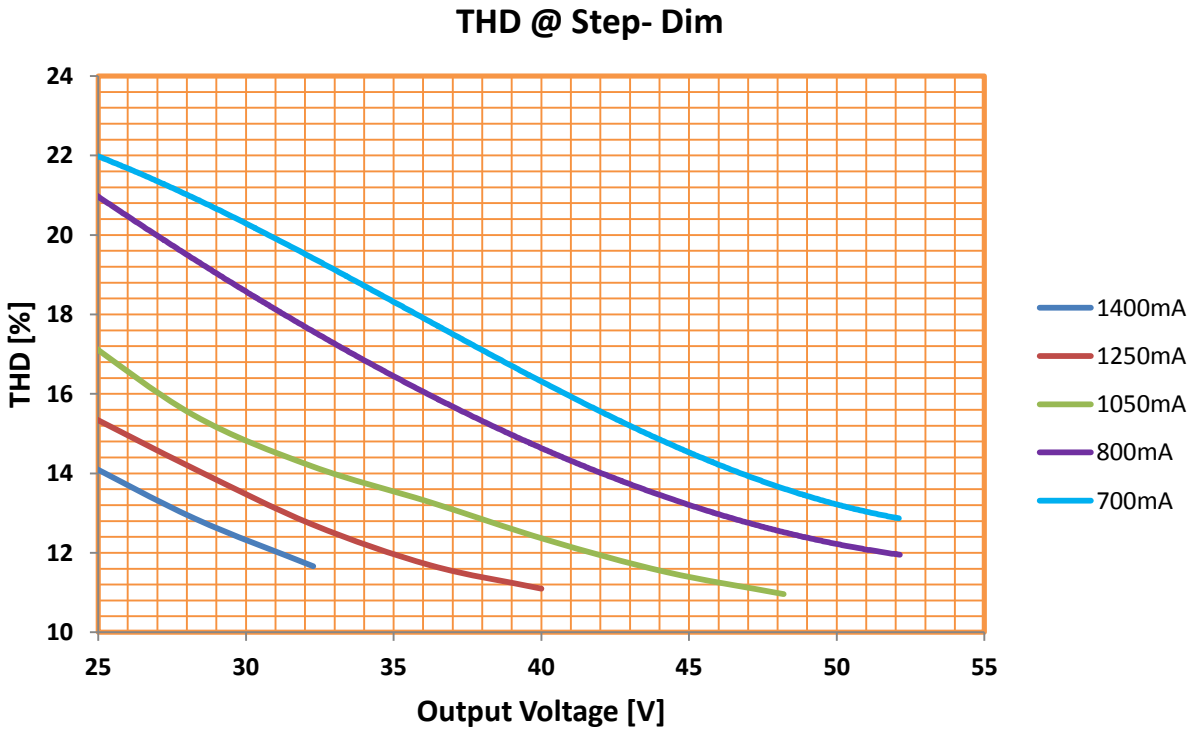
THD VS OUTPUT VOLTAGE @ 120V OPERATION





THD VS OUTPUT VOLTAGE @ 277V OPERATION

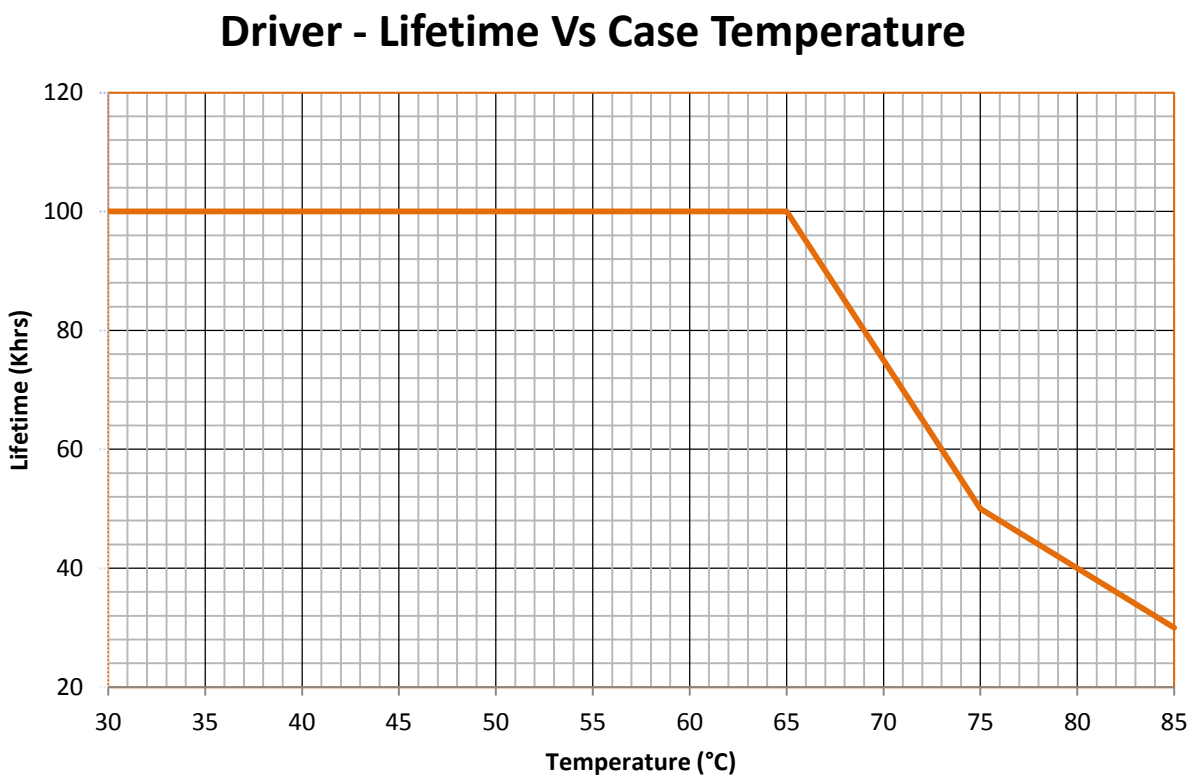




INRUSH CHARACTERISTICS

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

LIFE TIME 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 109.5ºC, and the TC point on the case was 87ºC at an ambient of 48.7ºC. The highest temperature recorded on Model AA57467 XFRM was 104ºC the TC point on the case was 90.8ºC at an ambient of 60.9ºC .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.