

**PHILIPS  
ADVANCE**



LED Driver

Xitanium SR

75W 120-277V 1.05A SR  
XI075C105V079VSY1



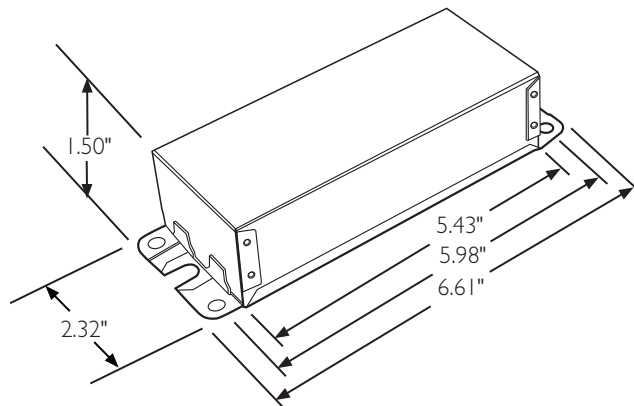
The Philips Advance Xitanium SR LED driver can help reduce complexity and cost of light fixtures used in wireless connected lighting systems. It features a standard digital interface to enable direct connection to SR-certified components. Functionality that ordinarily would require additional auxiliary components is integrated into the driver. The result is a simple, cost-effective light fixture that can enable every fixture to become a wireless node.

**Specifications**

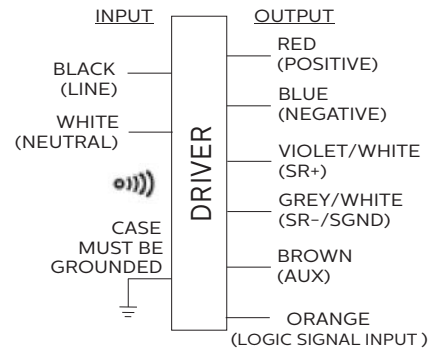
Input Voltage (Vrms)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max. Load and 70°C Case	Max. Case Temp. (°C)	Input Current (Arms)	Max. Input Power (W) <sup>1</sup>	Inrush Current (Apk/10%-µs)	THD @ Max. Load	Power Factor @ Max. Load	Surge Protection Common/Diff (KV)	Weight (Lbs/kgs)	Envir. Protection Rating
120	75	32-79	0.105-1.05	89	80	0.74	95	38 / 200	<10%	>0.95	6/6	1.50 / 0.68	UL damp & dry
277				92		0.32		94 / 175					

**Enclosure**

	In. (mm)
Case Length	5.43 (138.0)
Case Width	2.32 (59.0)
Case Height	1.50 (38.0)
Mounting Length	5.98 (152.0)
Overall Length	6.61 (168.0)



**Wiring Diagram**



Input and output use lead-wires.

Lead-wires are 18AWG 105C/600V solid copper per UL1452.

Lead length outside enclosure: 270 mm (±30mm) on all wires.

Dimming	Dimming Range	Minimum Output Current (A)
DALI	10% ~ 100%	0.105

1. Based on 1W load from SR power supply and 6.2W load from auxiliary power supply.

# Xitanium SR 75W 120-277V 1.05A

## Electrical Specifications

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

### Features

- Compatible with SR-certified devices
- Standard SR digital interface including integral power supply
- Auxiliary power supply for higher power device requirements
- Accurate energy metering
- Logic signal input
- Drive current setting via SimpleSet
- 5-year limited warranty<sup>1</sup>

### Benefits

- Enables interoperability with multiple sensor/network system vendors
- Reduces cost and complexity of outdoor connected lighting systems<sup>2</sup>
- Eliminates need for high-voltage relays to increase system reliability
- 2% metering accuracy meets proposed ANSI standard C136.52
- Can be used with standard motion sensors for local control to complement network control

### Application

- Area
- Roadway
- Parking garages
- Floodlights

## Product Data

Ordering Information	
Order Code	XI075C105V079VSY1
Full Product Code	XI075C105V079VSY1M (Mid-pack, 10pcs/box)
Full Product Name	XITANIUM 75W 1.05A 120-277V SR
Net Weight Per Piece	1.50 lbs / 0.68 kgs
Input Information	
Inrush Current	Per NEMA 410
Line Voltage (AC operation)	120-277VAC +/- 10%
Line Current	0.80A @ 120V, 0.35A @ 277V
Line Frequency	50/60Hz
Surge Protection	Refer to table
Output Information	
Output Voltage Range	32VDC to 79VDC
Output Current Range	0.105A to 1.05A
Output Current Ripple	<15% at max. Iout (ripple = pk-avg/avg) Low frequency (<120 Hz) content <1%
Output Current Tolerance	±5% at max. output current
Open Circuit Voltage	150VDC
Protections	Short Circuit and Open Circuit Protection for LED + and LED-
Features	
AOC (adjustable output current)	0.105A to 1.05A via SimpleSet programming (refer to graphs and notes)
Life	50,000 hr nom. @ TC 80°C; 100,000 hr nom. @ TC 70°C (refer to graphs)
Suitable for Outdoor Use?	Yes
Interfaces	AOC via SimpleSet or SR using MultiOne, SR, Logic Signal Input (LSI), Auxiliary Power Supply
Min. Ambient Temp	-40°C
Max. Case Temperature (Tcase)	80°C
Input Over-voltage	Can survive input over-voltage stress of 320VAC for 48 hours and 350VAC for 2 hours
Earth Leakage Current	0.75 mA [max.]
THD Total	Refer to graph

- <sup>1</sup> Philips Advance Xitanium LED drivers are designed and manufactured to engineering standards correlating to an average life expectancy of 50,000 hours of operation at maximum rated case temperature. Minimum 90% survivals based on MTBF modeling.
- <sup>2</sup> Functionality that ordinarily would require additional auxiliary components is integrated into the driver.

# Xitanium SR 75W 120-277V 1.05A

## Electrical Specifications

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## Product Data (continued)

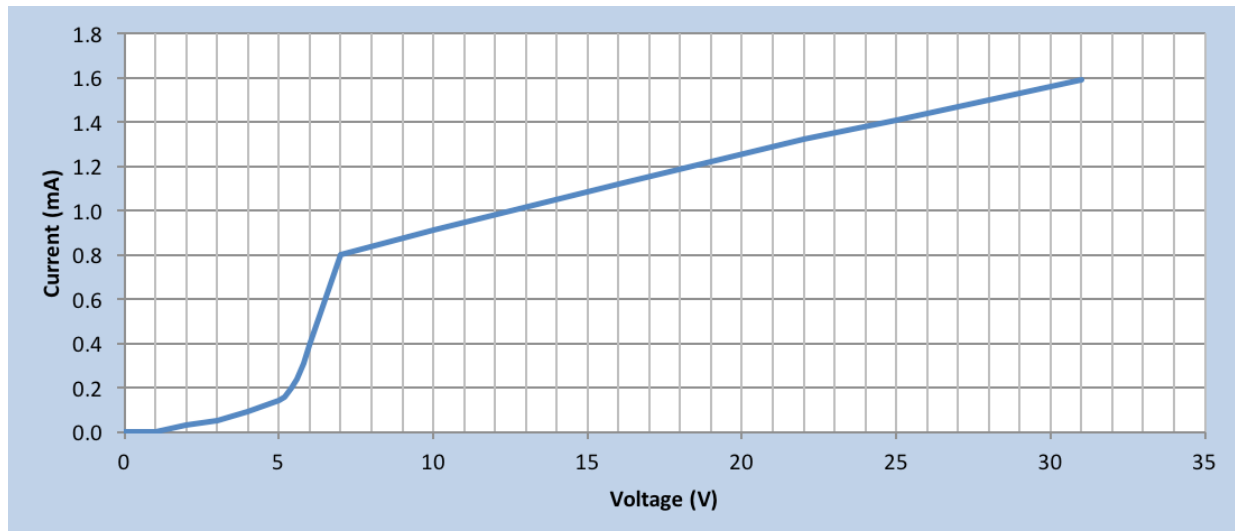
<b>Power Factor</b>	Refer to graph
<b>Efficiency</b>	Refer to graph
<b>Power Reporting Accuracy</b>	± 2% in performance window and under nominal operating conditions
<b>SR Interface</b>	
<b>Digital Protocol</b>	Specifications available to SR-Certified Partners
<b>SR Power Supply</b>	Specifications available to SR-Certified Partners
<b>Auxiliary Power Supply</b>	
<b>Power</b>	3W continuous, 10.5W peak for 1.2ms
<b>Voltage</b>	24V+/-10%
<b>Ripple</b>	300mV peak-peak for resistive load
<b>Protection</b>	Overload and short circuit protected
<b>Last Gasp Energy</b>	200mJ typ.
<b>Logic Signal Input (LSI)</b>	
<b>Dry Contact Input</b>	Yes
<b>Logic Low</b>	<3V or open
<b>Logic High</b>	>7V
<b>Max. Current Draw</b>	2mA
<b>Environment &amp; Approbation</b>	
<b>Agency Approbations</b>	UL8750, UL1310, UL935, CSA-C22.2 No. 250.13-12, CSA C22.2 No. 223
<b>Audible Noise</b>	<24dB Class A
<b>Isolation Between Output and Input</b>	Refer to table
<b>Isolation of Controls</b>	Refer to table
<b>EMC (electromagnetic compliance)</b>	Meets FCC 47 Part 15 Class A
<b>Envir. Protection Rating</b>	UL Dry & Damp

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## Electrical Specifications

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### Logic Signal Input (LSI) Characteristics (Typical)



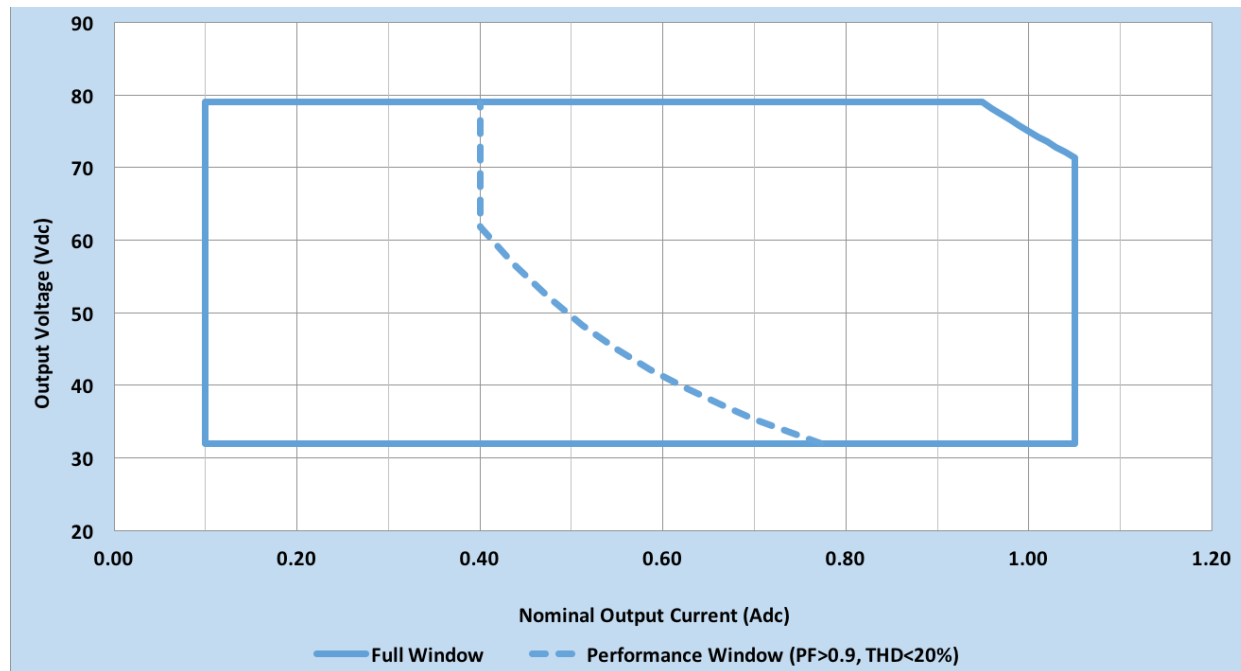
# Xitanium SR 75W 120-277V 1.05A

## Electrical Specifications

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## Operating Window

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. Output tolerance +/-5%.



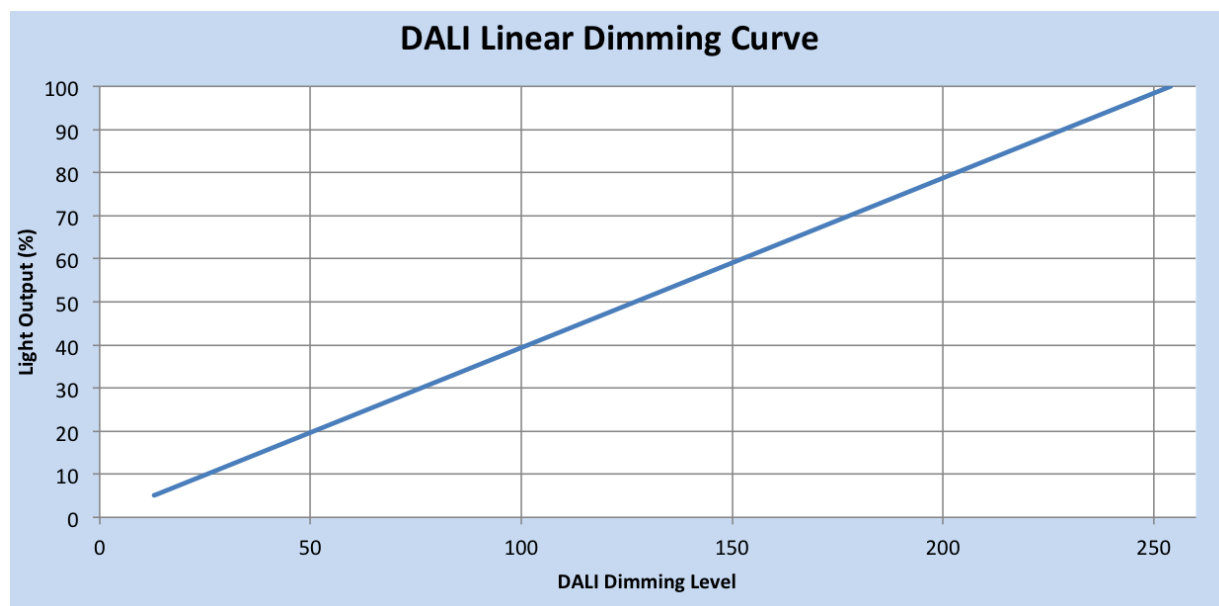
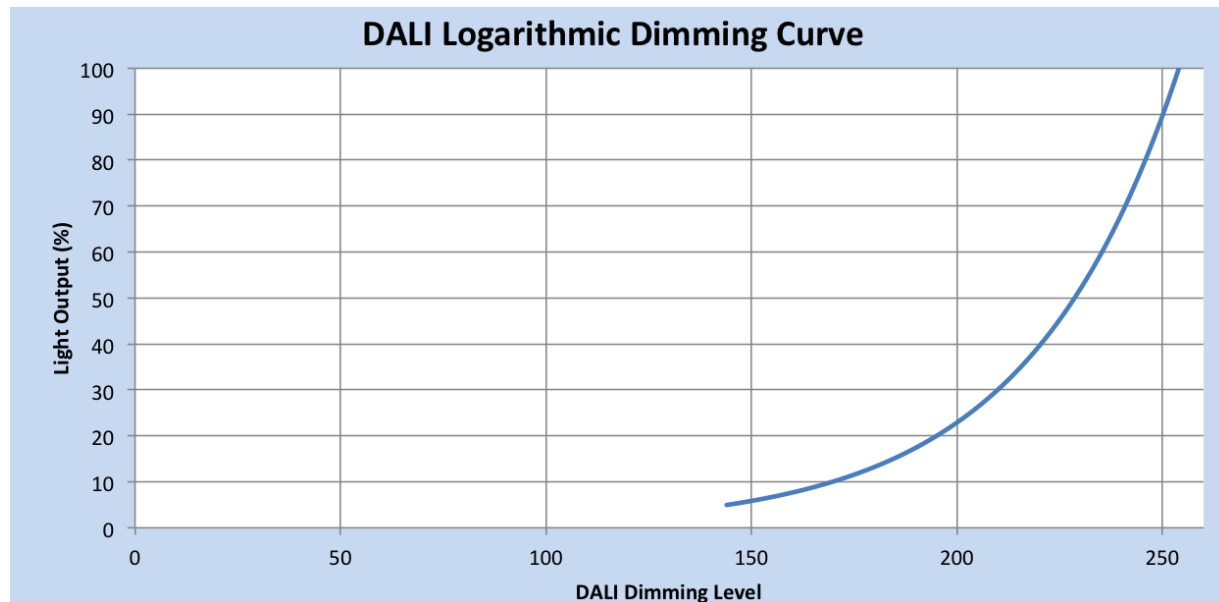
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## Electrical Specifications

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## Dimming Characteristics

SR drivers use a logarithmic dimming curve as default. Dimming is accomplished through the 2-wire DALI connection to the sensor. DALI standard IEC62386\_102 Edition 2 defines the logarithmic dimming curve. DALI standard IEC62386\_101 Edition 2 defines the linear dimming curve as well as the command for switching between logarithmic and linear curves.

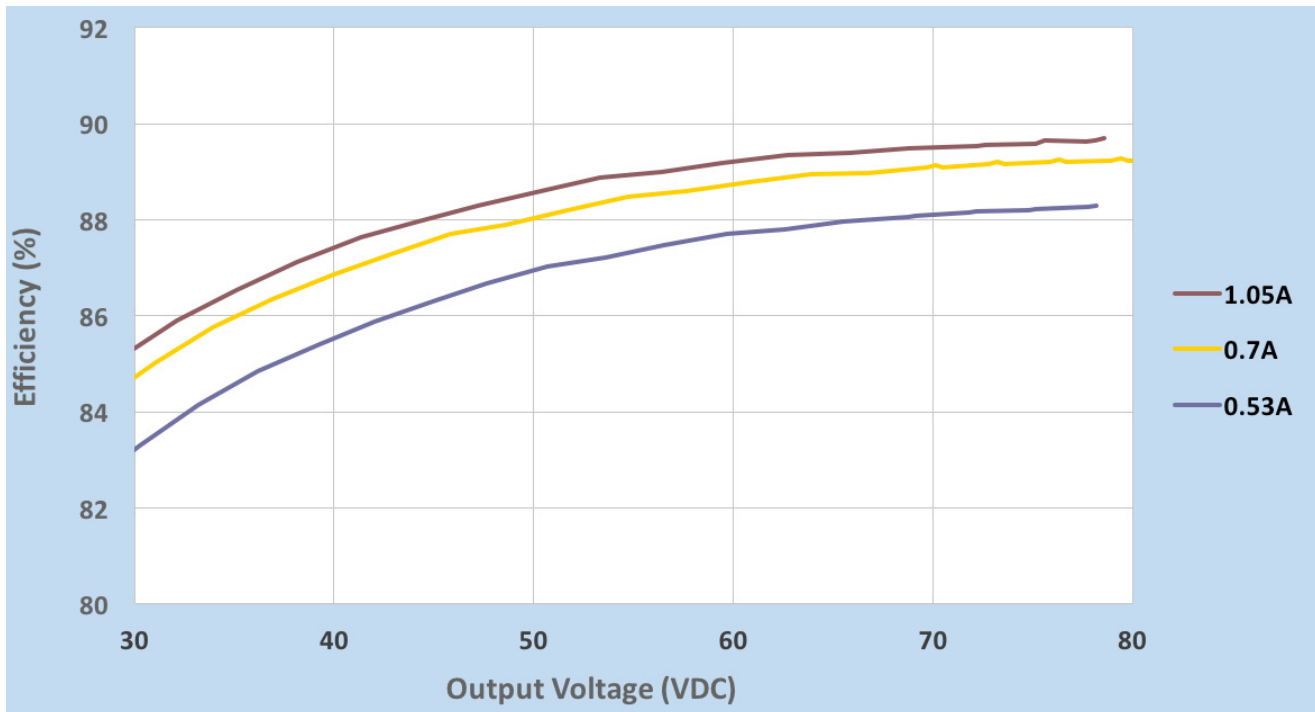


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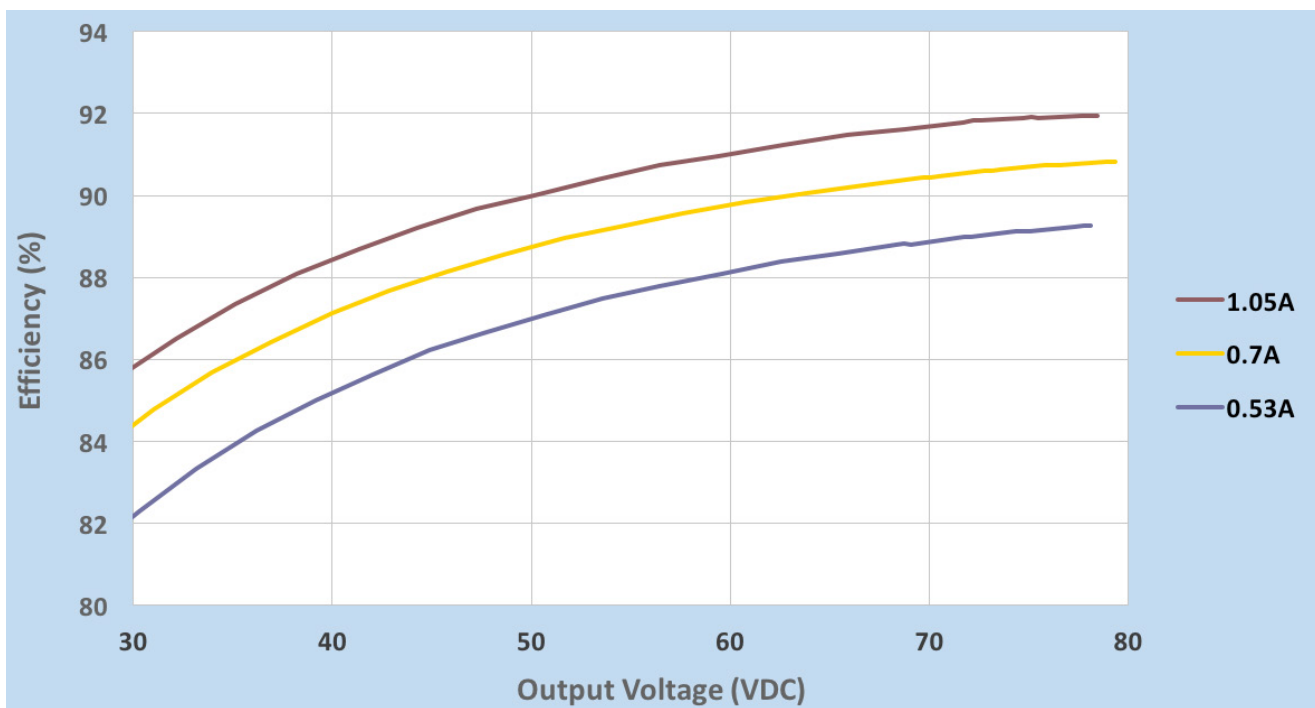
## Performance Characteristics

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. Data below at 70°C Tcase.

### Efficiency Vs. Output Voltage @ 120VAC



### Efficiency Vs. Output Voltage @ 277VAC

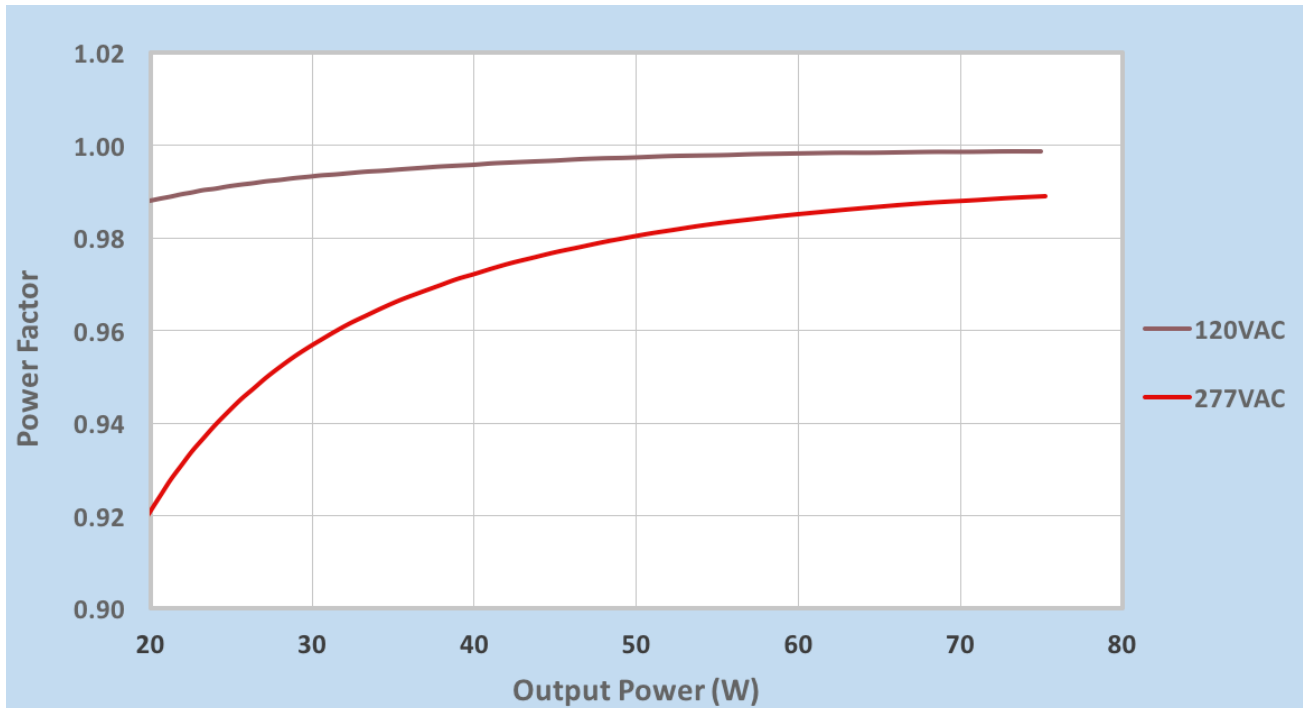


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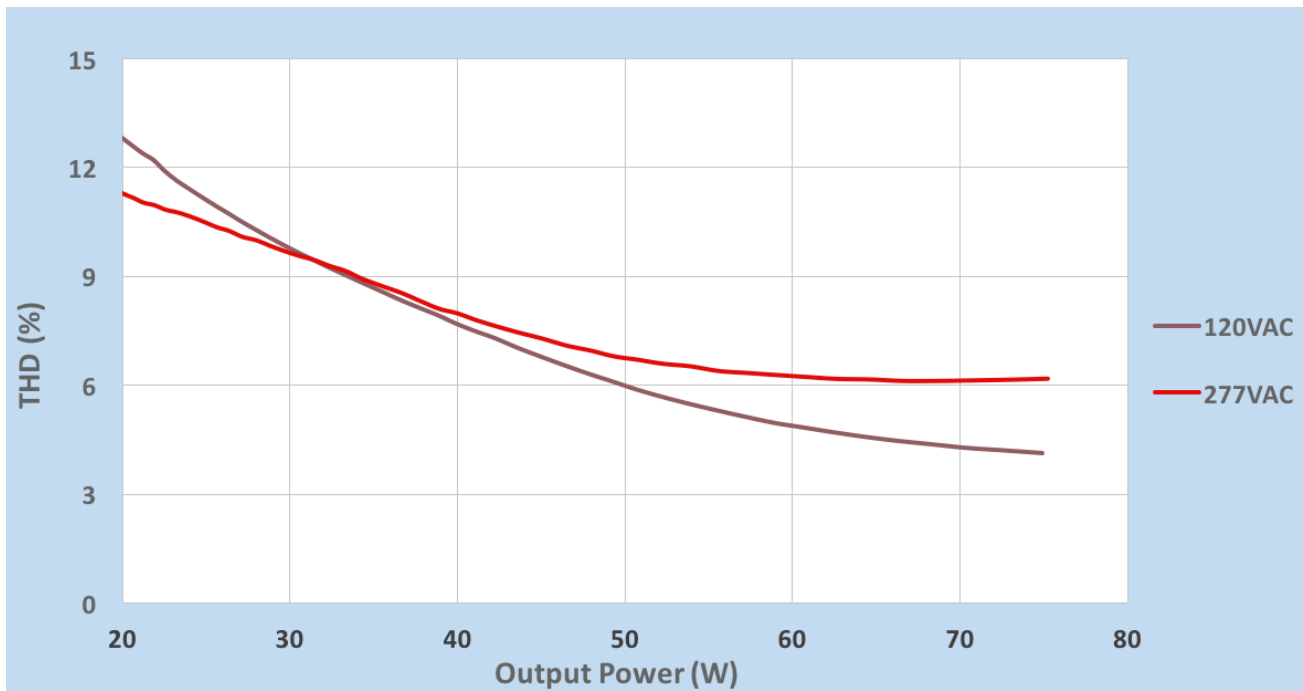
## Performance Characteristics

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. Data below at 70°C Tcase.

### Power Factor Vs. Output Power



### Total Harmonic Distortion Vs. Output Power



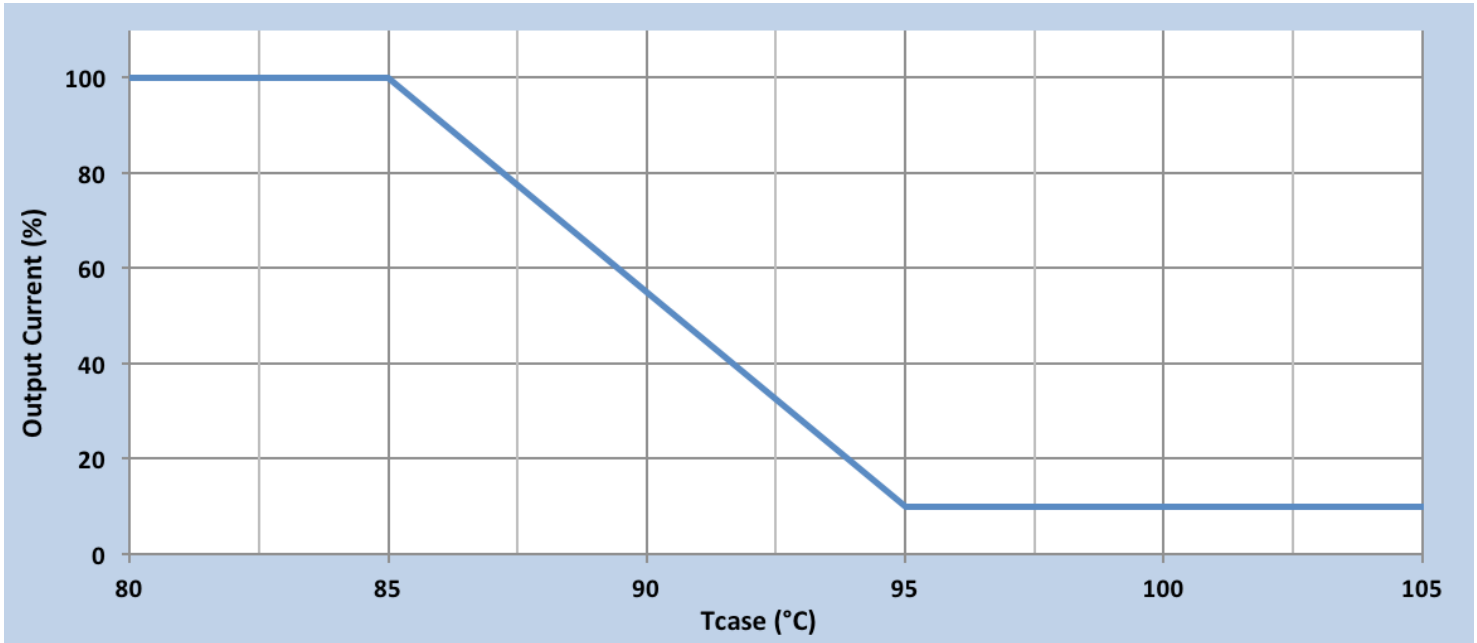


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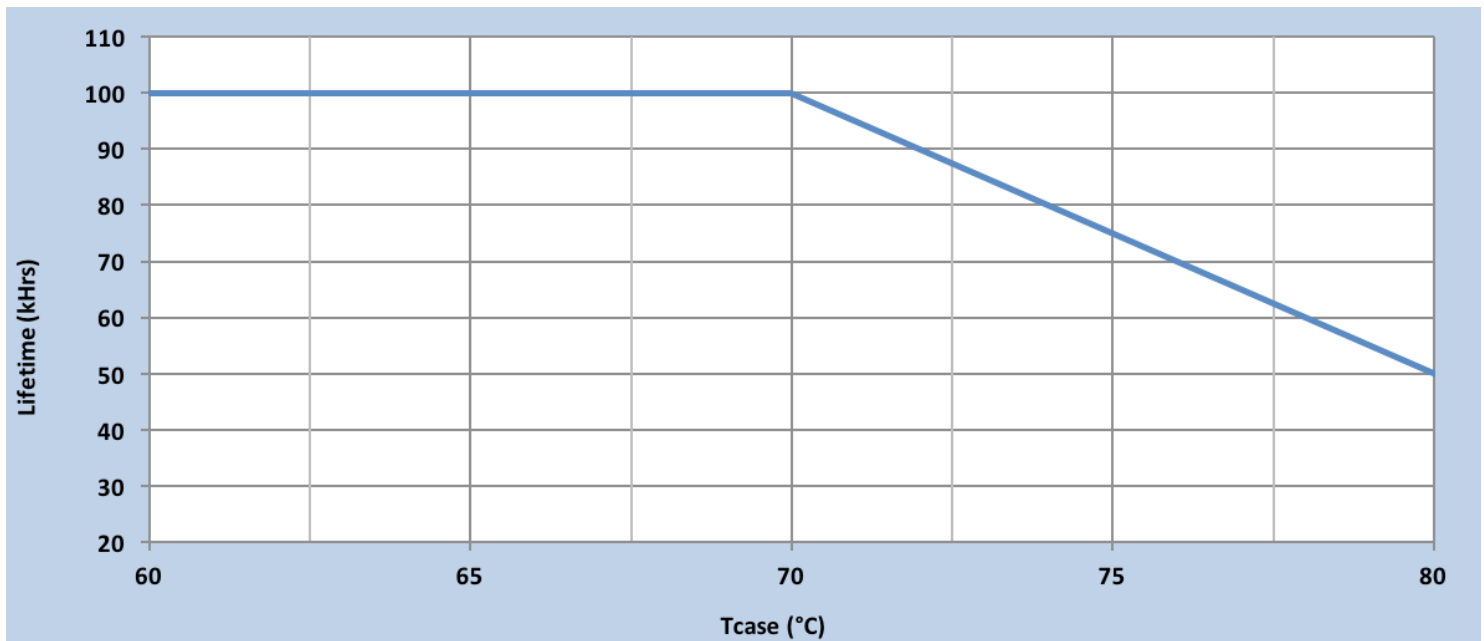
## Electrical Specifications

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### Output Current Vs. Driver Case Temperature

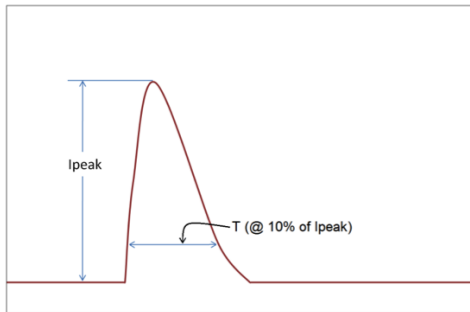


### Driver Lifetime Vs. Driver Case Temperature



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## Inrush Current Info



Vin	I <sub>peak</sub>	T (@ 10% of I <sub>peak</sub> )
120 Vac	38A	200μs
277 Vac	94A	175μs

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)	6kV	6kV

## Isolation

Isolation	Input Leads	Output Leads	SR Leads (SR+, SR-/SGND, AUX, and LSI), Class 2 Only	Enclosure
Input Leads	NA	2xU+1kV	2xU+1kV	2xU+1kV
Output Leads	2xU+1kV	NA	2xU+1kV	2xU+1kV
SR Leads (SR+, SR-/SGND, AUX, and LSI), Class 2 Only	2xU+1kV	2xU+1kV	NA	2xU+1kV
Enclosure	2xU+1kV	2xU+1kV	2xU+1kV	NA

U = Max. input voltage

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