

**PHILIPS
ADVANCE**

LED Driver

Xitanium

13W 0.1-0.3A 48V 0-10V INT
XI013C030V048DNM1



Philips Advance Xitanium Downlight LED Drivers are designed to give OEMs ultimate flexibility. With wide operating windows, compact size and simple current adjustability, luminaire manufacturers can easily design luminaires of lumen levels for office and retail applications.

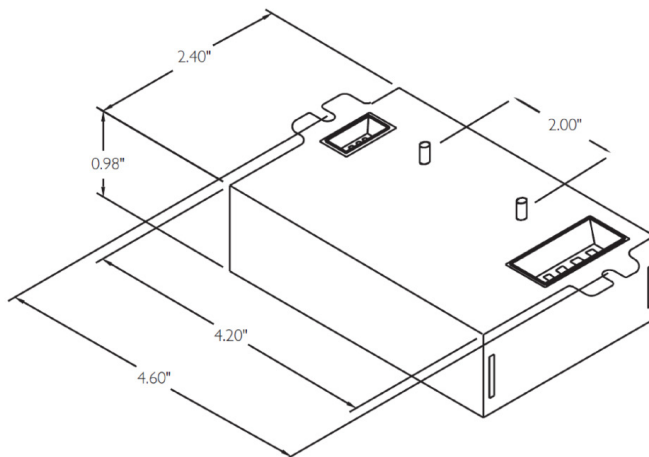
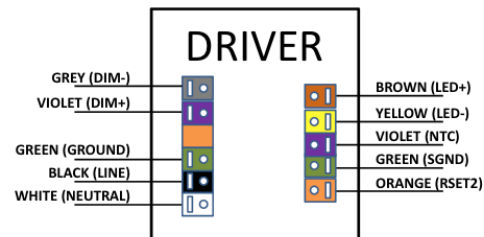
Specifications

Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load and 70°C Case	Max. Case Temp. (°C)	Input Current (A)	Max. Input Power (W)	THD @ Max. Load	Power Factor @ Max. Load	Surge Protection Common/Diff (KV)	Envir. Protection Rating
120	13	24 - 48	0.1 - 0.3	81	80°C	0.14	16.4	<5%	>0.96	>2.5	UL Dry & Damp
277				82		0.06		<10%			

Enclosure

	In. (mm)
Case Length	4.2 (106.7)
Case Width	2.36 (60)
Case Height	0.95 (24)
Mounting Length	4.6 (116.8)
Mounting Width	
Overall Length	4.96 (126)

Wiring Diagram



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).

Dimming	Dimming Range	Minimum Output Current (A)
0-10V Analog Class 2 Wiring	5% ~ 100% (for output current range 0.2-0.3A)	0.01

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Features

- UL Class 2 output with Adjustable Output Current
- SmartMate style housing with 80°C Tcase max
- Compatibility with Philips Fortimo DownLight Modules

Benefits

- Flexibility and ease of design via adjustable drive current and low voltage output
- Simple and economical integration into existing style fixtures
- System solution that optimizes performance and eases design-in

Application

- Indoor downlight applications
- Office
- Retail

Electrical Specifications

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

Product Data

Order Information	
Full Product Code	XI013C030V048DNM1M (Mid-Pack, 16pcs/Box)
Line Frequency	50/60Hz
Min. Mains Voltage Operational	108V
Max. Mains Voltage Operational	305V
Output Information	
Maximum Open Circuit Voltage	<60Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max lout Low frequency (≤ 120 Hz) content <5%
Output Current Tolerance (In the performance window)	<5%
Protections	Short Circuit, Open Circuit Protection for LED + and LED – and Temperature Foldback
Features	
0-10V Dimming	150 μ A source current from driver. See dim curve for detail.
AOC (Adjustable Output Current)	100mA to 300mA via external resistor (Refer to graph and notes below)
MTP (Module Temperature Protection)	Current cutback to 0% (Refer to specifications below)
Environment & Approbation	
Operating Ambient Temp. Range	-20°C to +50°C
Max Case Temperature (Tcase)	80°C for Life & UL Safety
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 A
Audible Noise	<24dB Class A
Weight	0.41 Lbs / 0.19 kgs

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0-10V Dimming Curve

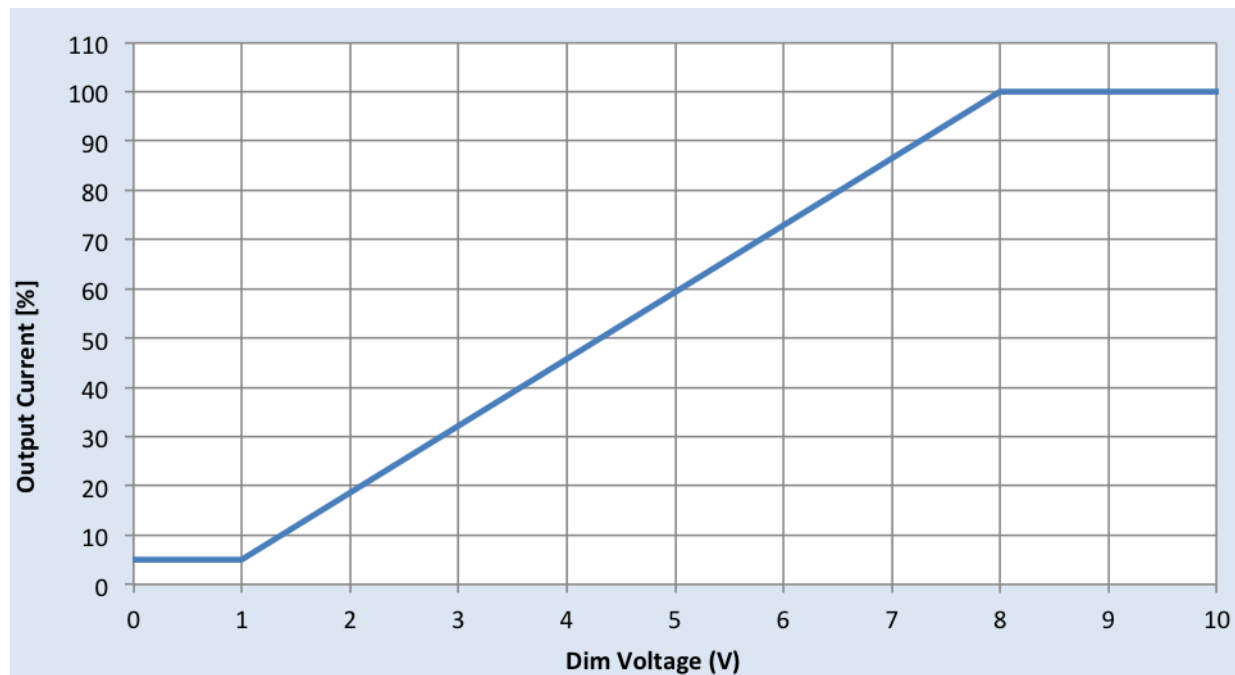
Dimming source current from the driver: 150µA (@ 0<Vdim<8V)

Minimum Dim Level: 5% of Iout (minimum 10mA)

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 sthis driver
Leviton	IllumaTech IP7 series
Philips	Sunrise - SR1200ZTUNV



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AOC (Adjustable Output Current) Settings (Rset)

Rset (Ohms)	Current (mA)
1	100
100	100
110	106
120	111
130	116
150	125
160	130
180	138
200	146
220	155
240	166
270	176
300	190
330	204
360	215
390	228
430	245
470	261
510	277
560	300
620	300
680	300
>100,000	300



Notes

Current is set via a resistor between Rset2 and SGND leads.

Any through-hole or SMD resistor with >0.25W and >20V can be used as Rset.

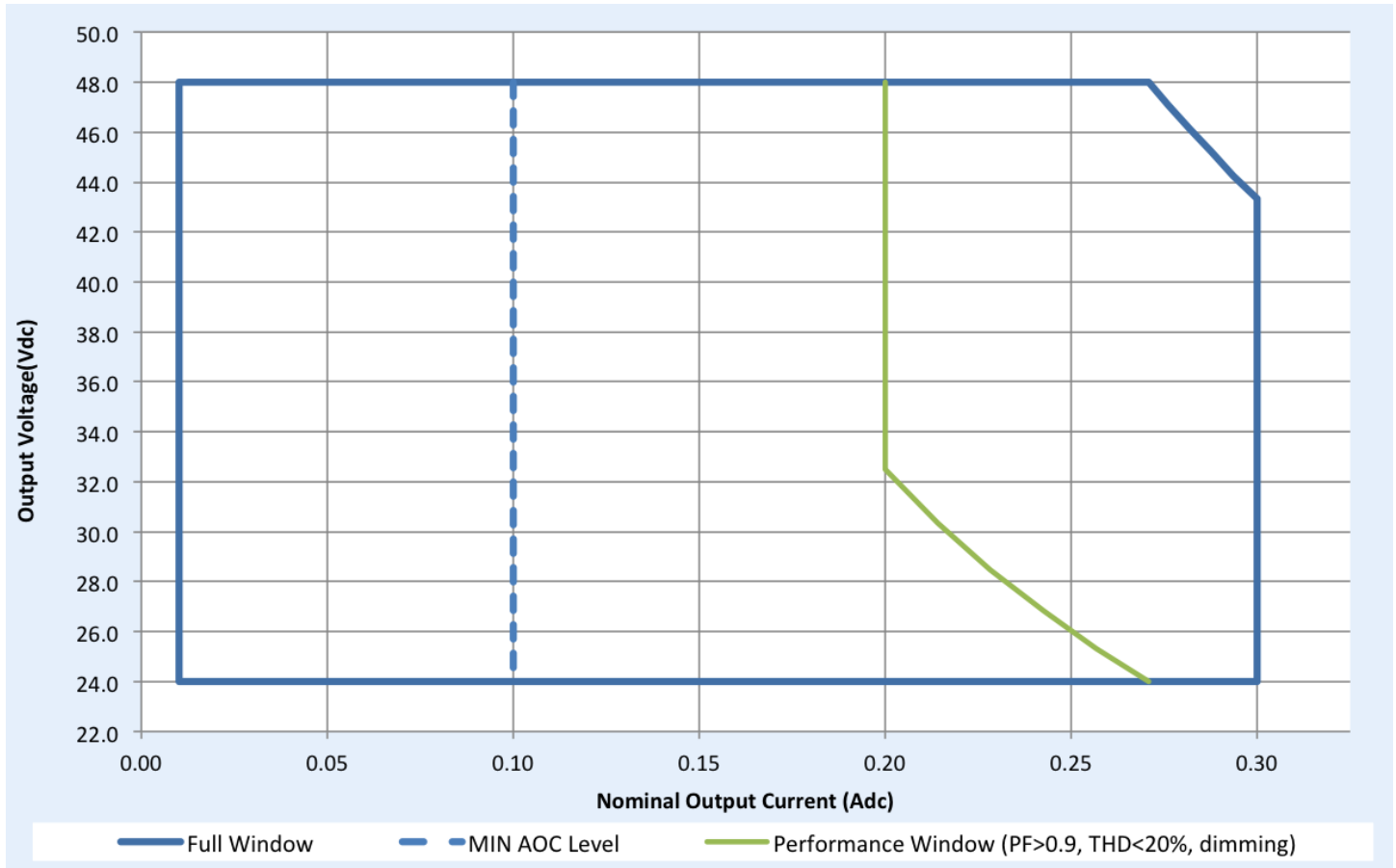
Driver will default to 300mA when Rset is left open.

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Operating Window



Notes

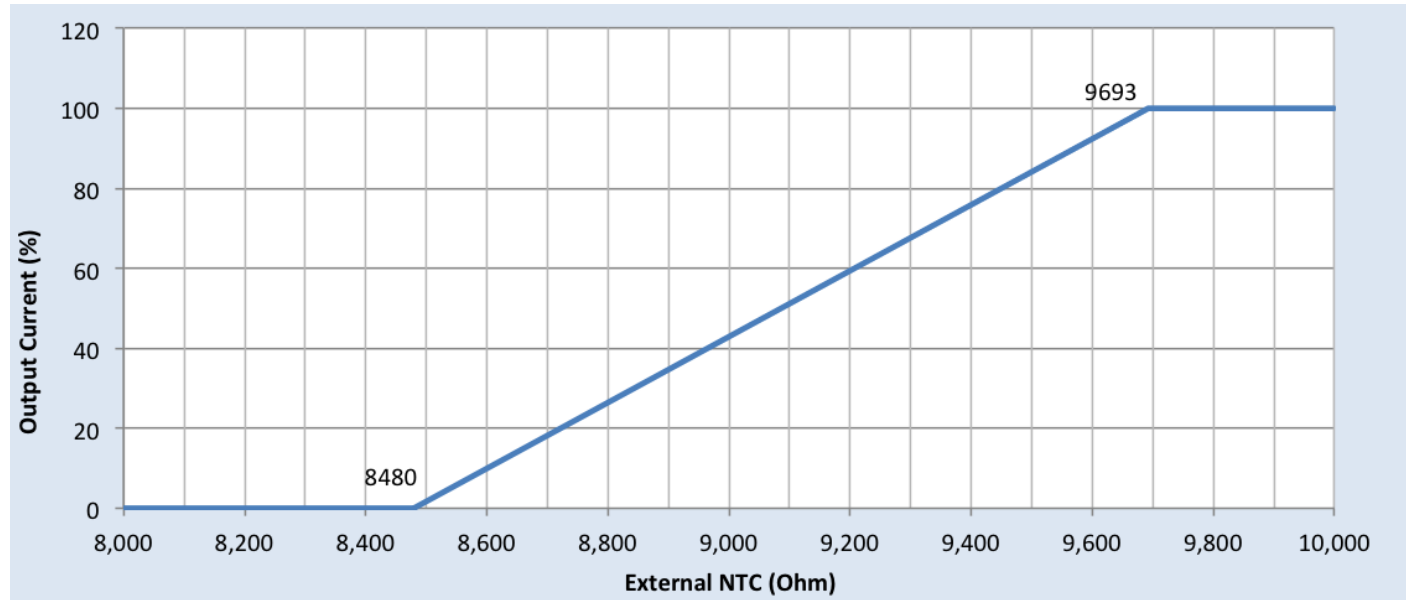
For 5% dimming output current setting through AOC should be >0.2A.

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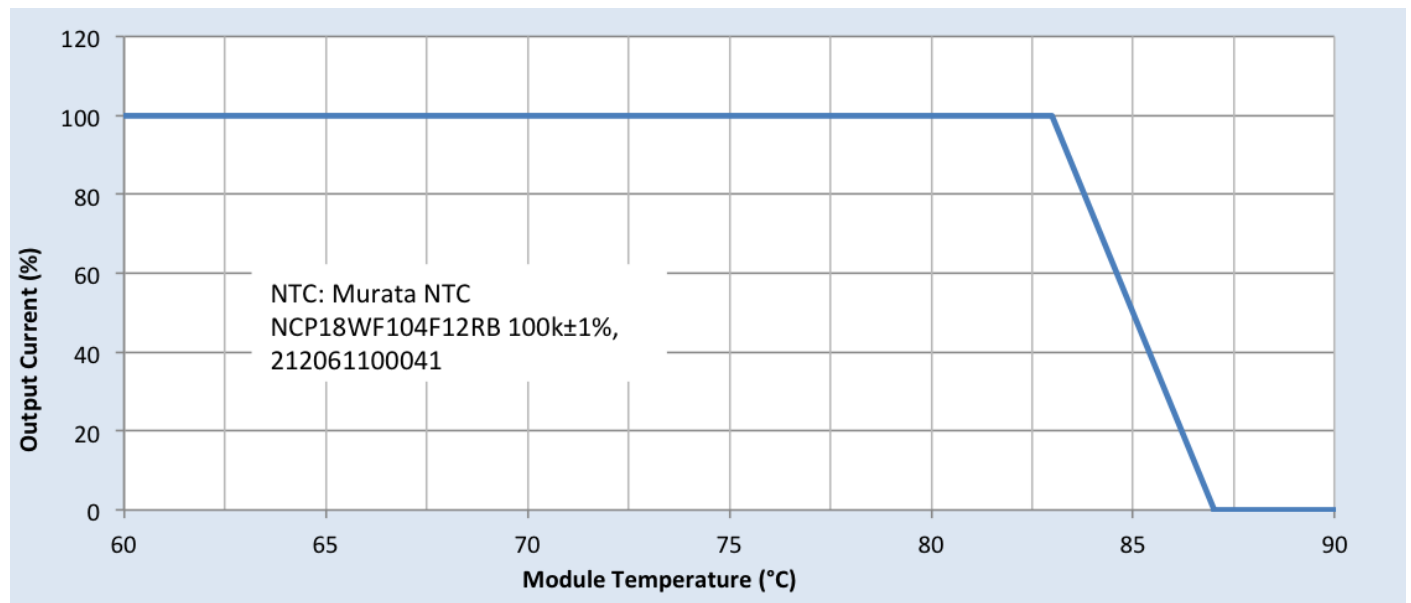
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Output Current Vs. External NTC Resistance



Output Current Vs. LED Module Temperature using 100kohm NTC

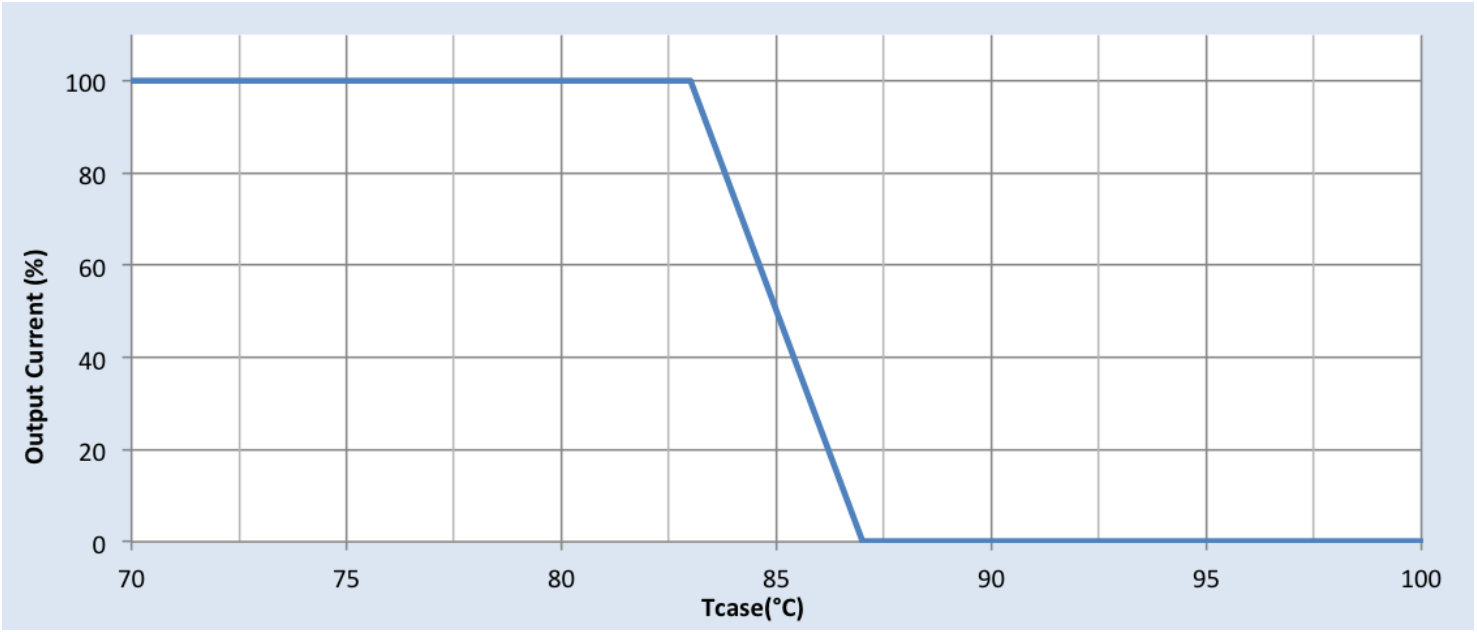


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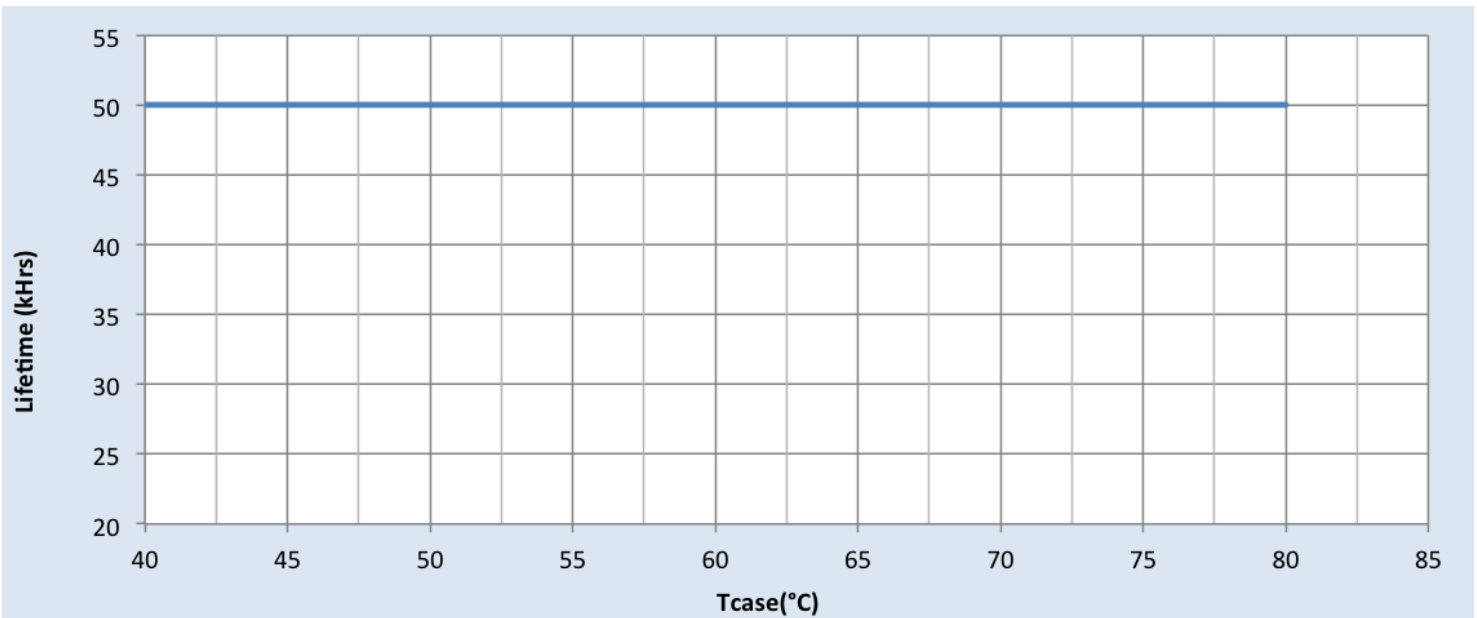
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Output Current Vs. Driver Case Temperature



Note: There is $\pm 5^\circ\text{C}$ tolerance on the driver case temperature.

Driver Lifetime Vs. Driver Case Temperature

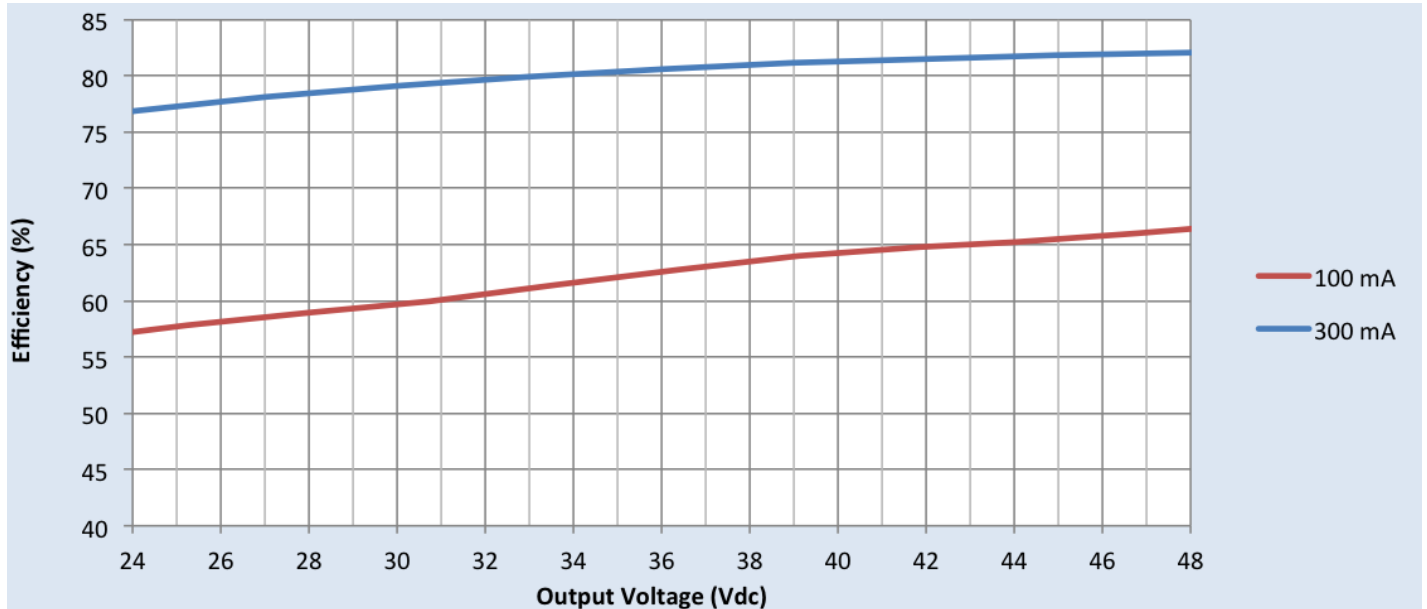


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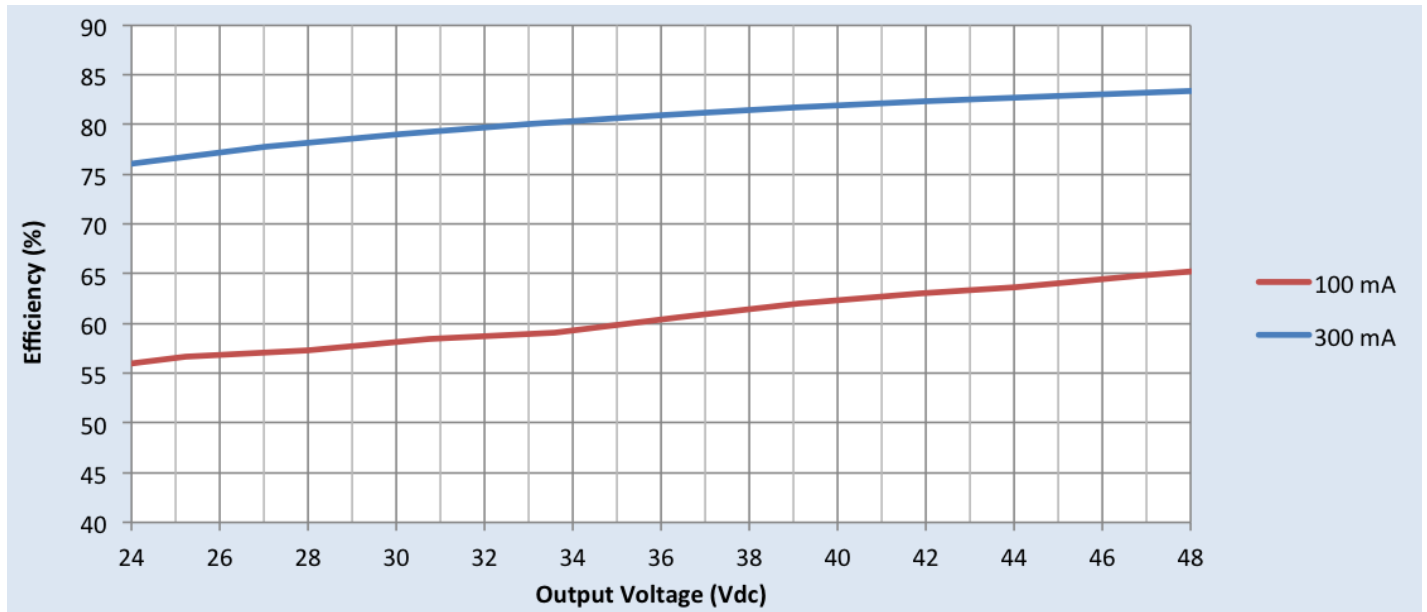
Performance Characteristics

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.

Efficiency Vs. Output Voltage at 120Vac



Efficiency Vs. Output Voltage at 277Vac

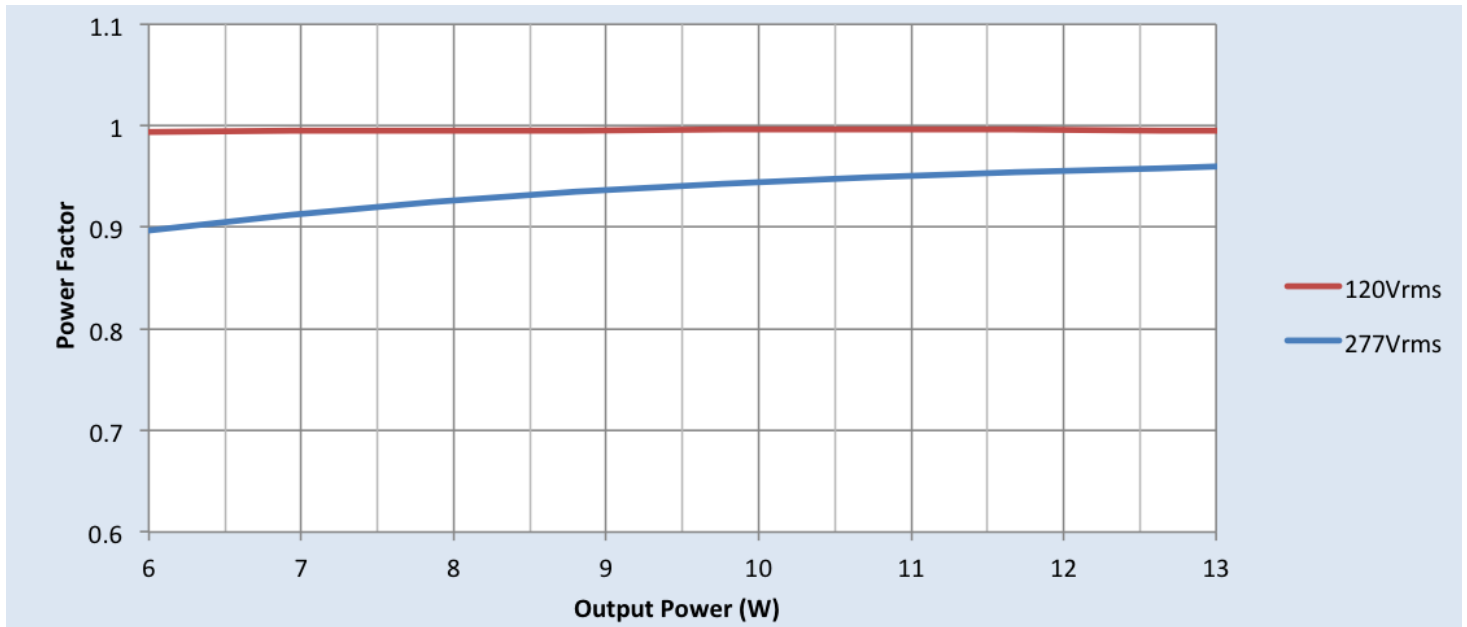


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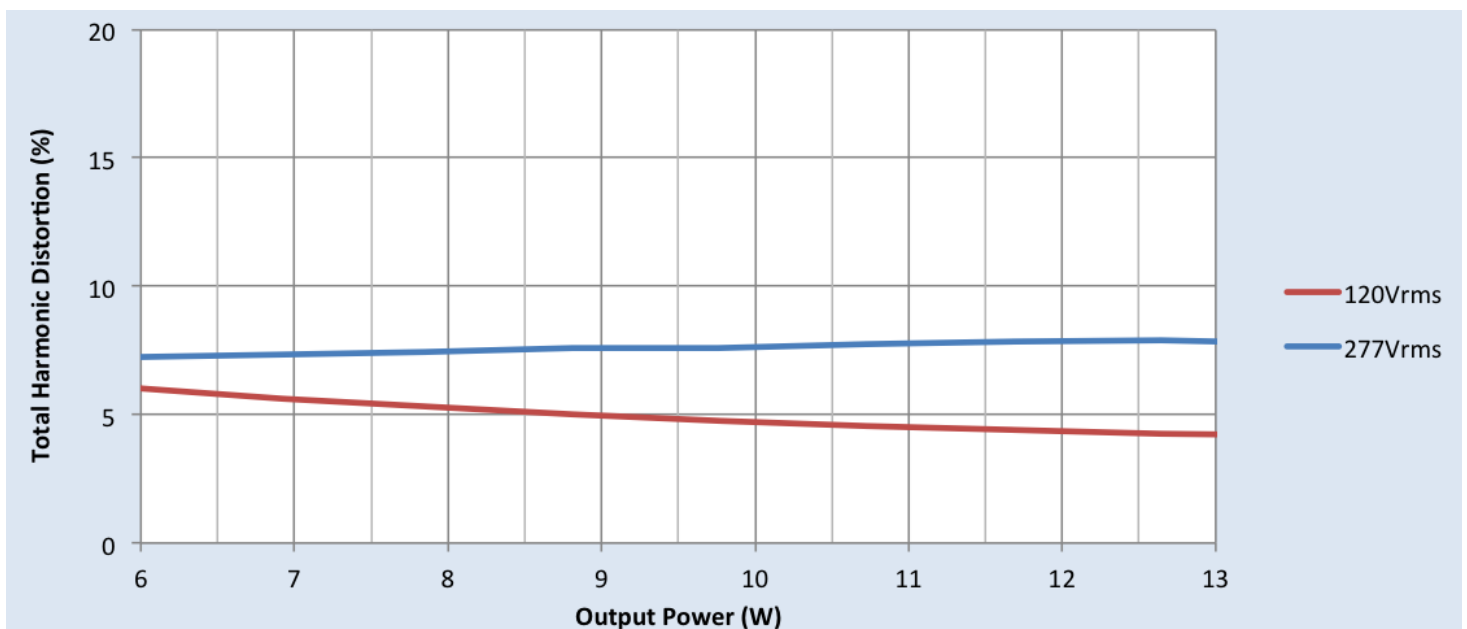
Performance Characteristics

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Power Factor Vs. Output Power

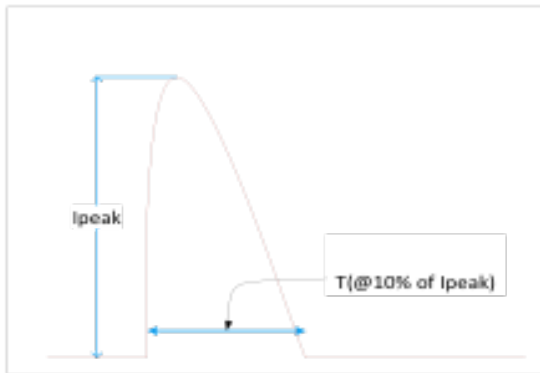


Total Harmonic Distortion (THD) Vs. Output Power



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Inrush Current Info



V_{in}	I_{peak}	T (@ 10% of I_{peak})
120 Vrms	15.5A	207 μ S
277 Vrms	42.6A	176 μ S

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 30 Ω)	>2.5kV	>2.5kV

Isolation

Isolation	Input	Output	0-10V (Class 2)	Enclosure
Input	–	2xU+1kV	2xU+1kV	2xU+1kV
Output	2xU+1kV	–	NA	500V
0-10V (Class 2)	2xU+1kV	NA	–	500V
Enclosure	2xU+1kV	500V	500V	–

U = Max input voltage

UL Conditions of Acceptability

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

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