

Philips Advance Xitanium LED Driver

XITANIUM LED DRIVER 20W 0.4-0.7A 30V LE+TE SPEC SHEET



XITANIUM 20W 0.4-0.7A 30V LE+TE
XI020C070V030RNP1

Features

- Compact form factor
- UL Class 2 output with Adjustable Output Current (AOC)
- Leading Edge (LE) and Training Edge (TE) dimming at 120V input

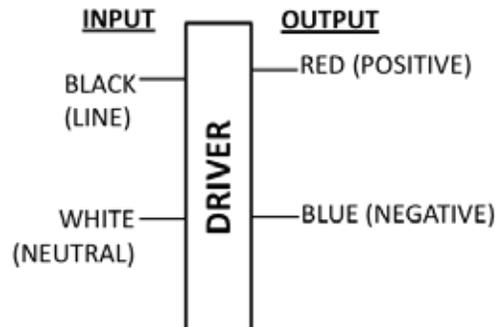
Benefits

- Enables design of low profile and compact fixtures
- Flexibility via adjustable drive current
- Helps to maximize energy savings and allows application specific light levels

Dimensions

	in.	mm
Case Length	3.74	95
Case Width	1.57	40
Case Height	0.98	25
Mounting Length	3.35	85
Overall Length		

Wire Diagram



Product Data

Input and output use lead wires.

Lead-wires are 18AWG 105C/600V stranded copper.

Standard lead length is 150mm (±10mm) on all wires outside the can.

All wires have tinned ends.

Dimming	Dimming Range	Minimum Output Current (A)	Other Comments
LE + TE (leading Edge & Trailing Edge)	2% ~ 100% (Only with specific dimmers)	0.014	Only @ 120V

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 (Ring wave, KV)	Weight (Lbs/ kgs)	Envir. Protection Rating
120	20	15 - 30	0.4 - 0.7	83.5	80°C	0.2	24	0.5 / 3	<15%	>0.95	>2.5	0.27 / 0.122	UL damp and dry
277				84		0.09		1.5 / 2	<26%	>0.86			



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Electrical Specifications

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

Ordering Information	
Order code	XI020C070V030RNP1
Full product code	XI020C070V030RNP1M (Mid-pack – 48pcs/box)
Full product name	Xitanium 20W 0.4-0.7A 30V LE+TE
Input Information	
Line Voltage	120-277Vac_rms
Line Current	0.2A @ 120V, 0.09A @ 277V
Line Frequency	50/60Hz
Min. Mains voltage operational	108 V [min]
Max. Mains voltage operational	305V [max]
Inrush Current	Per NEMA 410
Output Information	
Output voltage range	15V to 30Vdc
Maximum open circuit voltage	35V
Output Current Ripple (ripple = peak to average / average)	50% max @ max lout (with 9 LED load)
Output current tolerance	<3%
Line and load regulation	<5%
Protections	Short Circuit and Open Circuit Protection for LED + and LED-
Features	
Ambient Temp Range	-20C to +50C (Just for reference only. Use Tcase temperature as the guiding factor)
Max Case Temperature (Tcase)	80°C
Interfaces	LE+TE dimming, AOC
AOC (Adjustable Output Current)	400mA to 700mA via dip switches (refer to figures & notes in the Electrical Specification section)
LE + TE Dimming Specifications	Refer to information provided below
Environment & Approbation	
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 A
Isolation	Refer to table
Audible noise	<24dB Class A

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LE + TE Dimming:

Minimum Dim Level: 2% of Iout_max (minimum 14mA)

Approved Dimmer List

Manufacturer	Manufacturer Part Number	Type of Dimmer	Min No. of Drivers per dimmer	Max No. of Drivers per dimmer
Lutron	S-600P	Leading Edge	1	Dimmers can be loaded up to 80% of their max power rating
	DVELV-303P	Trailing Edge		
	NTELV-600	Trailing Edge		
	MAELV-600	Trailing Edge		
	DVLV-600P	Leading Edge		
	SELV-300P	Leading Edge		
	NFTU-5A	Leading Edge		
	CTCL-153P	Leading Edge		
GL-600H	Leading Edge			
Leviton	RPI06-1L	Leading Edge		

Notes:

1. The start-up time on all drivers is <IS
2. Min dim level is dimmer dependent
3. For dimmers not on this list, please contact the dimmer manufacturer for further instructions

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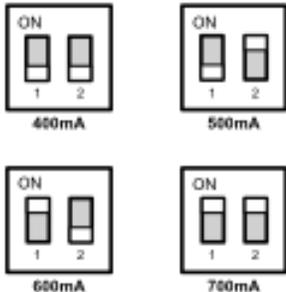
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AOC (Adjustable Output Current) Settings:

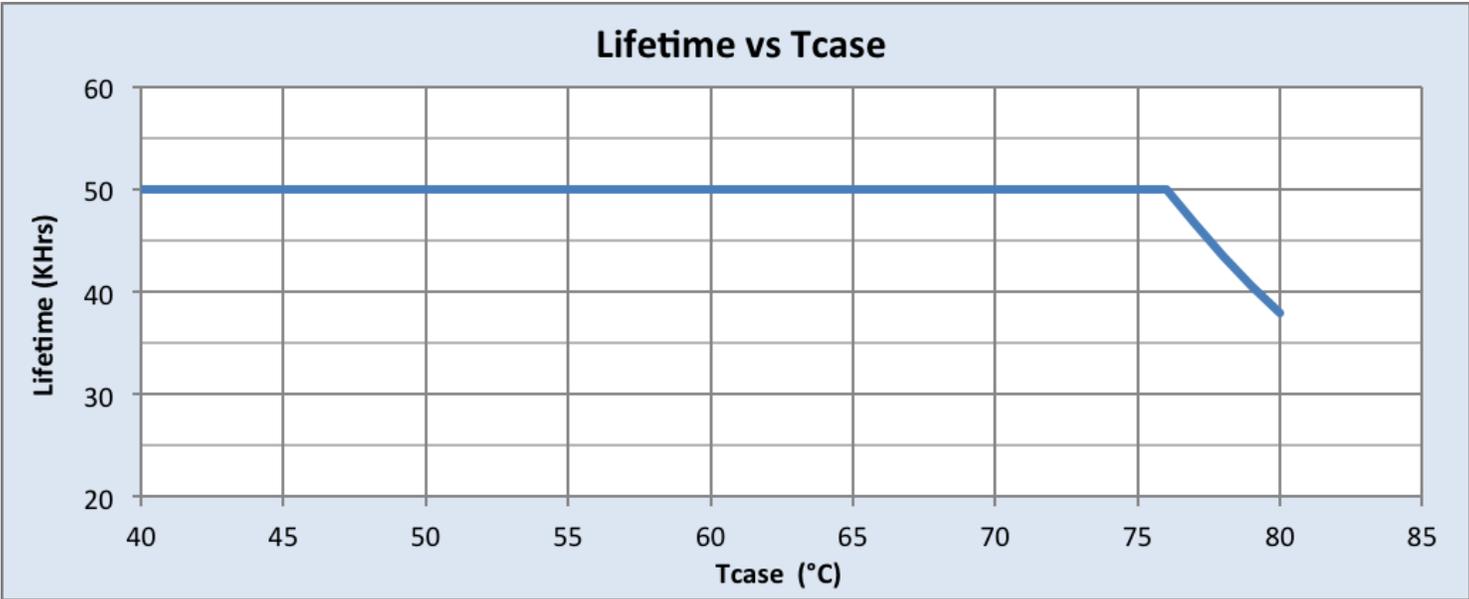
The output current of the driver can be adjusted using the two dip switches provided on the bottom of the driver. The below picture shows the switch positions required to set the current to different levels.

Switch 1	Switch 2	Drive Current
OFF	OFF	400mA
OFF	ON	500mA
ON	OFF	600mA
ON	ON	700mA



The driver will be shipped out of factory with both switches set to ON (700mA).

Lifetime vs. Tcase of Driver:



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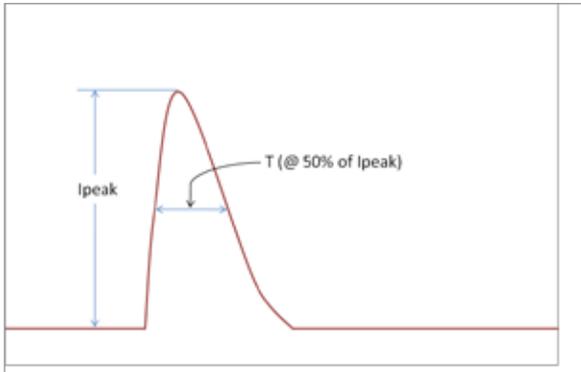
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Inrush Current Info:



Vin	Ipeak	T (@ 50% of Ipeak)
120 Vrms	0.5 A	3 mS
277 Vrms	1.5A	2 mS

Inrush current is measured at peak of the corresponding line voltage, at worst case line impedance.

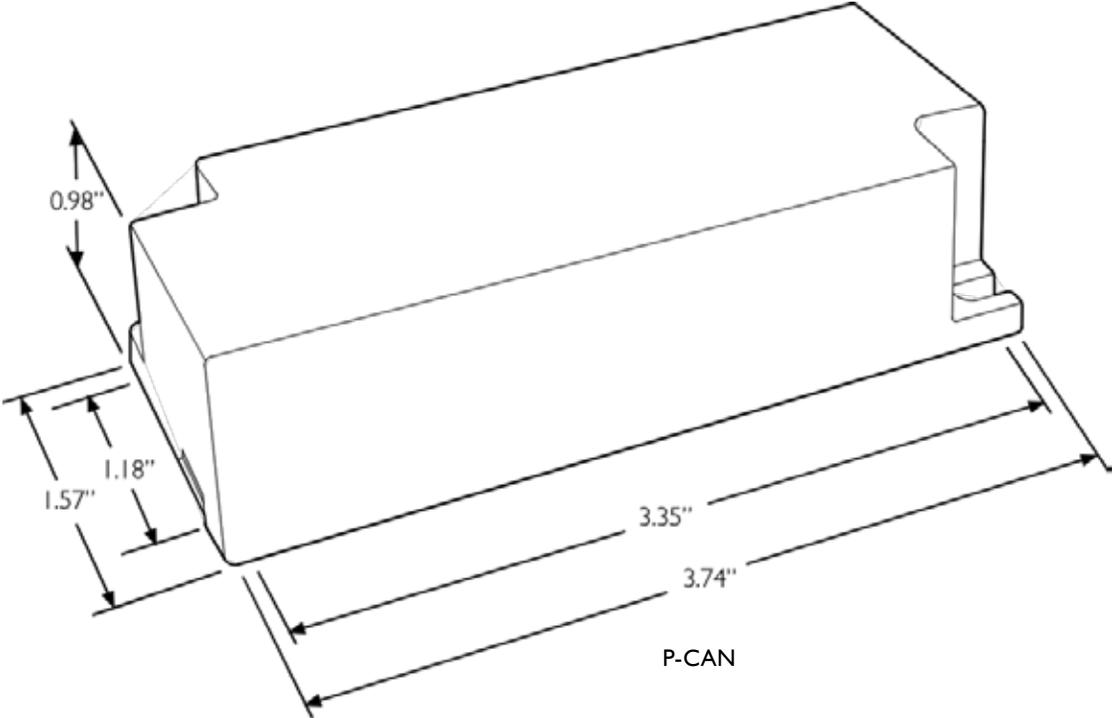
Lightning Surge Info:

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

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Mechanical Specifications

Mechanical Drawing:



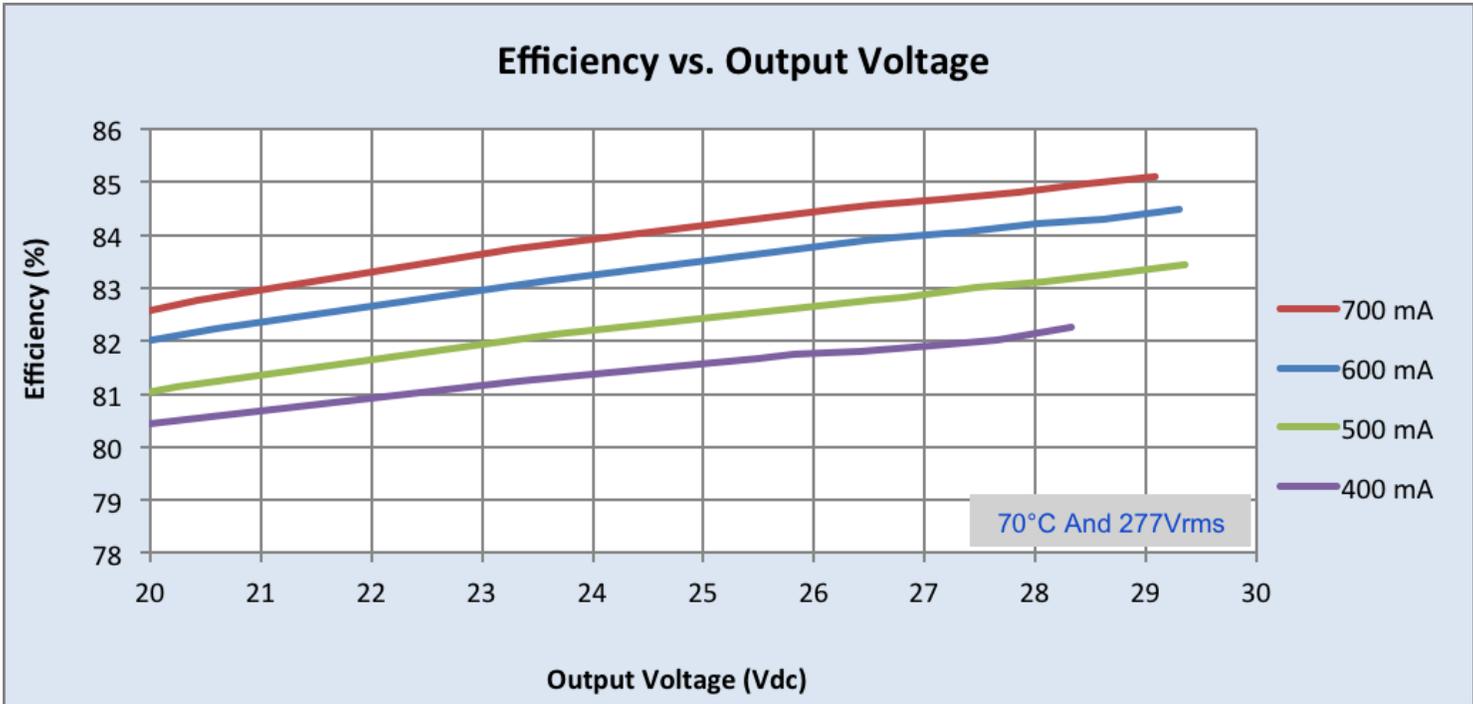
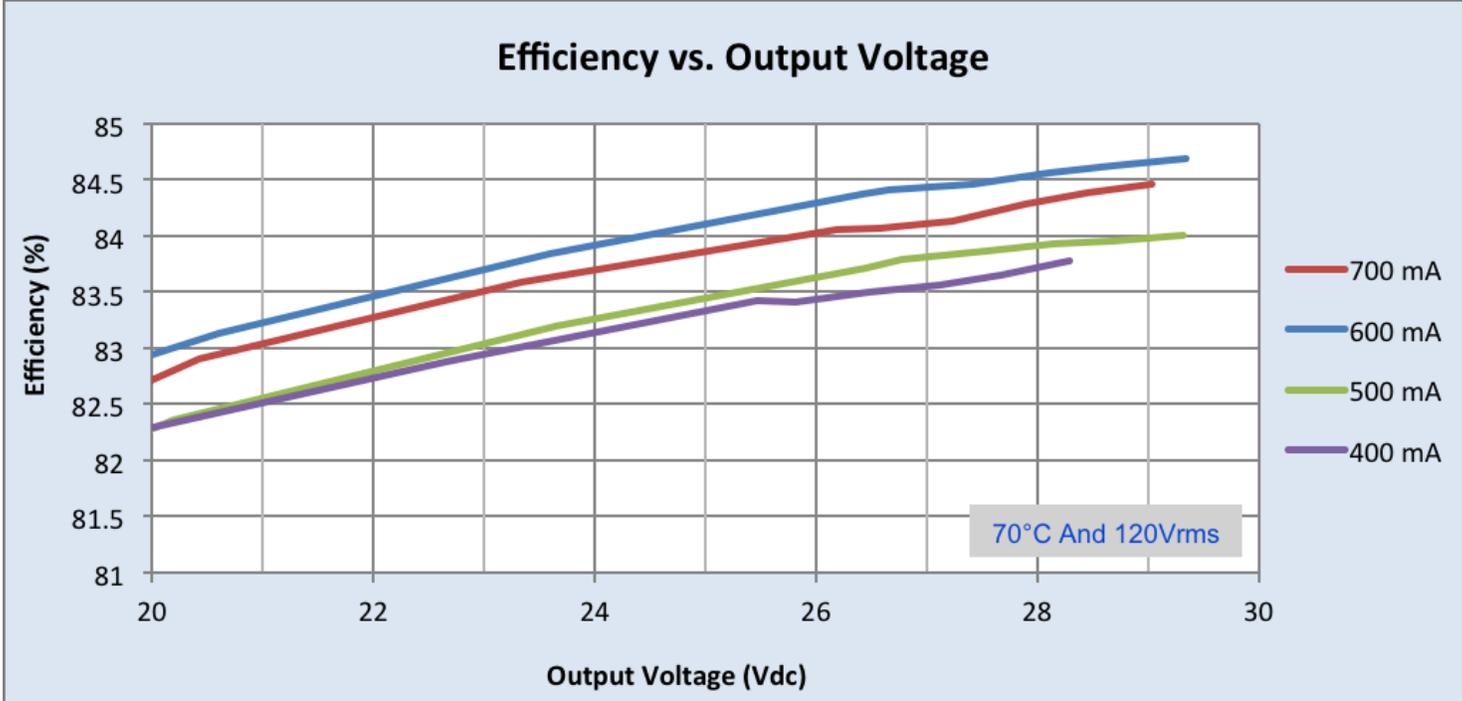
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Performance Characteristics

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.



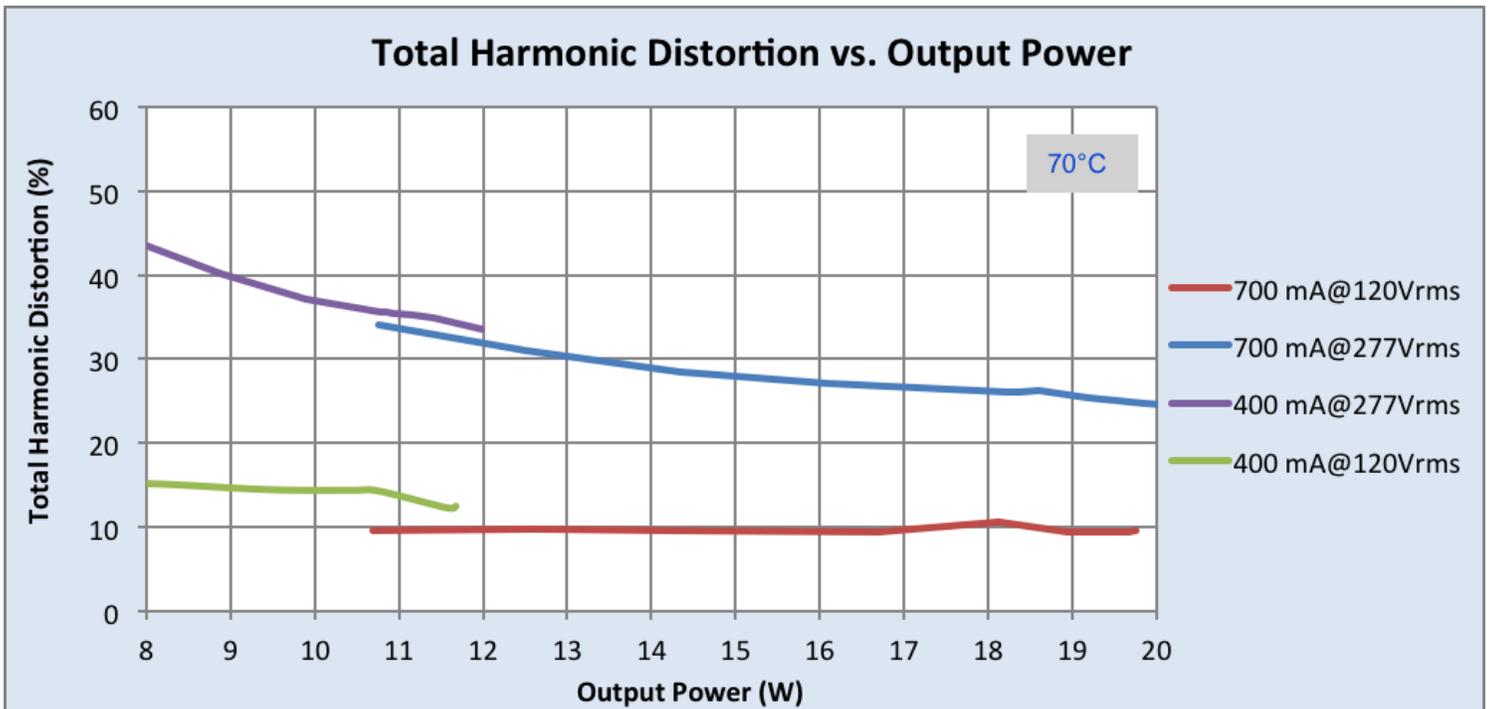
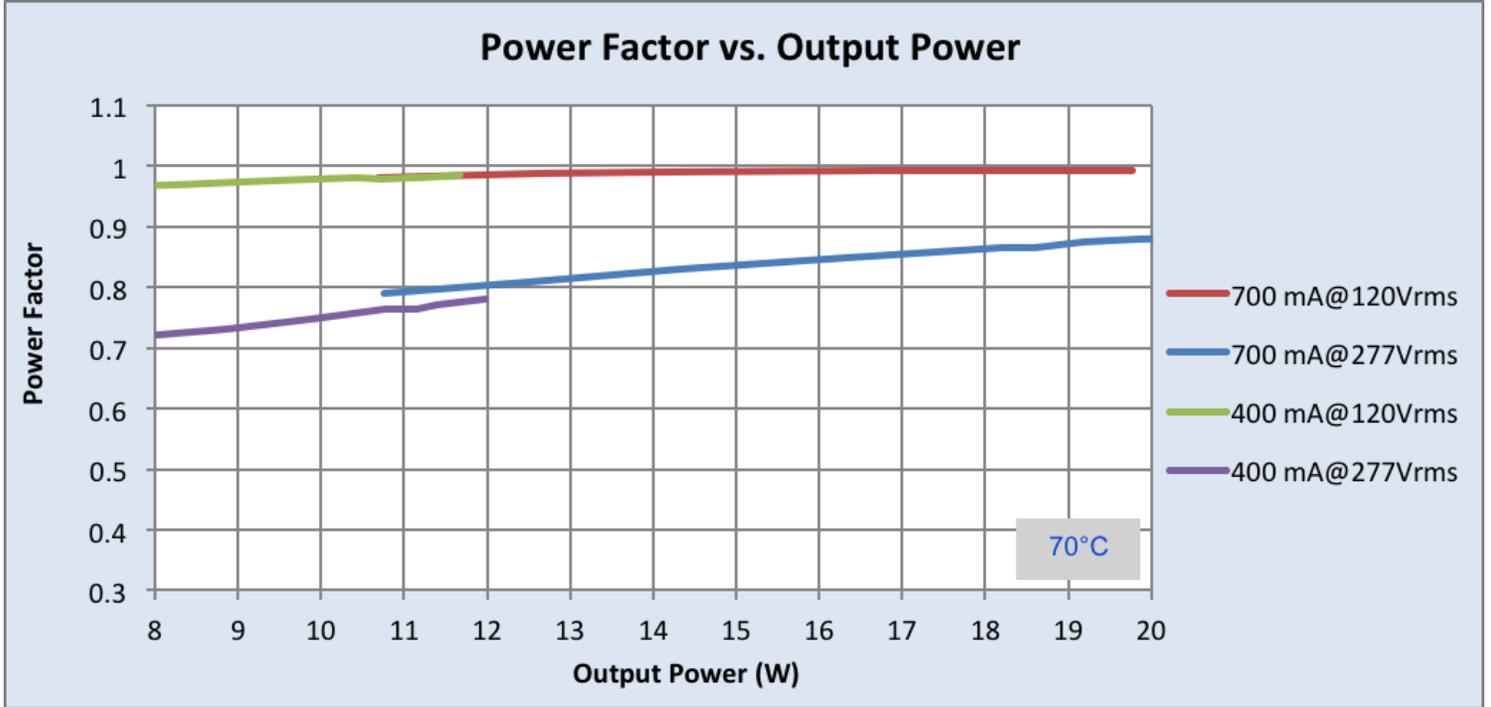
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Application Notes

Isolation:

Isolation	Input	Output
Input	Not applicable	2xU+1KV
Output	2xU+1KV	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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