

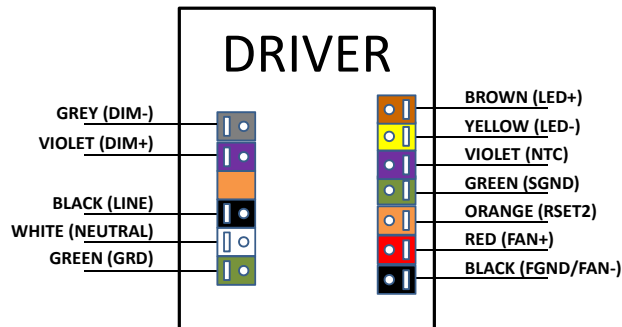
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Product Overview

XI050C100V054DNM1M	
Brand Name	XITANIUM
Description	XITANIUM 50W 0.3-1.0A 54V 0-10V
Input Voltage	120 ~ 277V
Input Freq.	50/60Hz
RoHS	Yes
Status	Preliminary

Input Voltage (Vac)	Output Power (W)	Output Voltage Range (V)	Output Current (A)	Efficiency@ Max Load and 70°C Case	Max Case Temp. (°C)	Input Current (Arms)	Max. Input Power (W)	Inrush Current (Apk/50%-µs)	THD @ Max Load (%)	Power Factor @ Max Load	Surge Protection Common/Diff (KV)	Weight (Lbs/kgs)	Envir. Protection Rating
120	50	27-54	0.3 – 1.0	87	75 °C	0.48	61	26 / 86	<10%	>0.95	1.5/1.5	0.8/ 0.37	UL damp and dry
277				89		0.21		65 / 83	<15%				

Wire Diagram



Product Data:

Install in accordance with National and Local Electrical Codes.

Use 18AWG Solid Copper Wire, Rated $\geq 300V/90^{\circ}C$. Strip wire to 3/8".

For Fortimo systems connect pink wire to Violet(NTC)

Dimming	Dimming Range	Minimum Output Current (A)	Other Comments
0-10V Analog Class 2 Wiring	5% ~ 100%	0.015	Dimming source current: 150 µA

Enclosure



	In.	mm
Case Length	4.20	106.7
Case Width	3.00	76
Case Height	1.30	33
Mounting Length	4.60	116.8
Mounting Width	0.25	6.3
Overall Length	4.98	126.6



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Electrical Specifications

All the specifications are typical and at 25°C Tcase unless specified otherwise.

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Order code	XI050C100V054DNM1M
Full product code	XI050C100V054DNM1M
Full product name	Xitanium 50W 0.3-1.0A 54V 0-10V
Line Voltage	120-277Vac_rms
Line Current	0.48A @ 120V, 0.21A @ 277V
Line Frequency	50/60Hz
Min. Mains voltage operational	108 V [min]
Max. Mains voltage operational	305V [max]
THD (total)	Refer to graph
Power Factor (PF)	Refer to graph
Inrush Current	Per NEMA 410
Lightning Surge Protection	Refer to table below
Output voltage range	27V to 54Vdc
Maximum open circuit voltage	60V
Output Current Ripple (ripple = peak to peak / average)	30% max @ max lout Low frequency (≤ 120 Hz) content $< 5\%$
Protections	Short Circuit and Open Circuit Protection for LED + and LED-; Temperature protection
Ambient Temp Range	-20°C to +50°C
Max Case Temperature (Tcase)	75°C for Life & UL safety
Interfaces	0-10V Dimming, AOC, MTP, FAN
AOC (Adjustable Output Current)	300mA to 1000mA via external resistor (Refer to specifications below)
MTP (Module Temperature Protection)	Current cutback to 10% (Refer to specifications below)
0-10V Dimming Specifications	150 μ A source current from driver, See dim curve for detail.
FAN Output	12V \pm 10%, 2W max
Environmental Protection Rating	UL damp and dry
Agency Approbations	UL8750, UL1310, UL935, CSA-C22.2 No. 250.13-12, CSA C22.2 No. 223
Electromagnetic Compliance	FCC Title 47 Part 15 Class B
Isolation	Refer to table
Audible noise	< 24 dB Class A

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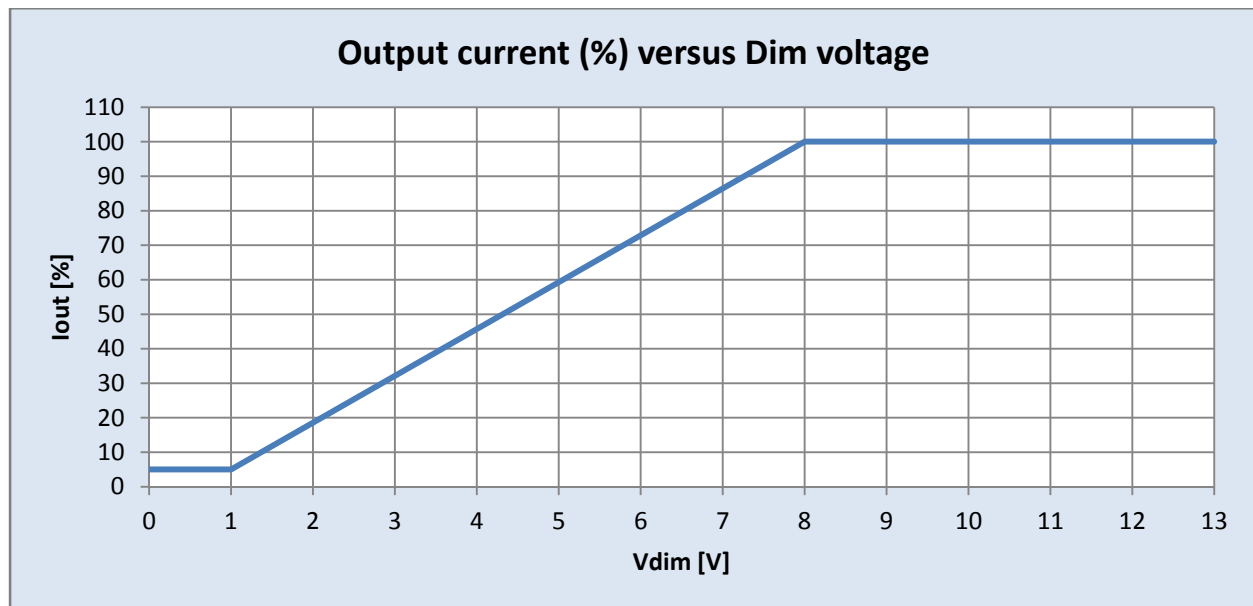
0-10V Dimming Curve:

Dimming source current from the driver: 150µA (@ 0<Vdim<8V)

LED Current Tolerance at 1000mA ≤ 5% over temperature and component variations and ≤ 10% at any dim level.

Minimum Dim Level: 5% of Iout (minimum 15mA)

Maximum output voltage on the dimming wires: 13V



Approved Dimmer List

Manufacturer	Manufacturer Part Number
Lutron	Visit www.lutron.com/advance for a list of dimmers (Mark VII) that will work with this driver
Leviton	IllumaTech IP7 series
Philips	Sunrise - SR I 200ZTUNV

For compatibility with other dimmers please contact the dimmer manufacturer

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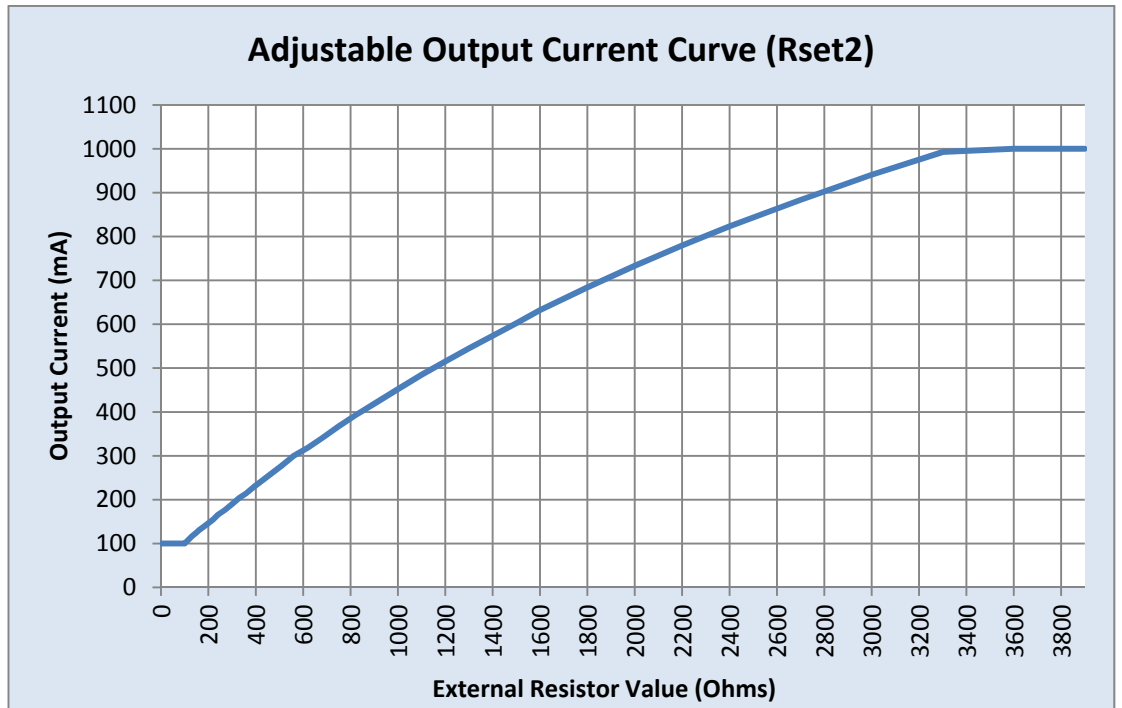
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AOC (Adjustable Output Current) Settings:

LED Current Tolerance over temperature and component variations for AOC ≤ 10% at ay dim level.

Rset(Ohms)	Current (mA)
100	100
120	111
150	124.5
180	138.2
220	154.6
270	176.4
330	203.7
390	228.3
470	261.0
560	296.5
680	340.2
820	392.1
1000	452.1
1200	514.9
1500	602.3
1800	684.2
2200	779.7
2700	883.5
3300	992.7
3900	1000



Driver will default to 1000mA when Rset is left open.

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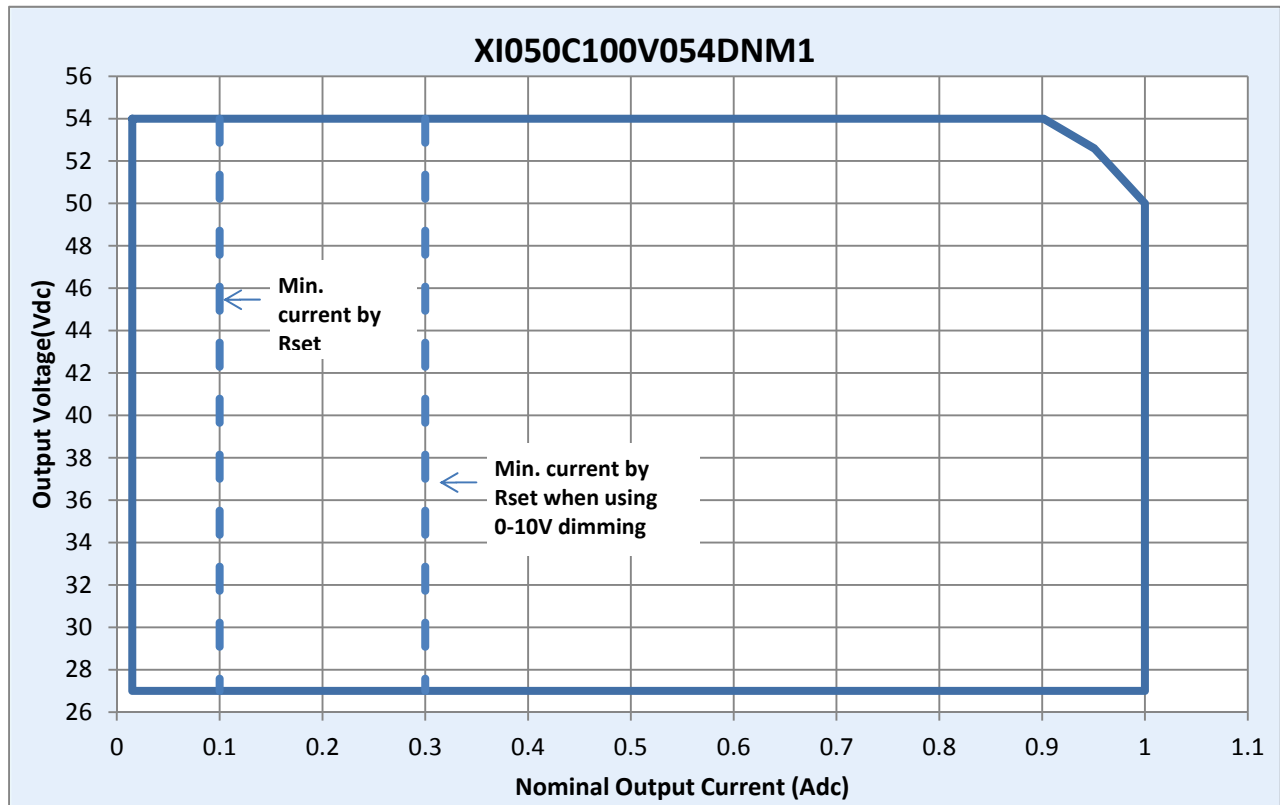
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Operating Window:



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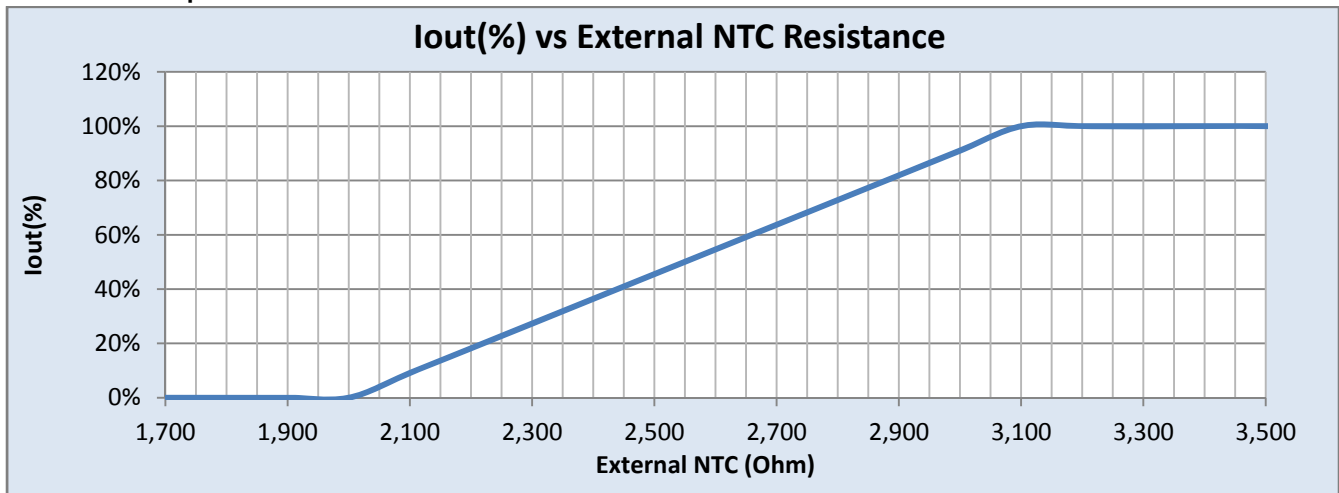


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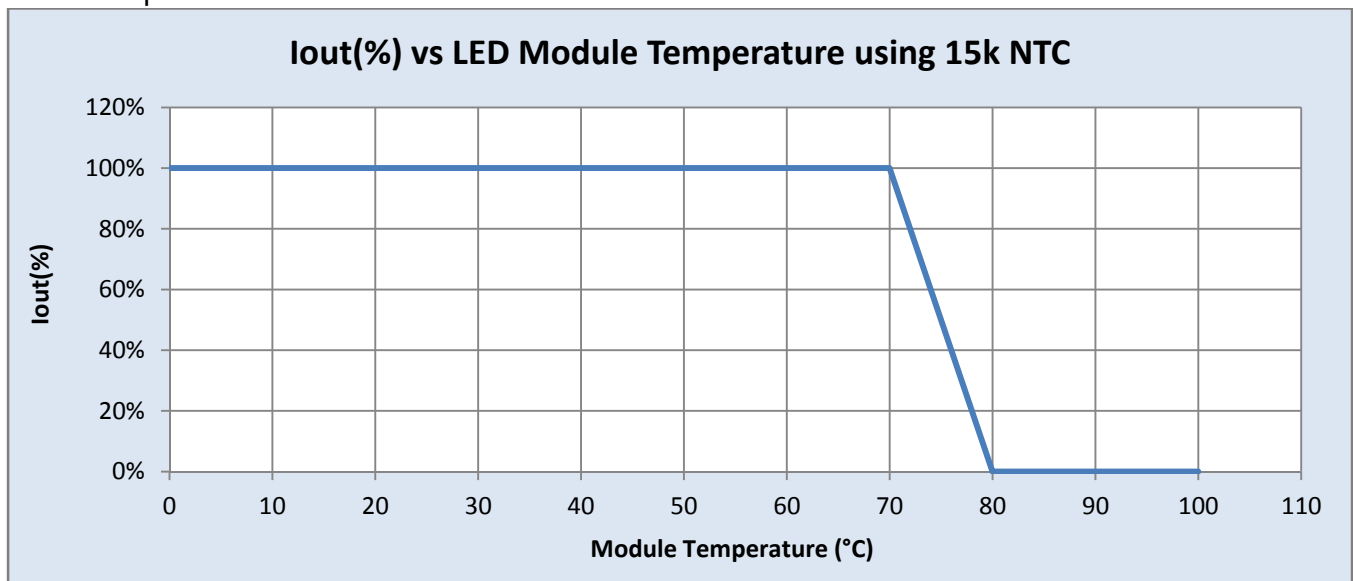
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Module Temperature Protection:



For example: Using NTC Vishay 15kOhm ± 2% NTC, B25/85=3700 (238I 615 54153), the output current Vs module temperature behavior is as follows.



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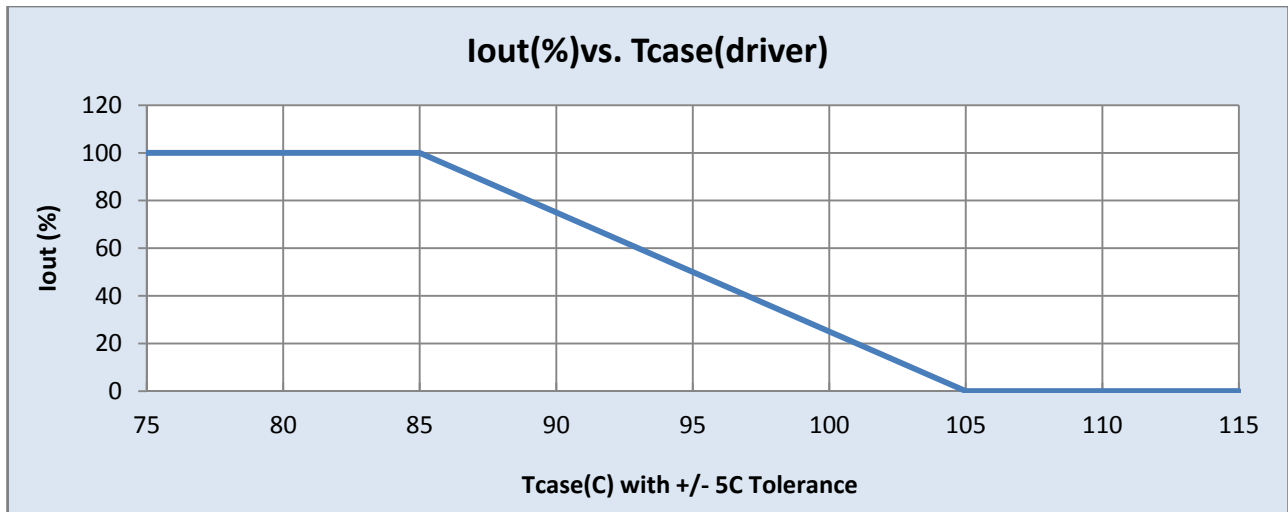


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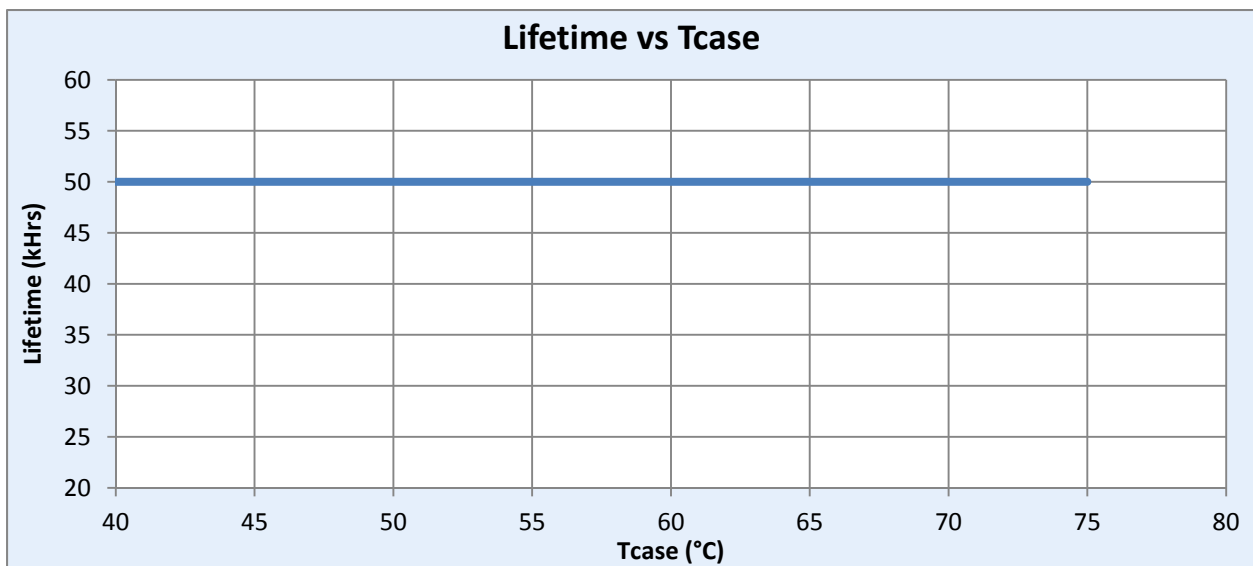
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Iout vs. Tcase of Driver:



Lifetime vs. Tcase of Driver:



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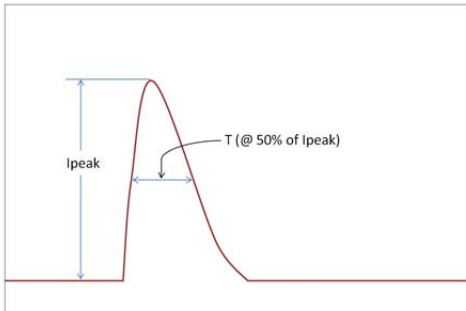
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Failure Rate based upon field call rate data:

- <0.01% per 1 kHr @ ≤ Tcase 75°C

Inrush Current Info:



Vin	Ipeak	T (@ 50% of Ipeak)
120 Vrms	26.6 A	86 μs
277 Vrms	65A	83 μs

Inrush current is measured at peak of the corresponding line voltage, source impedance per NEMA 410.

Lightning Surge Info:

ANSI Surge Type	Differential Mode (L-N)	Common Mode (L-G, N-G, L&N-G)
100 kHz Ring Wave (w/t 30Ω)	6kV	4kV
1.2/50μs - 8/20μs Combination Wave (w/t 2Ω)	1.5kV	1.5kV

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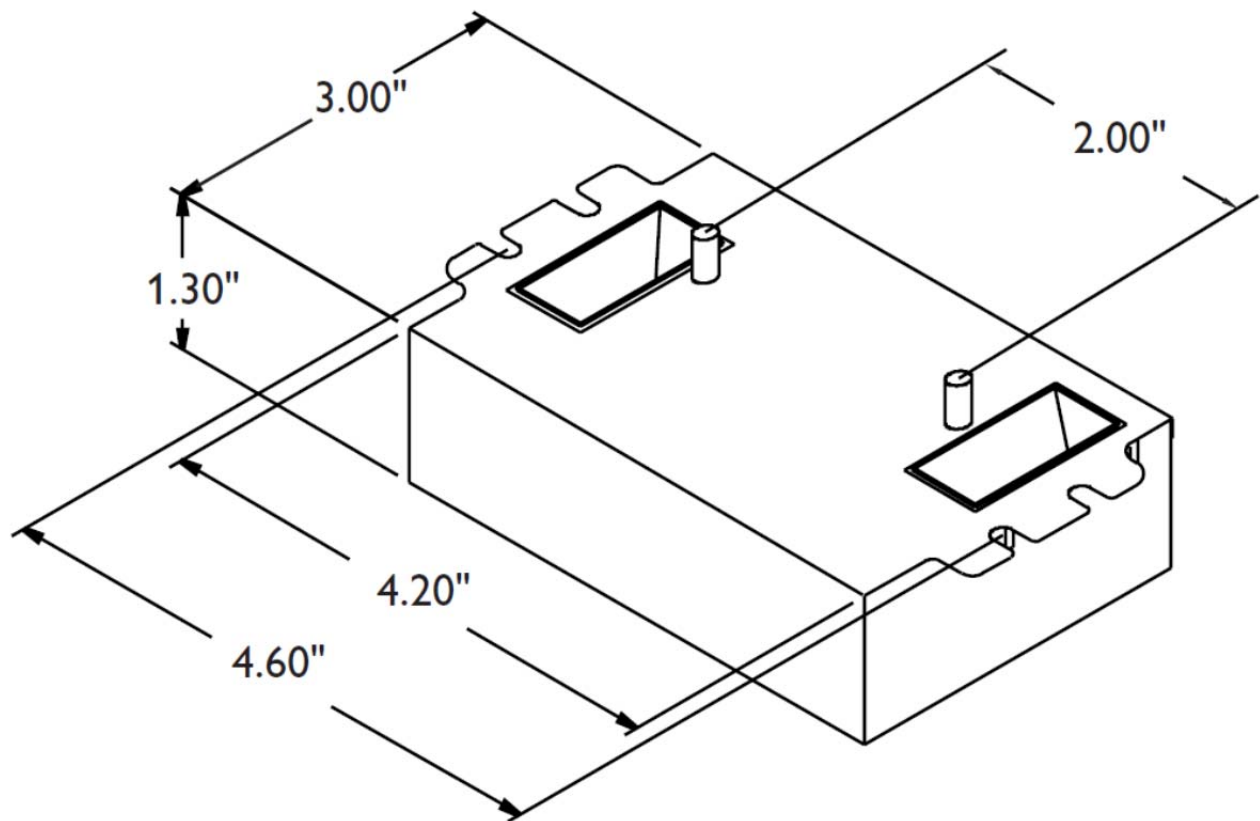
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Mechanical Specification

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Mechanical Drawing:



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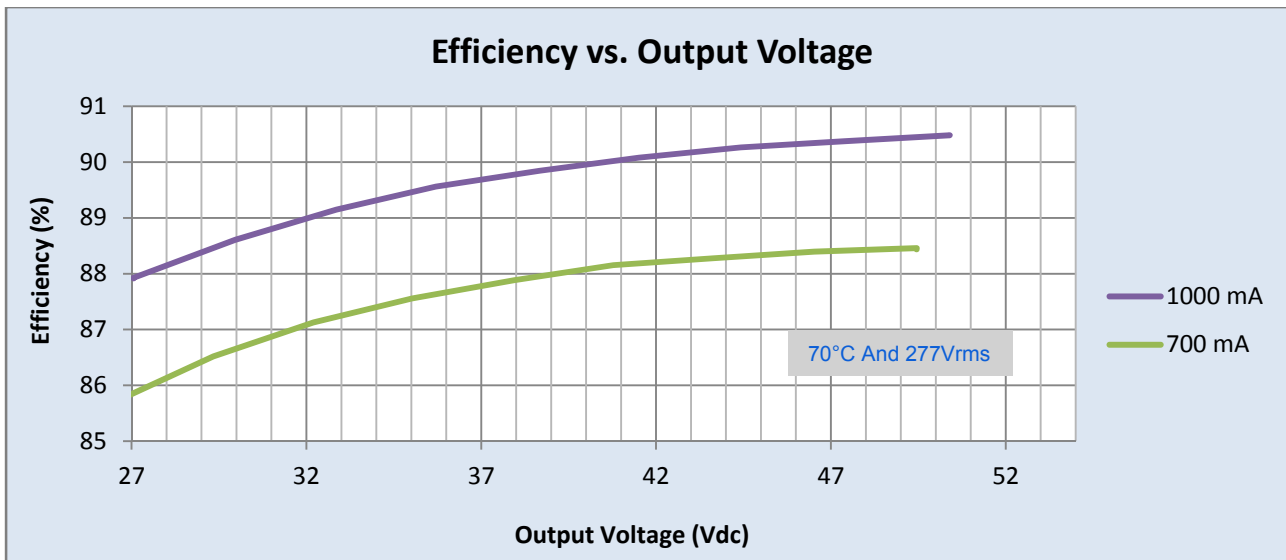
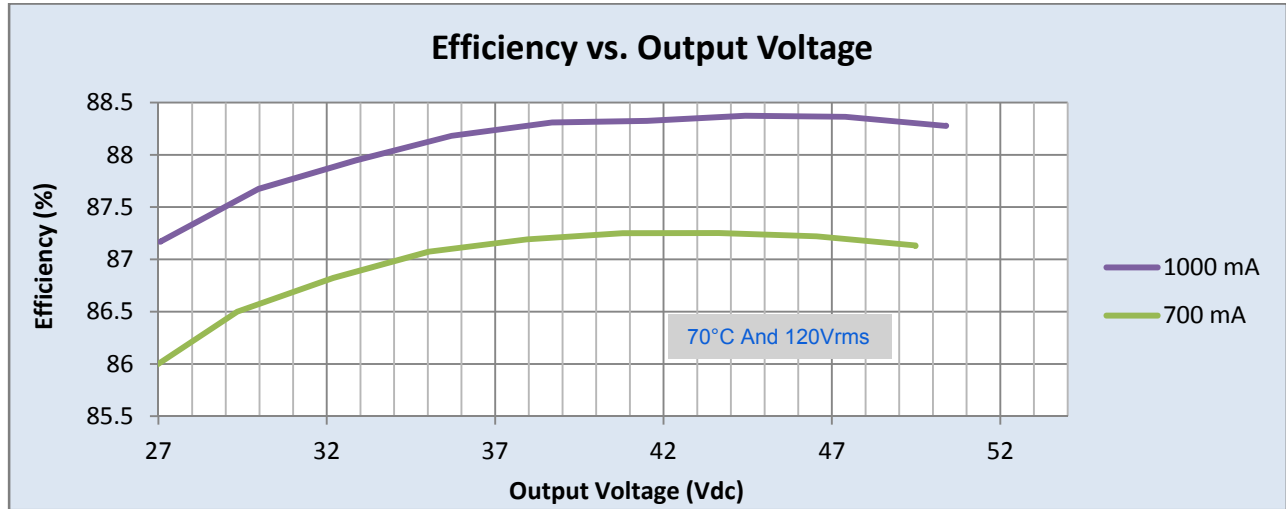
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Performance Characteristics

Based on measurements on a typical sample. The accuracy of the measurements is within the tolerance of the measurement instruments. The graphs are meant to be a guideline and not a specification.

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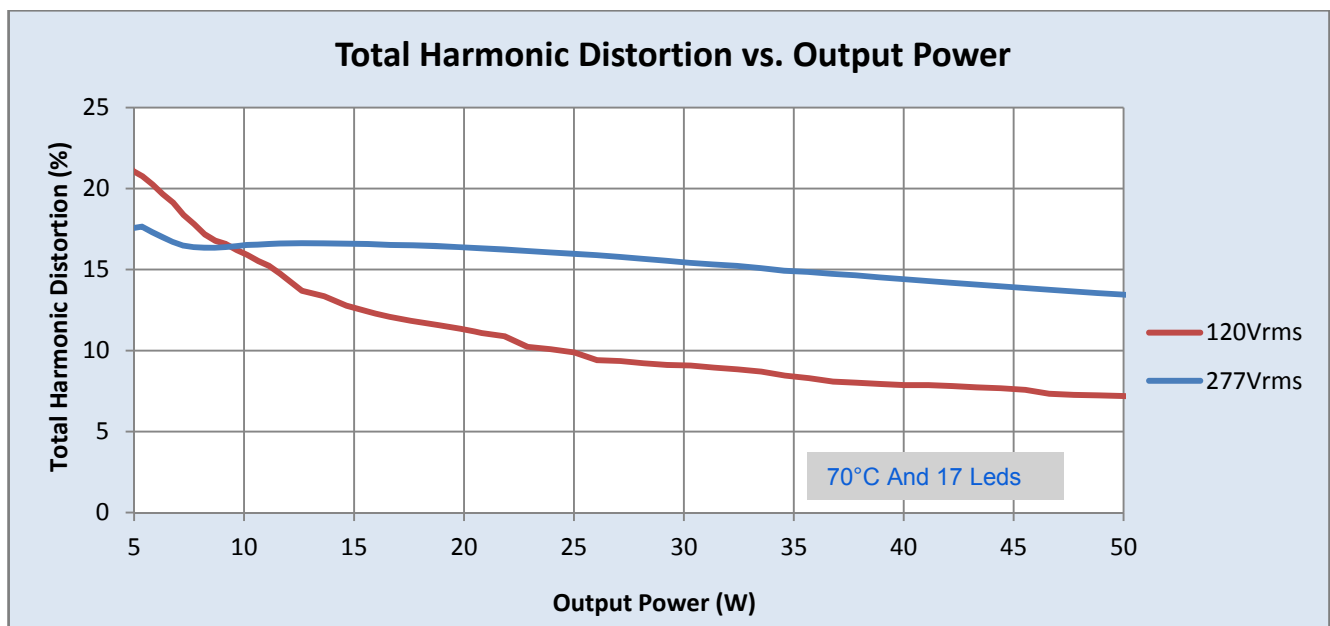
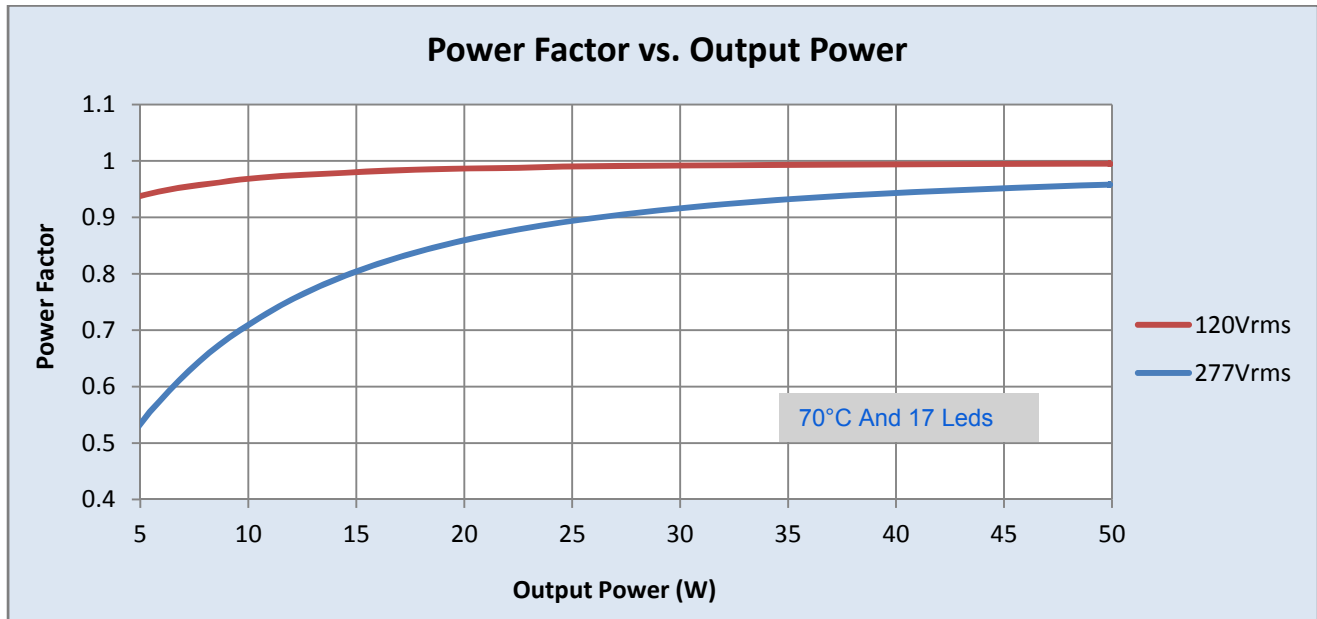
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Application Notes:

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Isolation:

Isolation	Input	Output	0-10V (Class 2)	Enclosure
Input	Not applicable	2xU+1KV	2.5KVac	2xU+1KV
Output	2xU+1KV	Not applicable	Non-isolated	500V
0-10V (Class 2)	2.5KVac	Non-isolated	Not applicable	500V
Enclosure	2xU+1KV	500V	500V	Not applicable

UL Conditions of Acceptability:

Please contact your Philips representative for a copy of the latest UL Conditions Of Acceptability (COA).

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