

**PHILIPS  
ADVANCE**



LED Driver

Xitanium

50W 120-277V 1.5A 0-10V  
XI050C150V038CNH1



RoHS  
COMPLIANT



Class 2  
Power Unit  
Dry & Damp  
Location

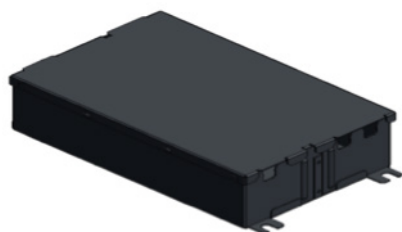
Long-lasting and low maintenance, LED-based light sources are an excellent solution for all lighting applications. For optimal performance, these solutions require reliable drivers matching the long lifetime of the LEDs. The Philips Advance Xitanium LED Outdoor Driver portfolio offers a range of products specially designed to operate LED solutions in outdoor applications. These drivers are designed for hard-wired integration into outdoor luminaires even in rugged applications. They operate to specification under wide temperature and electrical ranges to help ensure reliability.

### Specifications

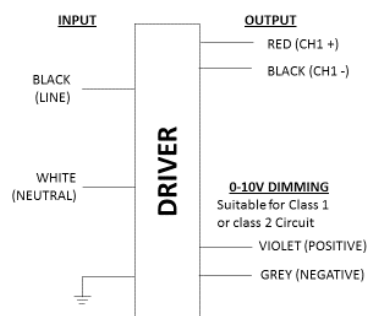
Input Voltage (Vac)	Output Power (W)	Output Voltage Range (V)	Output Current (A)	Efficiency@ Max Load and 70°C Case	Max Case Temp. (°C)	Input Current (Arms)	Max. Input Power (W)	THD @ Max Load (%)	Power Factor @ Max Load	Surge Protection (Combi-Wave, KV)	Envir. Protection Rating
120	50	20-36	1.5	86.8	80°C	0.53	62	<10%	>0.95	4	UL damp & dry and Type HL
277				87.9		0.23		<10%			

### Enclosure

	In. (mm)
Case Length	5.7 (144.7)
Case Width	3.6 (91.4)
Case Height	1.5 (38.2)
Mounting Length	6 (151.5)
Overall Length	6.32 (160.5)



### Wiring Diagram



Input lead wires are 18AWG 105C/600V stranded copper with flag terminals per UL1452.

Lead Length outside enclosure: 7" (+2"/-1").

Dimming and Output lead wires are 18AWG 105C/600V solid copper per UL1452.

Lead Length outside enclosure: 12" (+2"/-1").

Driver case must be grounded.

Dimming	Dimming Range	Minimum Output Current (A)	Other Comments
0-10V Analog	10% ~ 100%	0.15	Dimming source current: 150µA (±3%)

# Xitanium 50W 120-277V 1.5A 0-10V

## Features

- UL Class 2 output
- 50,000+ hour lifetime<sup>1</sup>
- Isolated 0-10V dimming

## Benefits

- Flexibility and ease of design for Class 2 luminaire designs
- Enables long life luminaire designs
- Helps maximize energy savings and allows application-specific light levels

## Application

- Roadway
- Parking garages
- Wallpacks

## Electrical Specifications

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

## Product Data

Order Information	
Full Product Code	XI050C150V038CNH1 (Mid-Pack, 10pcs/Box)
Line Frequency	50/60Hz
Min. Mains Voltage Operational	108Vac
Max. Mains Voltage Operational	305Vac
Output Information	
Maximum Open Circuit Voltage	53Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max Iout Low frequency ( $\leq 120$ Hz) content <5%
Output Current Tolerance at maximum output current	<5%
Protections	Short Circuit, Open Circuit Protection for LED + and LED - and Temperature Foldback
Features	
0-10V Dimming	150 $\mu$ A source current from driver. See dim curve for detail.
Environment & Approbation	
Operating Ambient Temp. Range	-40°C to +55°C
Max Case Temperature (Tcase)	80°C
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	1.94 Lbs / 0.88 kgs

1. Philips Advance Xitanium LED Drivers are manufactured to engineering standards correlating to a designed and average life expectancy of 50,000 hours of operation at maximum rated case temperature. Minimum 90% survivals based on MTBF modeling.

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## Electrical Specifications

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## 0-10V Dimming Curve

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

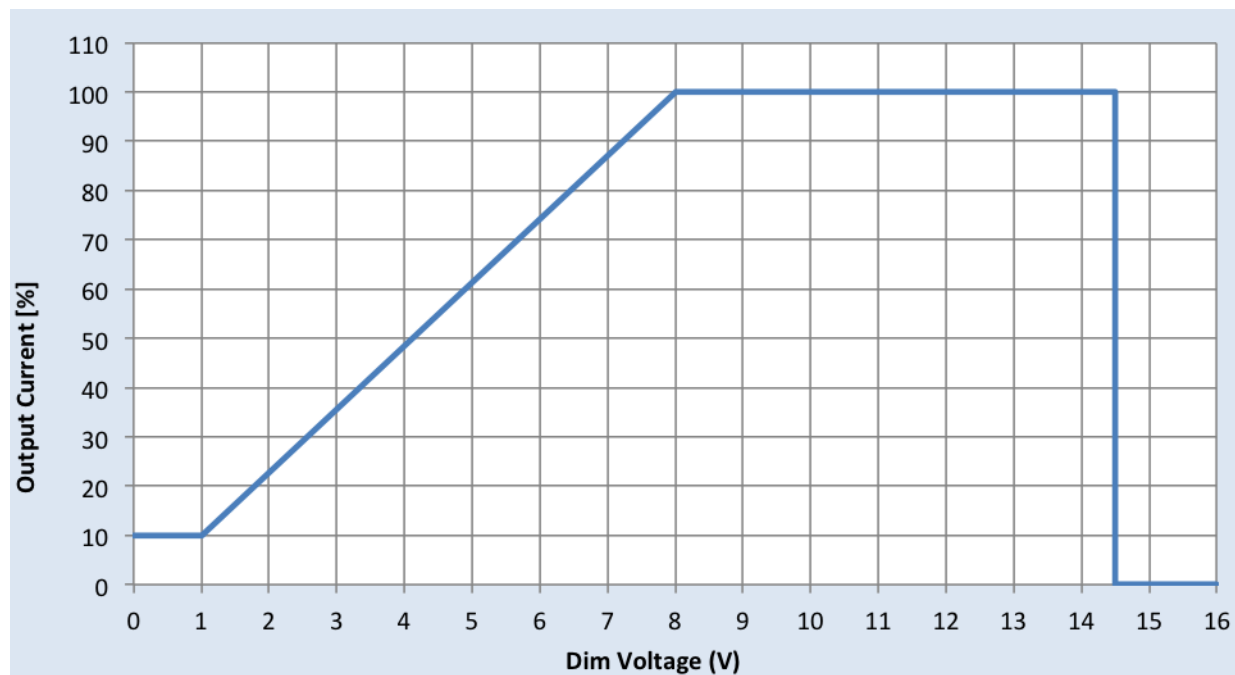
Minimum Dim Level: 10% of Iout minimum 150mA

Vdim guaranteed not to shutdown the driver: ≤12V

Vdim for shutdown: ≥14.5V

## Approved Dimmer List

Manufacturer	Manufacturer Part Number
Lutron	Visit <a href="http://www.lutron.com/advance">www.lutron.com/advance</a> for a list of dimmers (Mark VII) that will work with this driver.
Leviton	IllumaTech IP7 series
Philips	Sunrise - SR1200ZTUNV



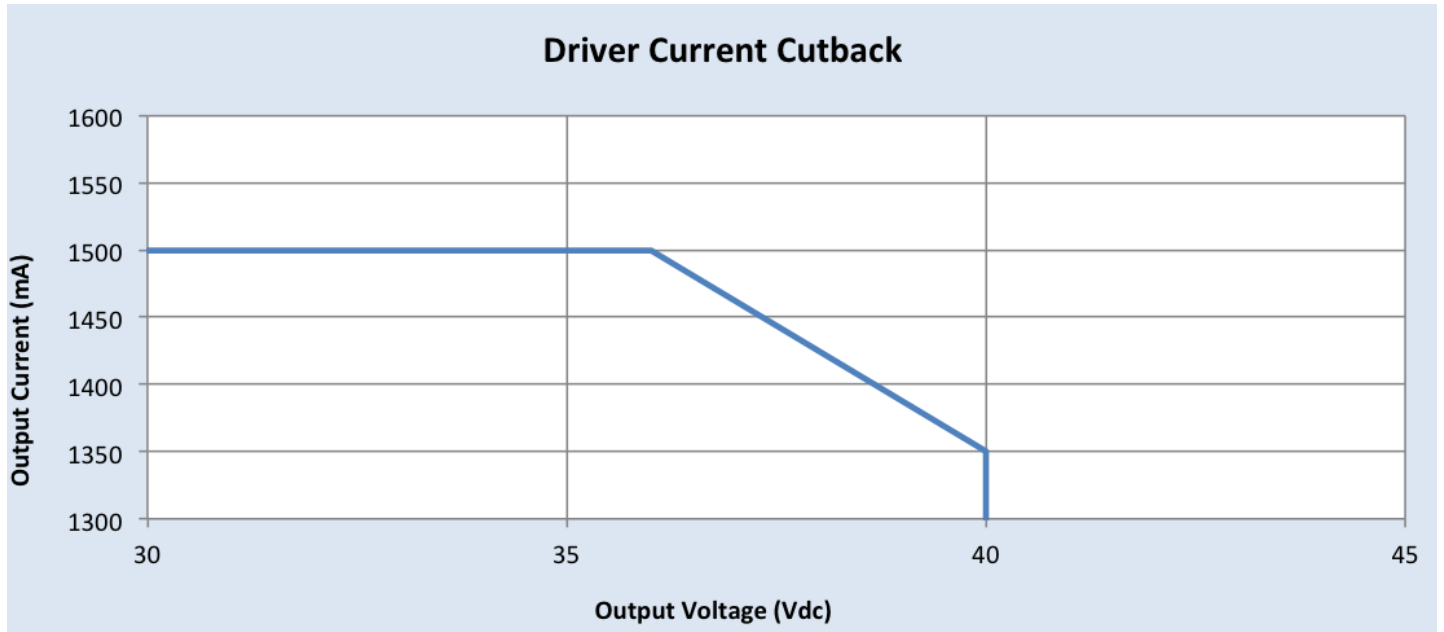
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## Electrical Specifications

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### Driver Current Cutback

The Driver Current Cutback feature provides for an increased output voltage with a reduced output current during abnormal LED operation, such as cold weather starting.

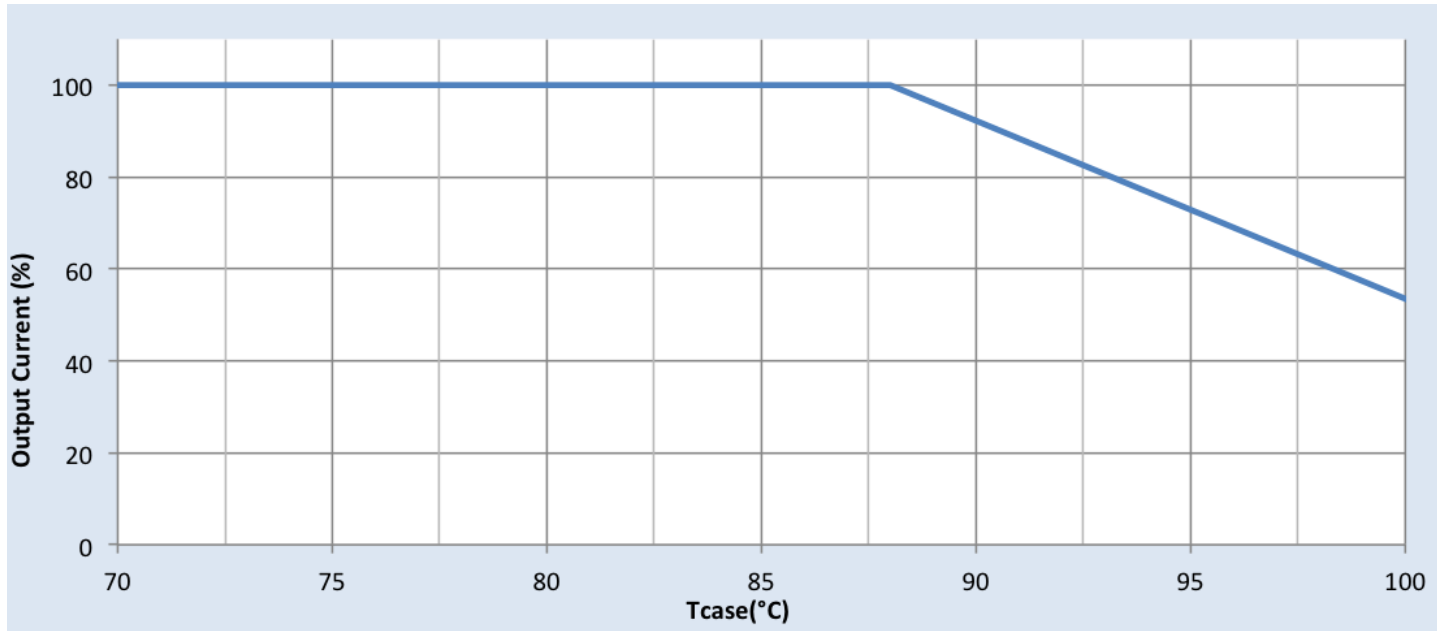


# Xitanium 50W 120-277V 1.5A 0-10V

## Electrical Specifications

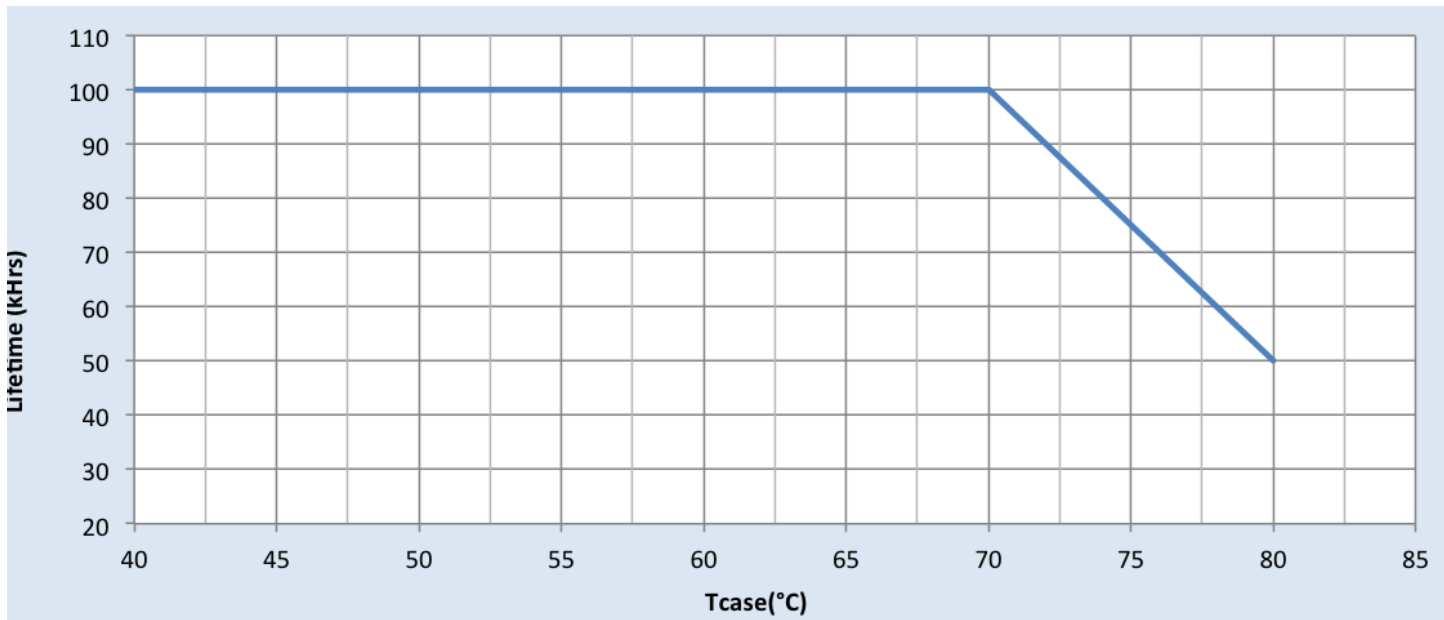
All the specifications are typical and at 25°C Tcase unless specified otherwise.

### 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

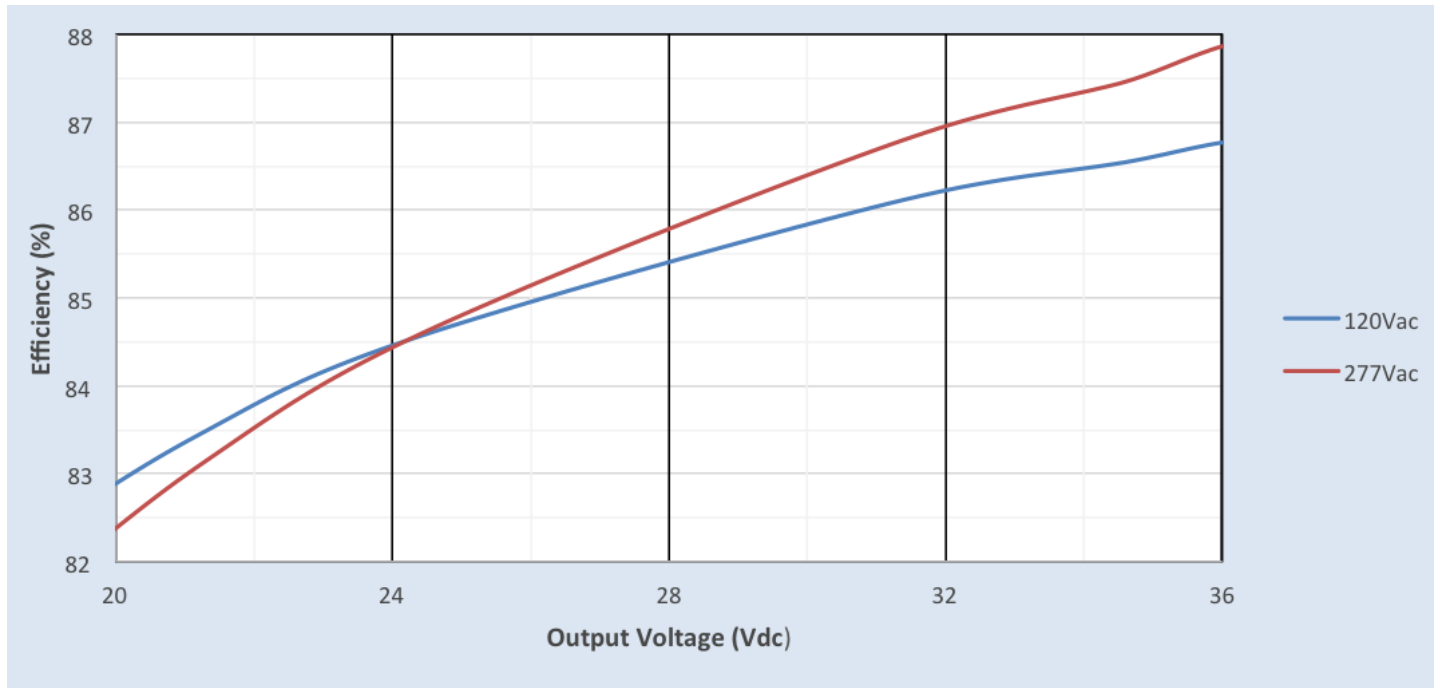


# Xitanium 50W 120-277V 1.5A 0-10V

## 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

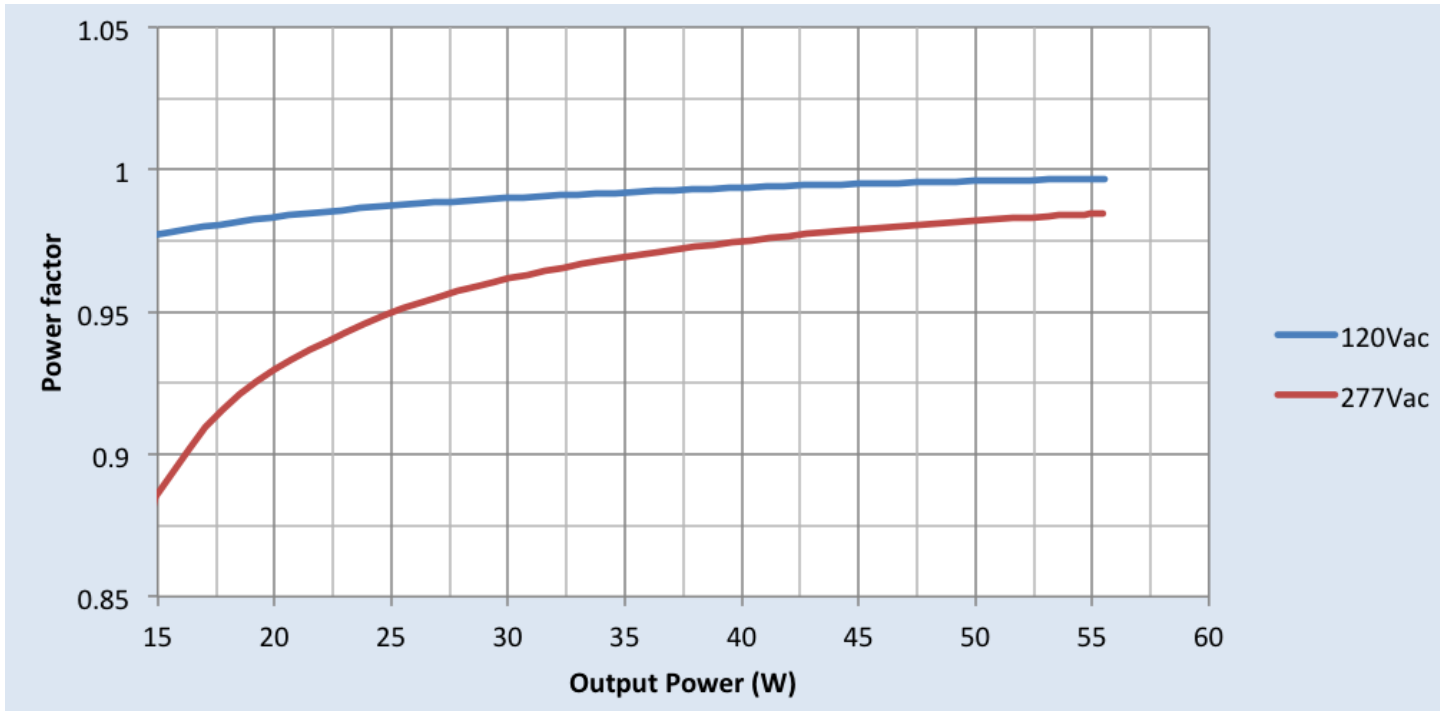


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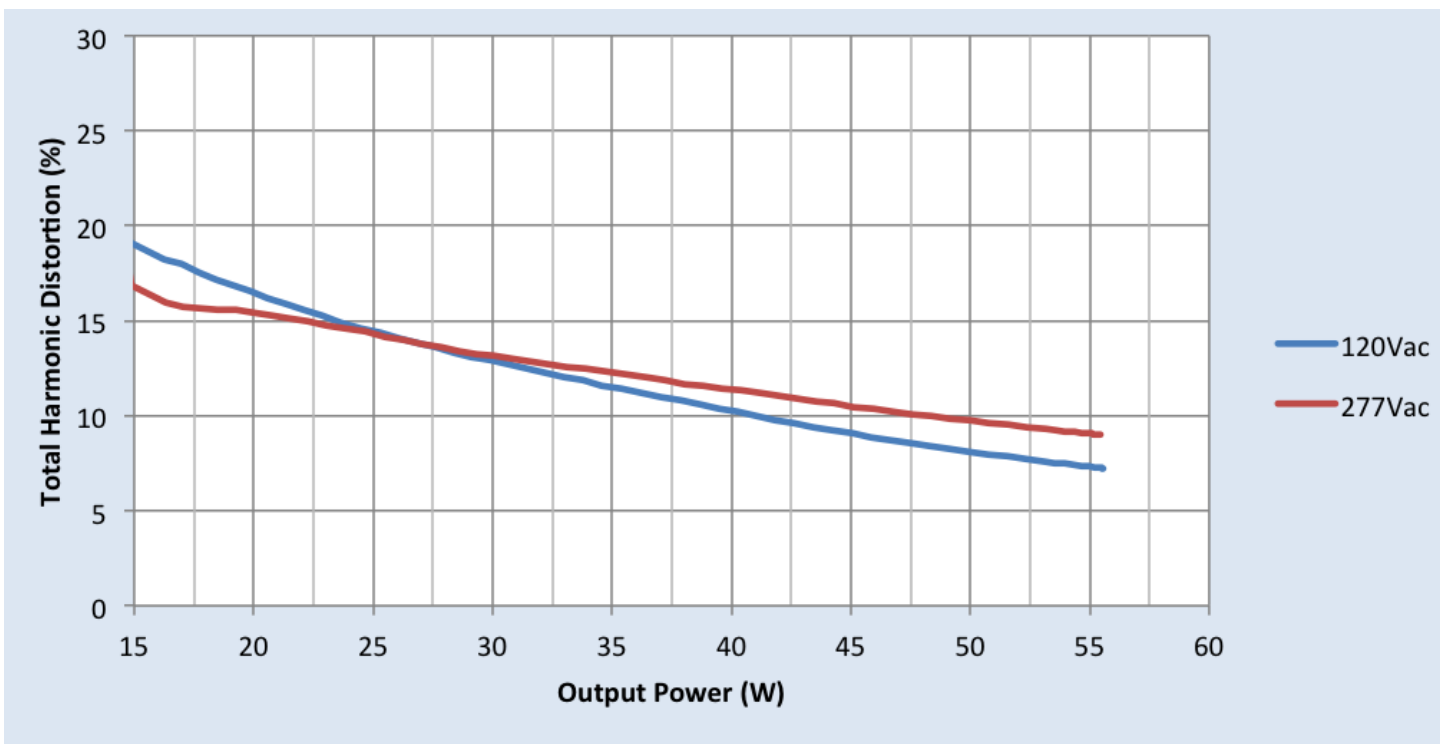
## Performance Characteristics

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.

### Power Factor Vs. Output Power

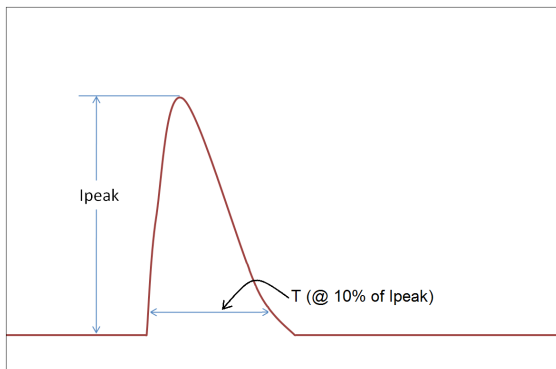


### Total Harmonic Distortion (THD) Vs. Output Power



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## Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
120 Vrms	25A	103μS
277 Vrms	83A	128μS

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)
1.2/50μs Combination Wave (w/t 2Ω)	4kV	4kV

## Isolation

Isolation	Input	Output	0-10V (Class 2)	Enclosure
Input	NA	2xU+1kV	2.5kV	2xU+1kV
Output	2xU+1kV	NA	2.5kV	500V
0-10V (Class 2)	2.5kV	2.5kV	NA	500V
Enclosure	2xU+1kV	500V	500V	NA

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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Philips Lighting North America Corporation  
10275 W. Higgins Road, Rosemont IL 60018  
Tel: 800-322-2086 Fax: 888-423-1882  
Customer/Technical Service: 800-372-3331  
OEM Support: 866-915-5886

Imported by: Philips Lighting  
A division of Philips Electronics Ltd.  
281 Hillmount Rd, Markham, ON, Canada L6C 2S3  
Tel. 800-668-9008