

Philips Advance Xitanium LED Driver

PHILIPS ADVANCE XITANIUM LED DRIVER SPEC SHEET



XITANIUM 36W 0.1-1.0A 48V 0-10V
XI036C100V048DNM1

Features

- UL Class 2 output with Adjustable Output Current (AOC)
- SmartMate style housing with 90°C Tcase max
- Compatible with Philips Fortimo Down Light Modules

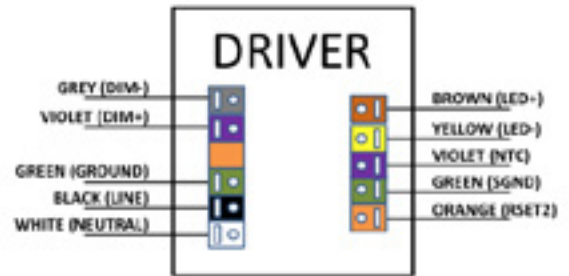
Benefits

- Flexibility via adjustable drive current
- Simple integration into existing style fixtures
- System solution that helps optimize performance and eases design-in

Dimensions

	in.	mm
Case Length	4.20	106.7
Case Width	2.36	60
Case Height	0.95	24
Mounting Length	4.60	116.8
Overall Length	4.96	126

Wire Diagram



Dimming	Dimming Range	Minimum Output Current (A)	Other Comments
0-10V Analog Class 2 Wiring	5% ~ 100%	0.030	Dimming source current: 150 μ A

Product Data

Install in accordance with National and Local Electrical Codes. Use 18AWG Solid Copper Wire, Rated \geq 300V/90C. Strip wire to 3/8".

For Fortimo systems connect pink wire to Violet (NTC).

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%- μ s)	THD @ Max Load (%)	Power Factor @ Max Load	Surge Protection (Ring Wave, KV)	Weight (Lbs/kgs)	Envir. Protection Rating
120	36	20 - 48	0.1 - 1.0	86	Life - 80°C UL - 90°C	0.36	42	21/78	<10%	>0.95	>2.5kV	0.46/ 0.21	UL damp and dry
277				88		0.16		64/74.5	<15%				



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SPEC SHEET

Electrical Specifications

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

Ordering Information	
Order code	XI036C100V048DNM1
Full product code	XI036C100V048DNM1M (Mid-Pack, 32pcs/box)
Full product name	Xitanium 36W 0.1-1.0A 48V 0-10V
Input Information	
Line Voltage	120-277Vac_rms
Line Current	0.36A @ 120V, 0.16A @ 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 Information	
Output voltage range	20V to 48Vdc
Maximum open circuit voltage	53V
Output Current Ripple (ripple = peak to average / average)	15% max @ max lout Low frequency (≤ 120 Hz) content <5%
Protections	Short Circuit and Open Circuit Protection for LED + and LED-
Ambient Temp Range	-20°C to +50°C
Max Case Temperature (Tcase)	80°C for Life & 90°C for UL Safety
Features	
Interfaces	0-10V Dimming, AOC, MTP
AOC (Adjustable Output Current)	100mA to 1000mA via external resistor (refer to graph below & notes in the Application section)
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.
Environment & Approbation	
Environmental Protection Rating	UL damp and dry
Agency Approbations	UL8750, ULI310, UL935, CSA-C22.2 No. 250.13-12, CSA C22.2 No. 223
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Isolation	Refer to table
Audible noise	<24dB 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.

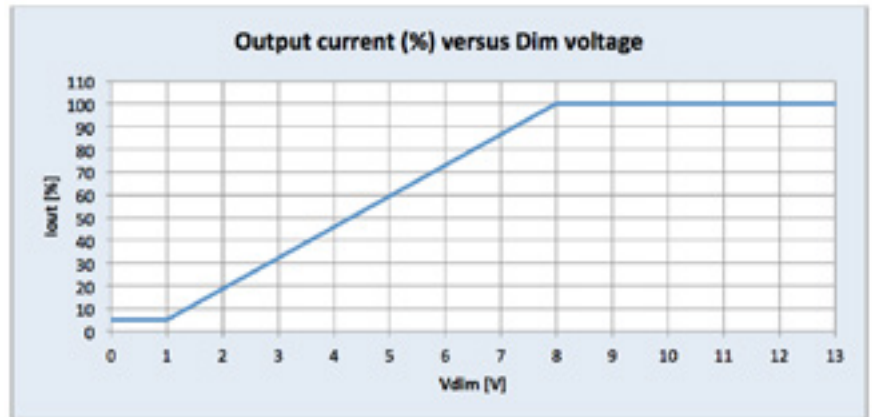
Minimum Dim Level: 5% of Iout (minimum 30mA)

Maximum output voltage on the dimming wires: 12V

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 - SRI200ZTUNV

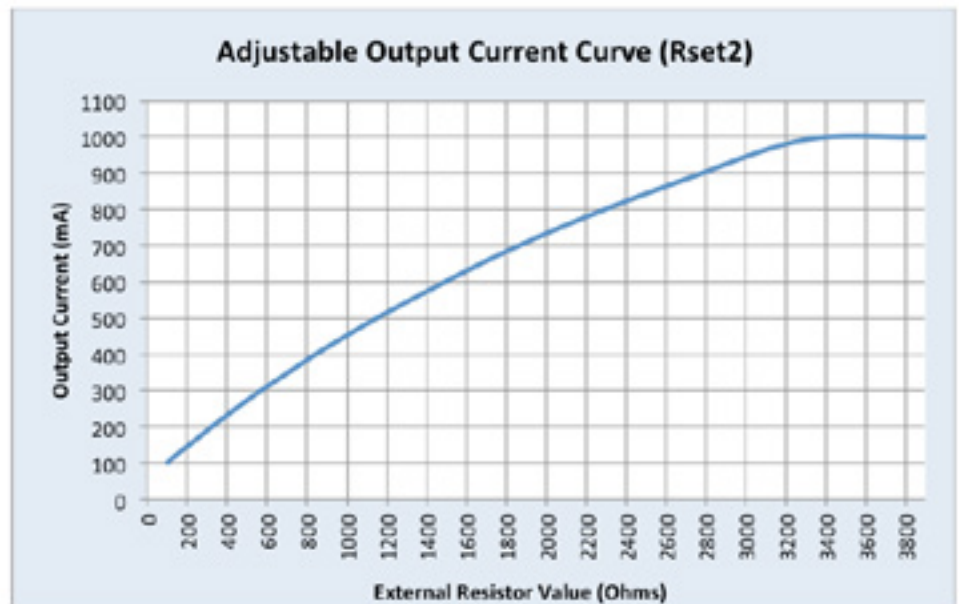
For compatibility with other dimmers please contact the dimmer manufacturer.



AOC (Adjustable Output Current) Settings:

LED Current Tolerance over temperature and component variations for 4%±15mA at any 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



Notes:

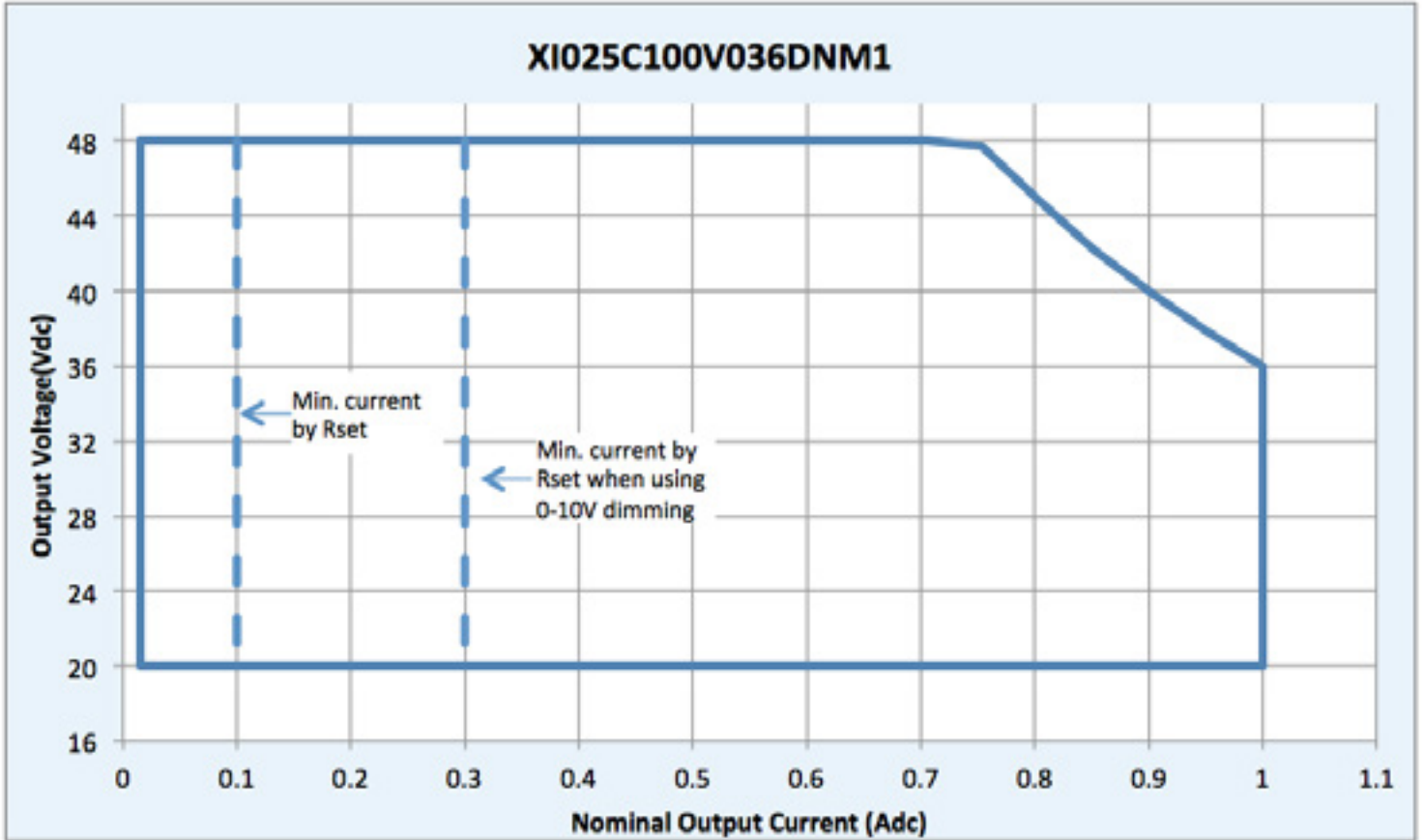
- Any through hole or SMD resistor with >0.25W and >20V can be used as RSET2 between Rset2 and SGND pins
- The driver will default to 1000mA when Rset is left open

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Operating Window:

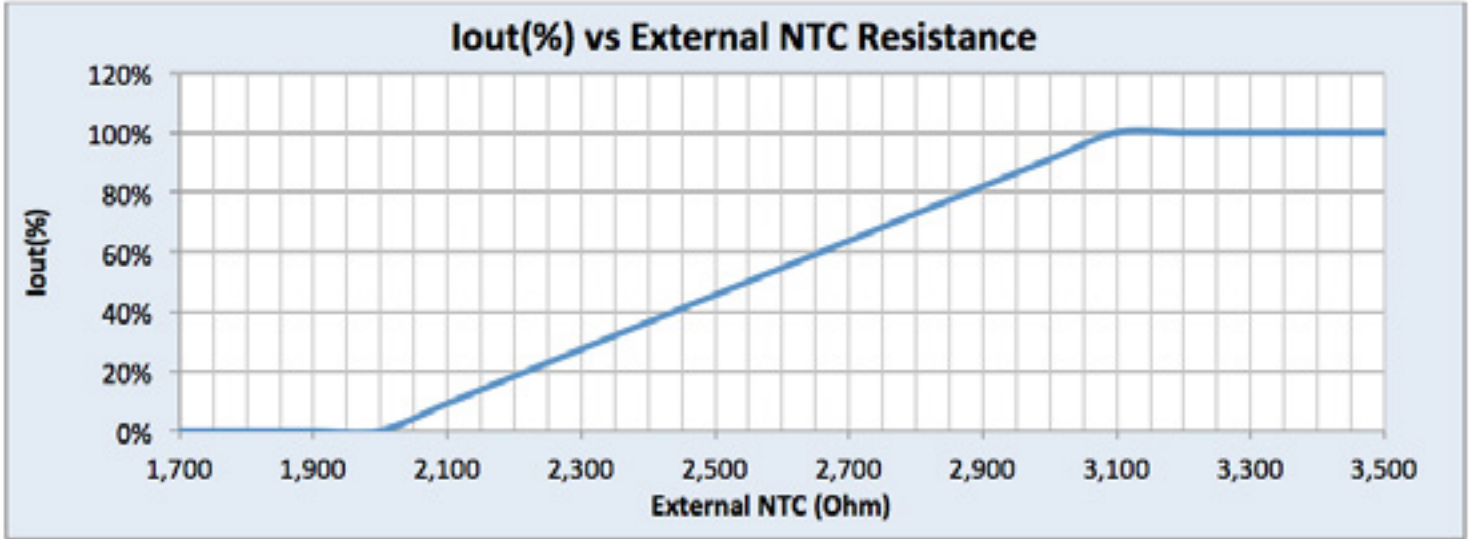


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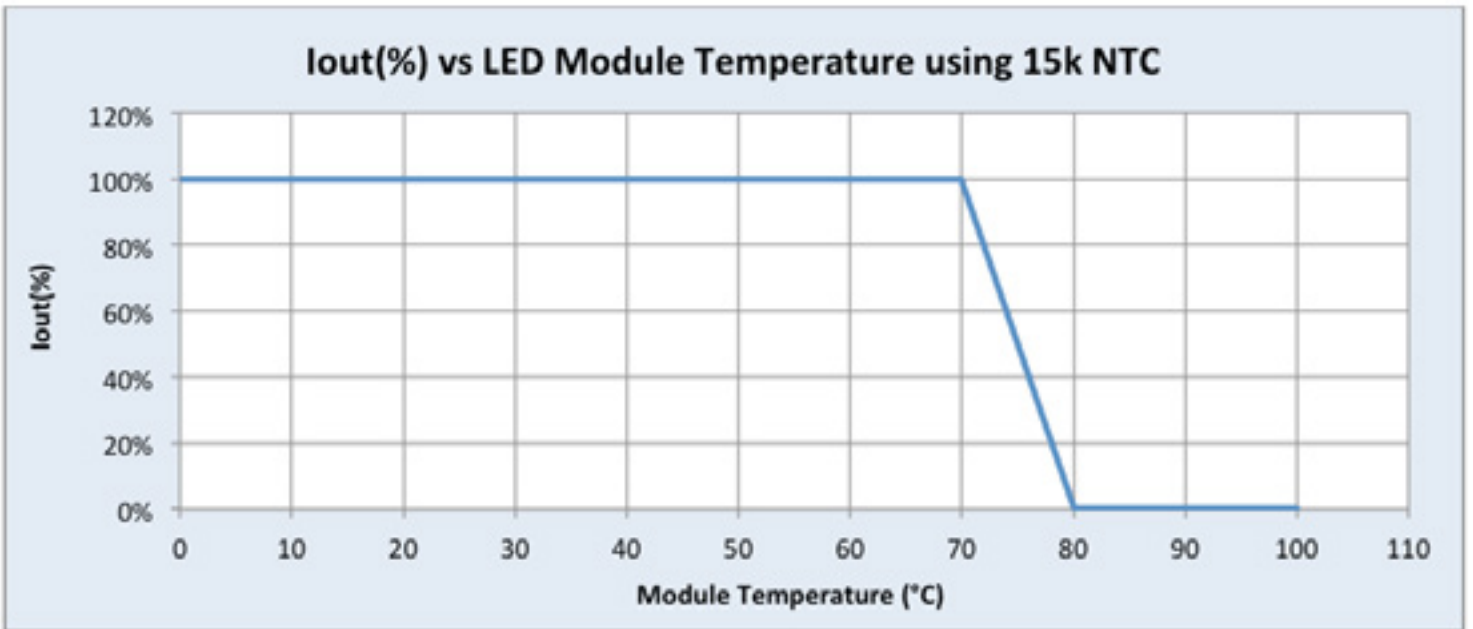
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Module Temperature Protection:



For example: Using NTC Vishay 15kOhm \pm 2% NTC, B25/85=3700 (2381 615 54153), the output current Vs module temperature behavior is as follows.

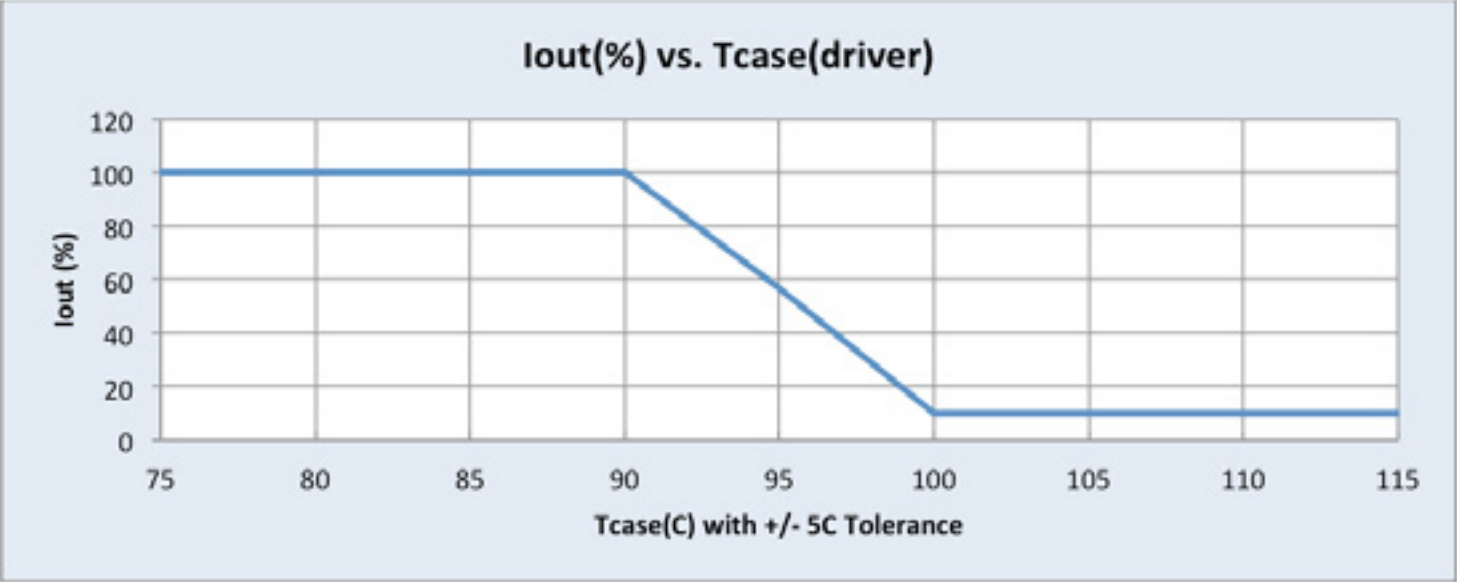


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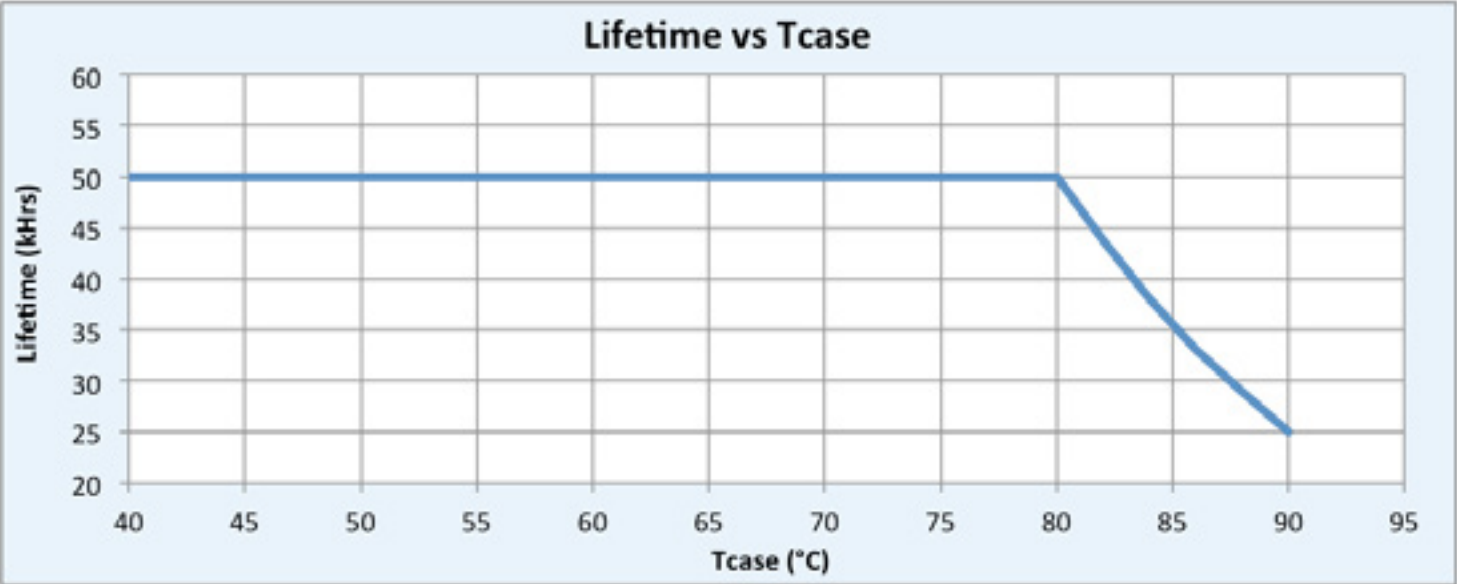
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Iout vs. Tcase of Driver:



Lifetime vs. Tcase of Driver:

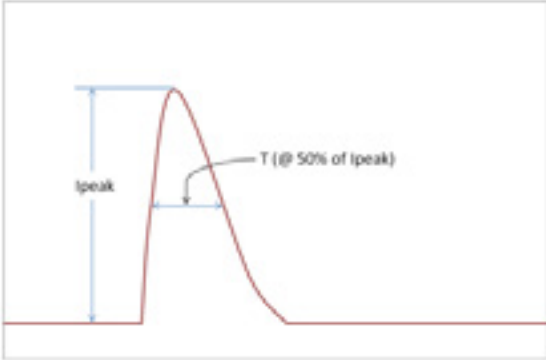


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Inrush Current Info:



Vin	Ipeak	T (@ 50% of Ipeak)
120 Vrms	21A	78uS
277 Vrms	50A	83uS

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

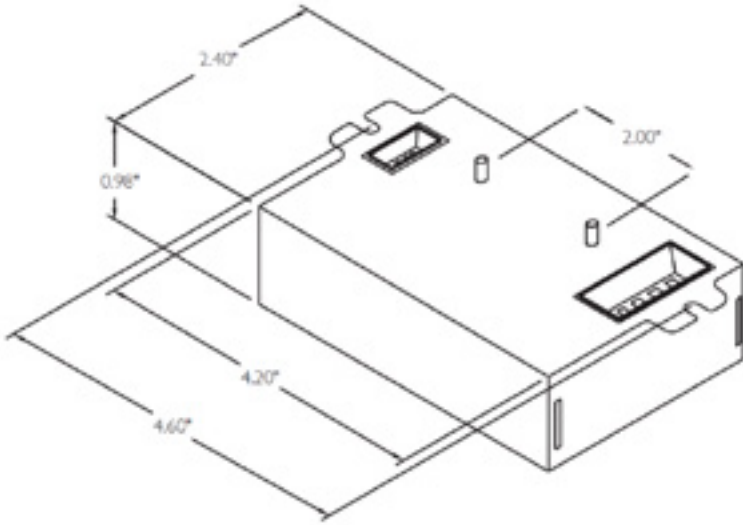
Lightning Surge Info:

ANSI Surge Type	Differential Mode (L-N)	Common Mode (L-G, N-G, L&N-G)
100 kHz Ring Wave (w/t 30Ω)	>2.5kV	>2.5kV

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Mechanical Specifications

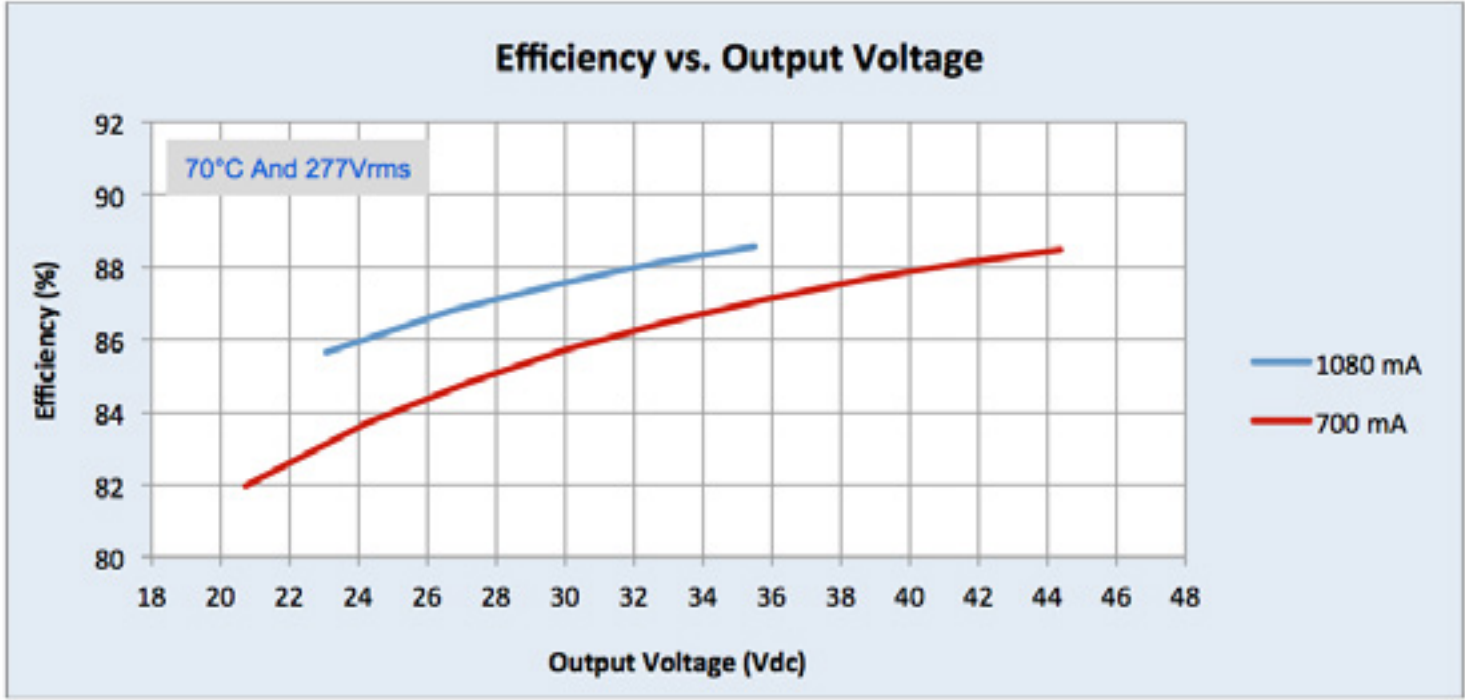
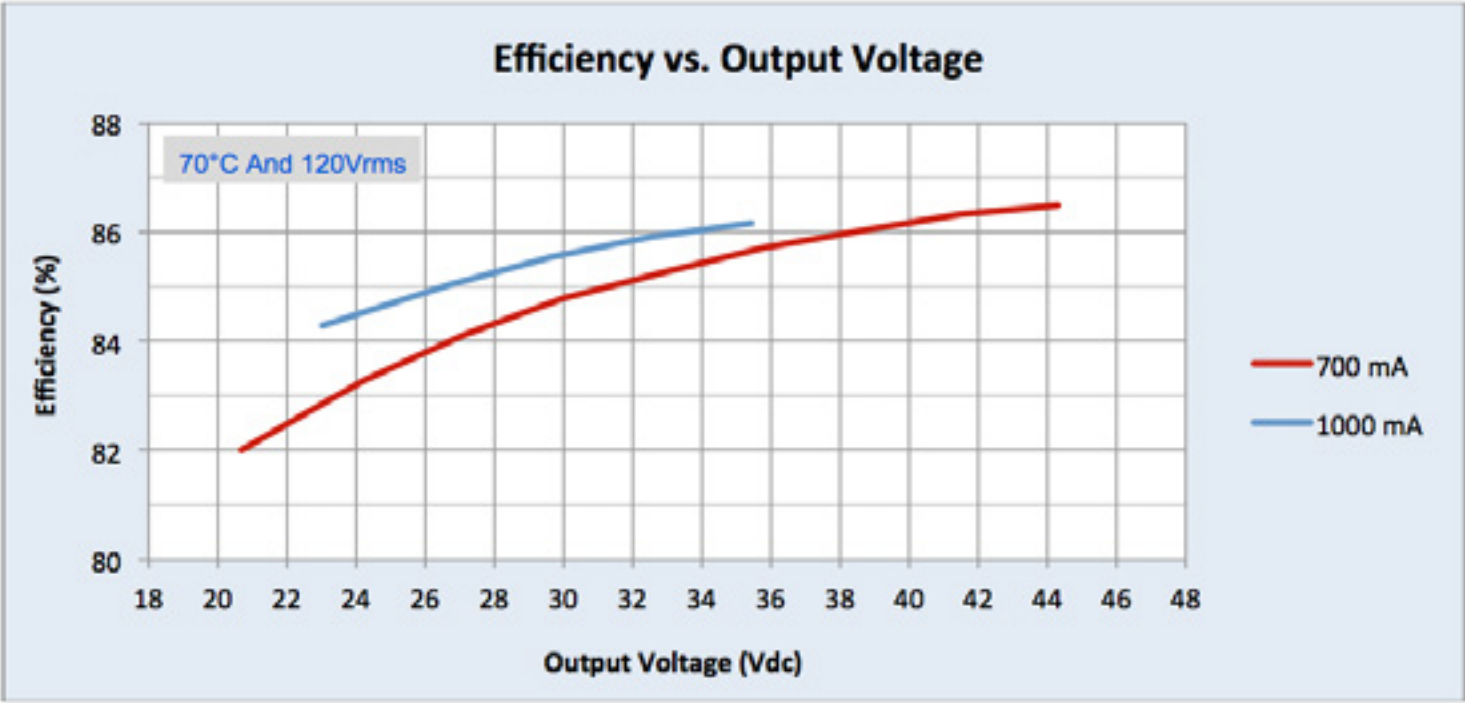
Mechanical Drawing:



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Performance Characteristics

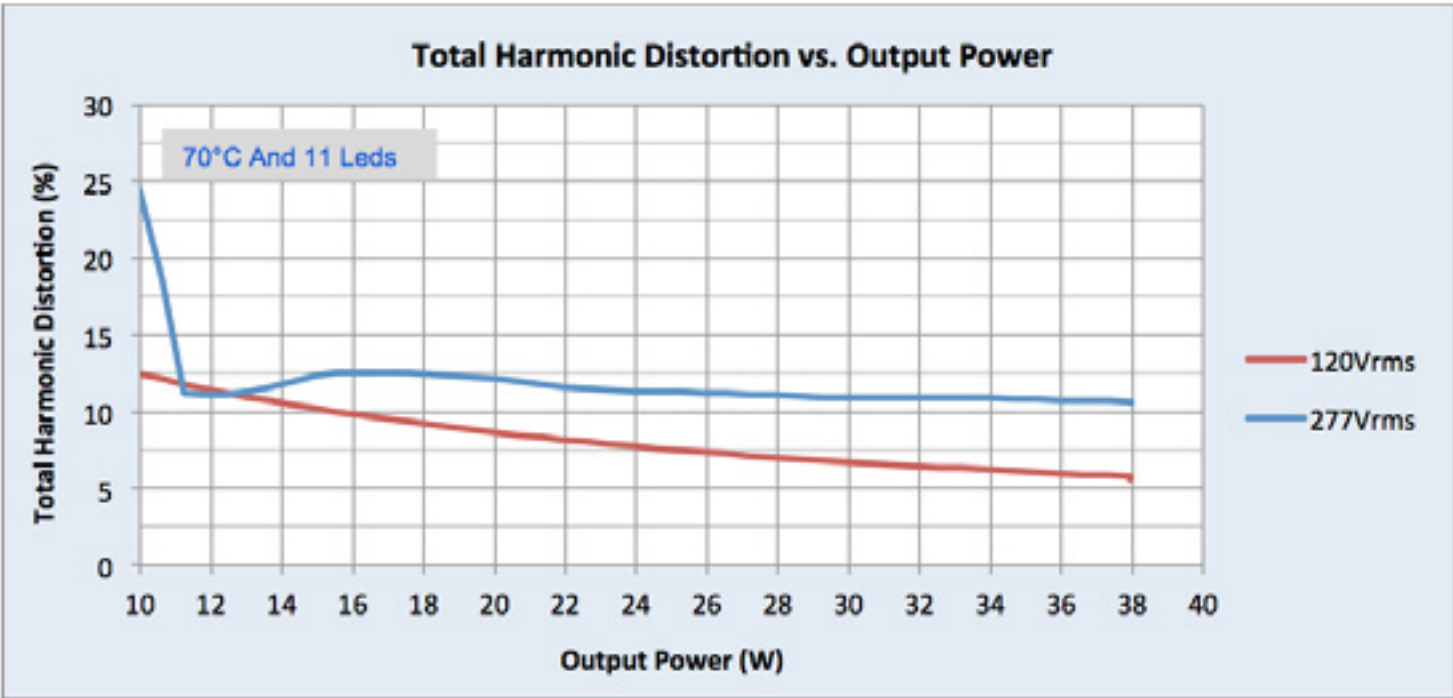
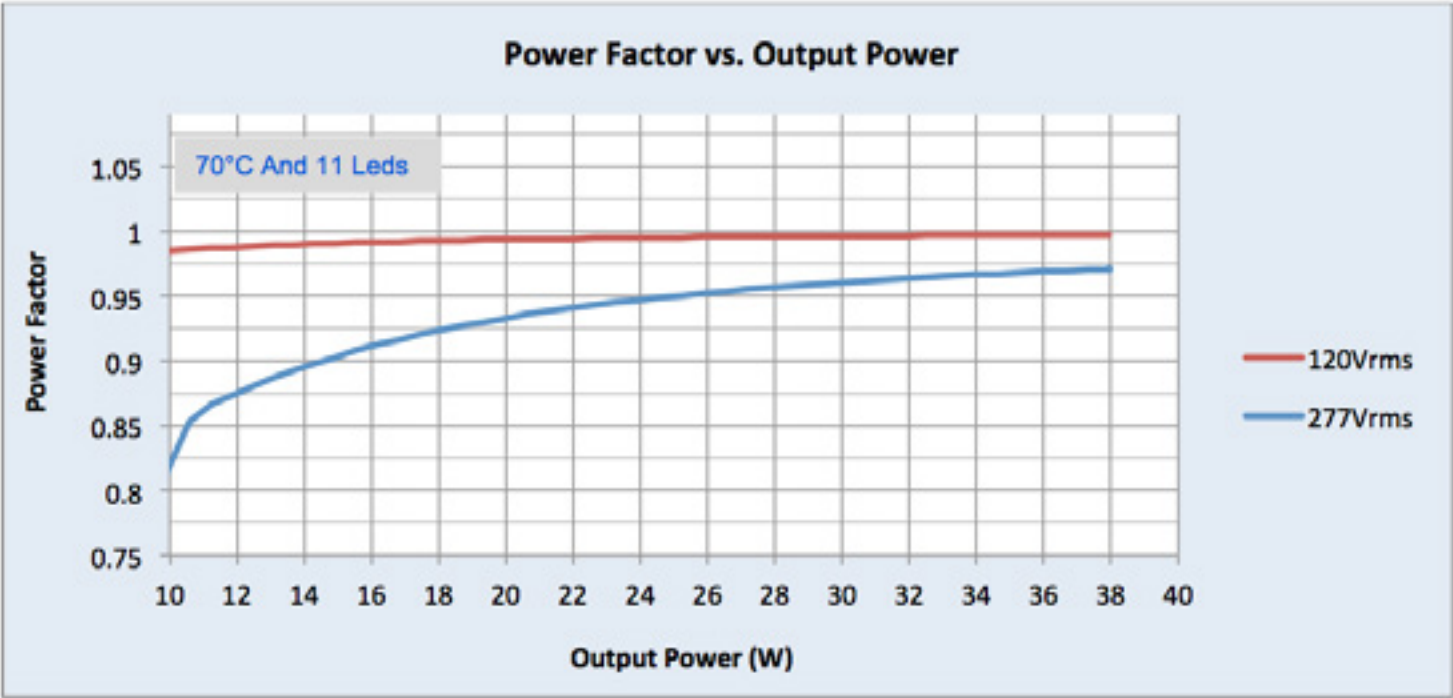
Based on measurements on a typical sample. The accuracy of the measurements is within the tolerance of the measurement instruments. The graphs are meant to be a guideline and not a specification.



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Application Notes

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 Lighting sales representative for a copy of the latest UL Conditions Of Acceptability (COA).



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