

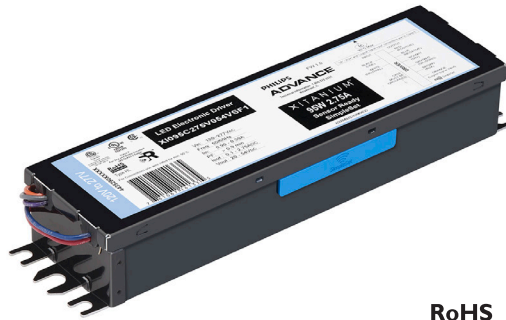
**PHILIPS
ADVANCE**



LED Driver

Xitanium SR

180W 120-277V 1.25A SR
with Auxiliary Supply
XI180C125V210VSF1



Class P
For Dry and Damp Location

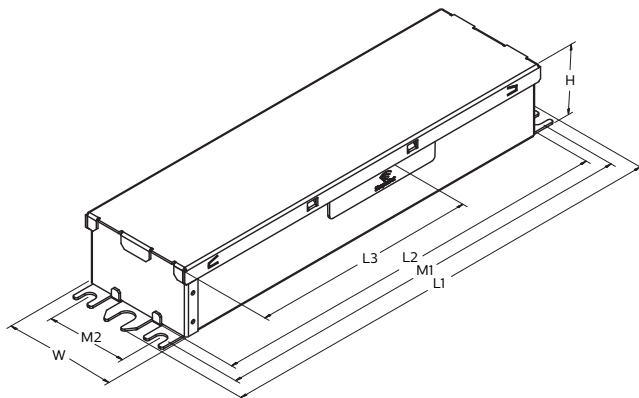
The Philips Advance Xitanium SR LED driver can help reduce complexity and cost of light fixtures used in connected lighting systems in outdoor lighting applications. It features a standard digital interface to enable direct connection to SR-certified components. Functionality that ordinarily would require 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) ¹	Inrush Current (Apk/10%-µs)	THD @ Max. Load	Power Factor @ Max. Load	Surge Protection Common/Diff (KV)	Weight (Lbs/kgs)	Envir. Protection Rating	Dimming	Dimming Range	Min. Output Current (A)
120	180	70-210	0.10-1.25	91	Life - 85°C UL - 90°C	1.8A	216	66/254	<15%	>0.95	6/6	2.1 lbs / 0.95 KGS	UL damp & dry	DALI	10% ~ 100%	0.070
277				93		0.76A		154/256								

Enclosure

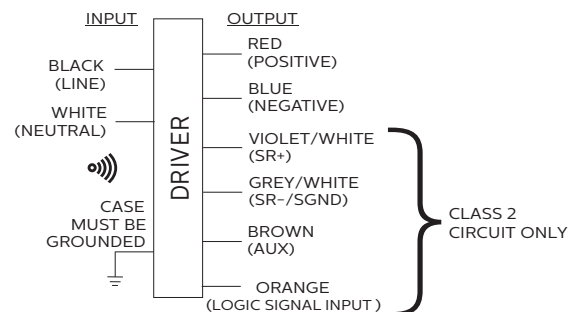
	In. (mm)
Case Length (L2)	8.44 (214.4)
Case Width (W)	2.35 (59.8)
Case Height (H)	1.68 (37.6)
Mounting Length (M)	8.91 (226.2)
Overall Length (L1)	9.47 (240.5)
Center of SimpleSet Antenna (L3)	4.70 (119.3)



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

Wiring Diagram

	Wire Length (mm)
Black (Line)	270 (± 30)
White (Neutral)	270 (± 30)
Red (Positive, LED output)	270 (± 30)
Blue (Negative, LED output)	270 (± 30)
Violet/White (Positive, 0-10V)	270 (± 30)
Gray/White (Negative, 0-10V)	270 (± 30)
Brown (Aux)	270 (± 30)
Orange (Logic signal input)	270 (± 30)



Xitanium SR 180W 120-277V 1.25A (with Auxiliary Supply)

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 warranty¹

Benefits

- Enables interoperability with multiple sensor/network system vendors
- Reduces cost and complexity of outdoor connected lighting systems²
- 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

- Site & area
- Parking garages
- Floodlights
- Roadway

Product Data

Ordering Information	
Order Code	XI180C125V210VSF1
Full Product Code	XI180C125V210VSF1 (Mid-pack, 10pcs/box), (12NC:929001725213)
Full Product Name	XITANIUM 180W 120-277V 1.25A SR with auxiliary supply
Net Weight Per Piece	2.1 lbs / 0.95 kgs
Input Information	
Inrush Current	Per NEMA 410
Line Voltage (AC operation)	120-277VAC +/- 10%
Line Current	1.75 @ 120V, 0.75A @ 277V
Line Frequency	50/60Hz
Surge Protection	Refer to table
Output Information	
Output Voltage Range	70VDC to 210VDC
Output Current Range	0.10A to 1.25A
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	270VDC
Protections	Short Circuit and Open Circuit Protection for LED + and LED-
Features	
AOC (adjustable output current)	0.10A to 1.25A via SimpleSet programming (refer to graphs and notes)
Life	50,000 hr nom. @ TC 85°C; 100,000 hr nom. @ TC 75°C (refer to graphs)
Suitable for Outdoor Use?	Yes
Interfaces	SimpleSet, SR, Logic Signal Input (LSI), Auxiliary Power Supply
Min. Ambient Temp	-40°C
Max. Case Temperature (Tcase)	Life - 85°C; UL - 90°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

1. 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 MTTF modeling.
2. Functionality that ordinarily would require additional auxiliary components is integrated into the driver.

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Product Data (continued)

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

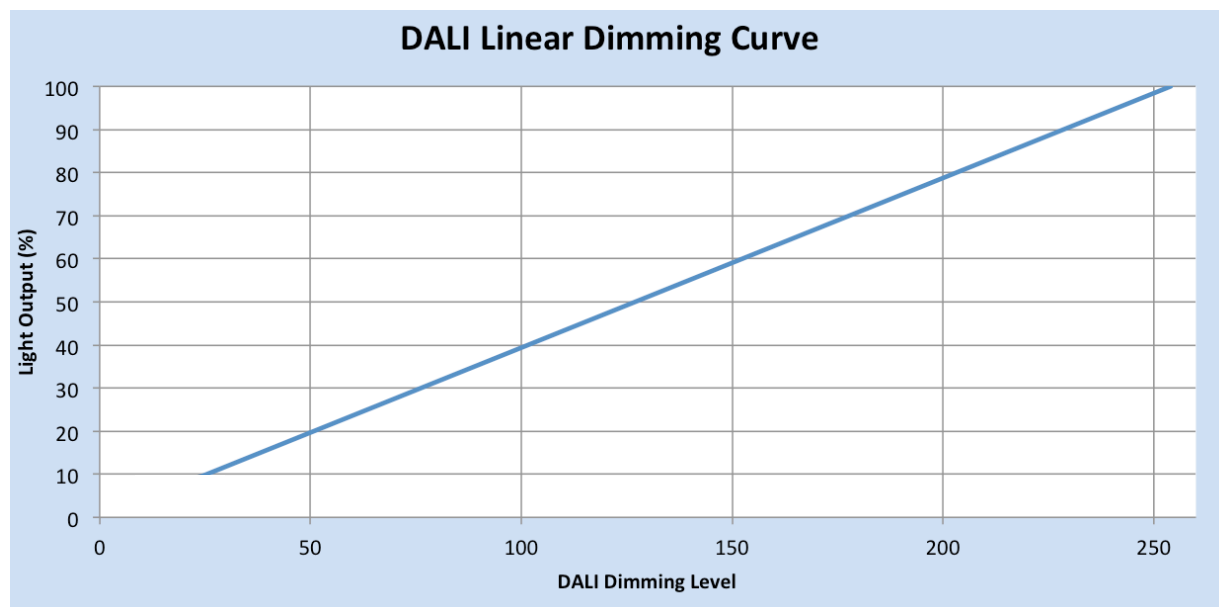
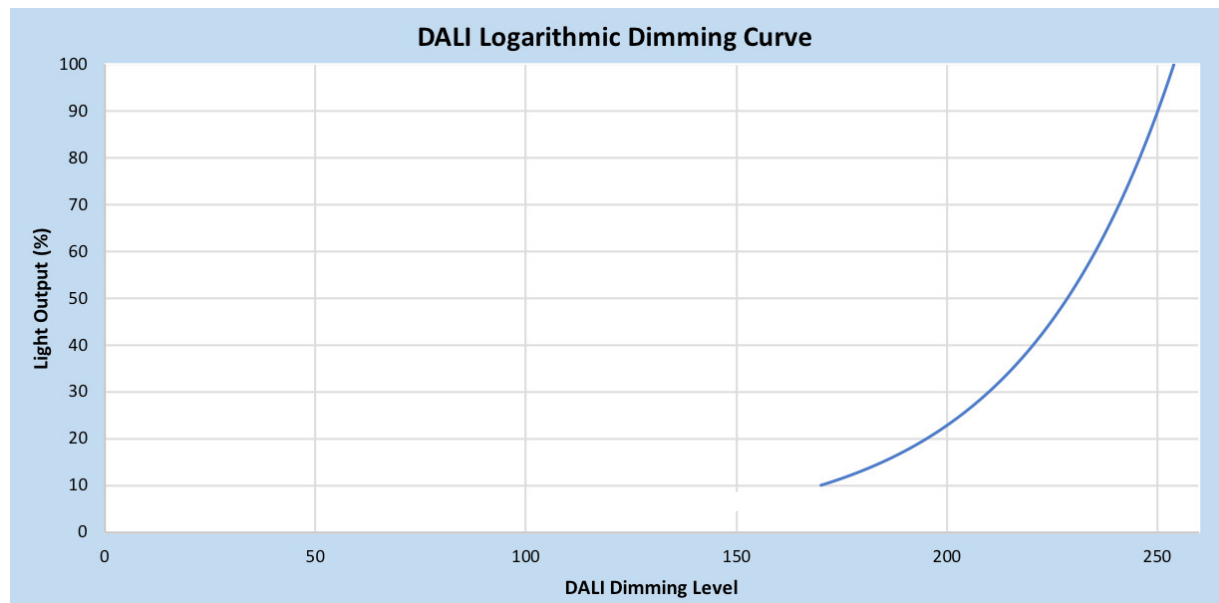
Xitanium SR 180W 120-277V 1.25A (with Auxiliary Supply)

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.



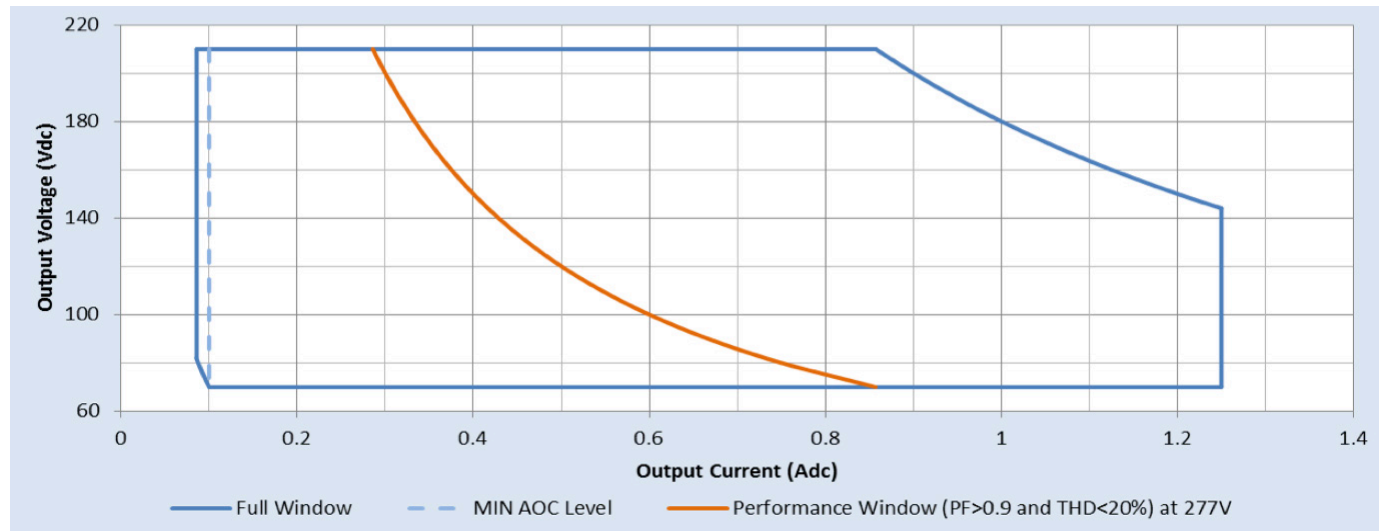
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Operating Window

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%.



Notes

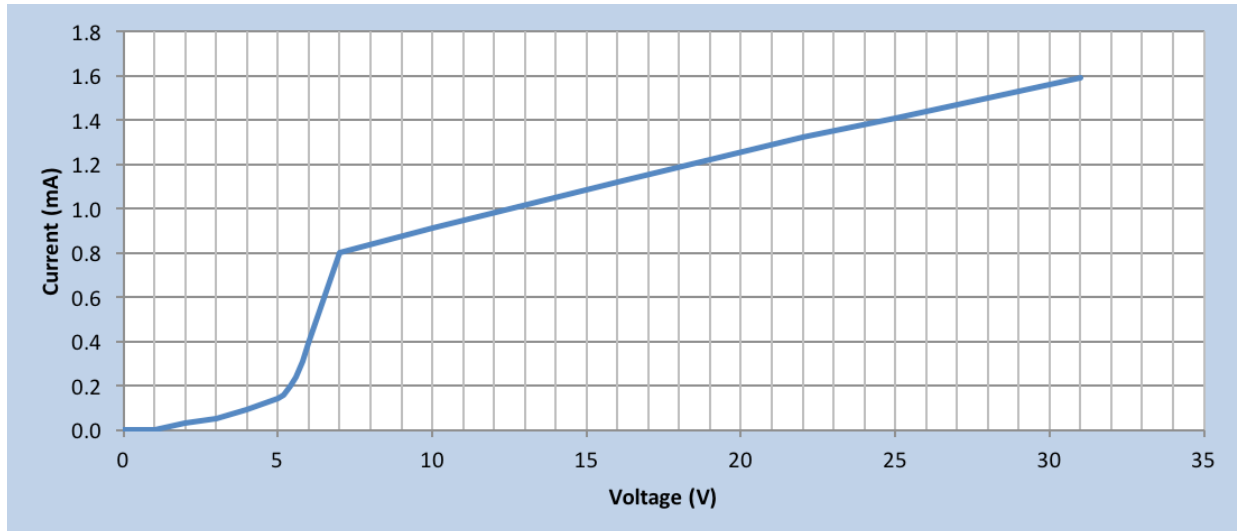
1. Factory default output current is 1.05A.
2. To get a 100% to 10% dimming range, the output current setting through AOC should be $\geq 700\text{mA}$.

Xitanium SR 180W 120-277V 1.25A (with Auxiliary Supply)

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Logic Signal Input (LSI) Characteristics (Typical)

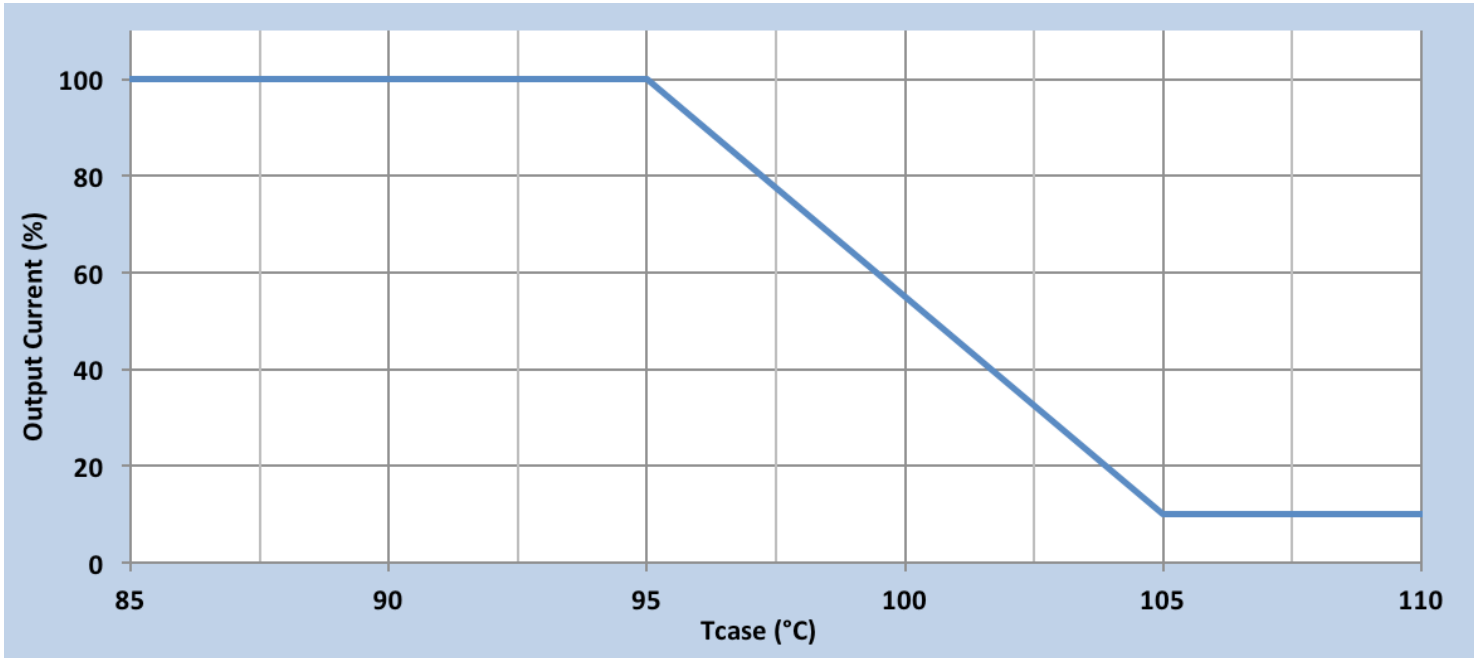


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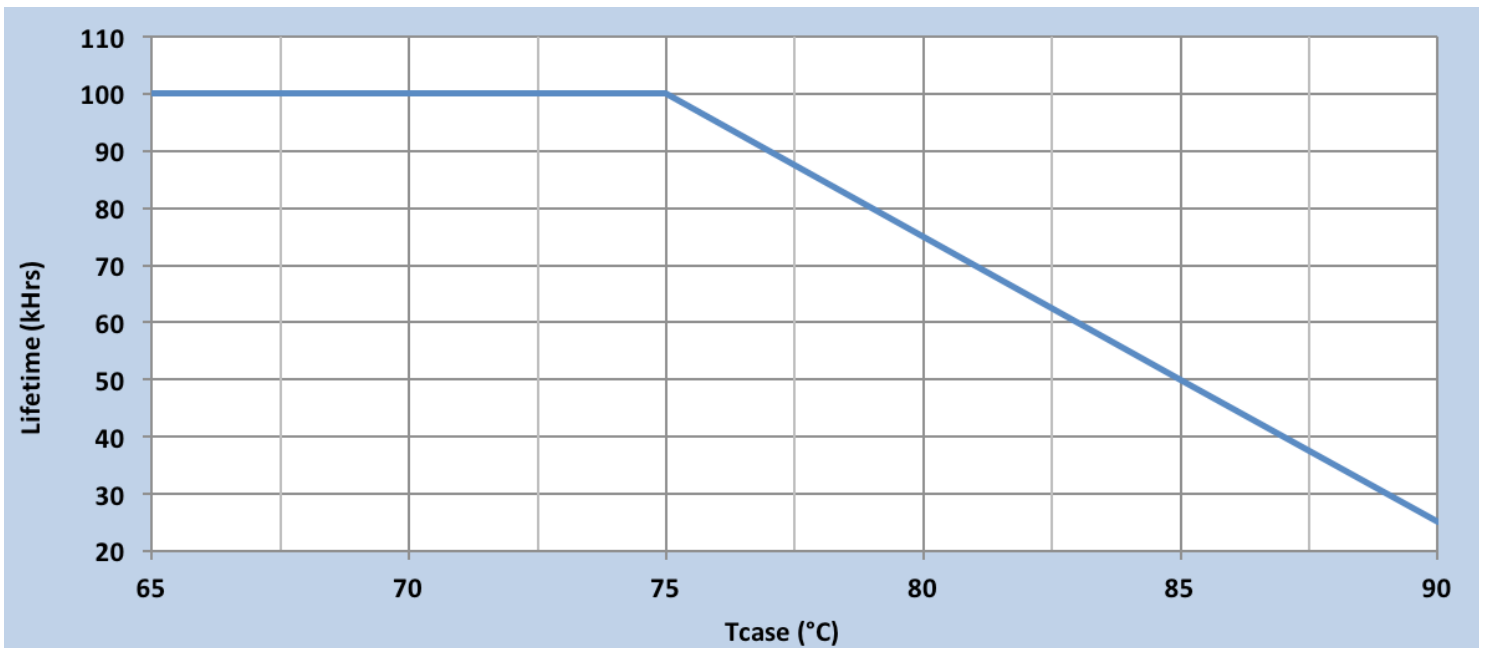
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Output Current Vs. Driver Case Temperature



Driver Lifetime Vs. Driver Case Temperature

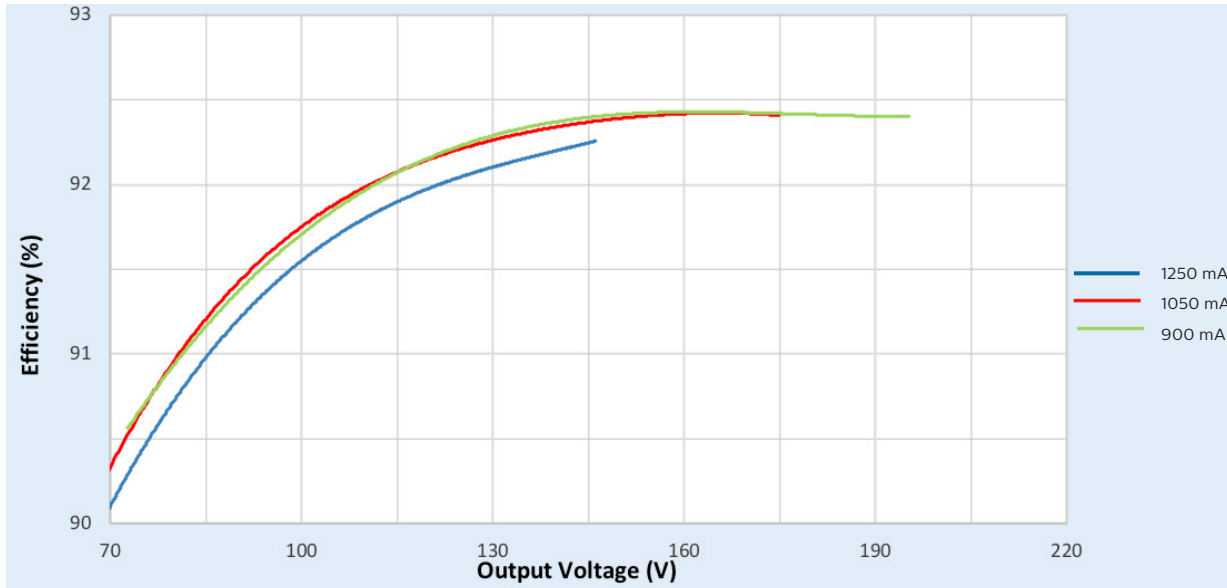


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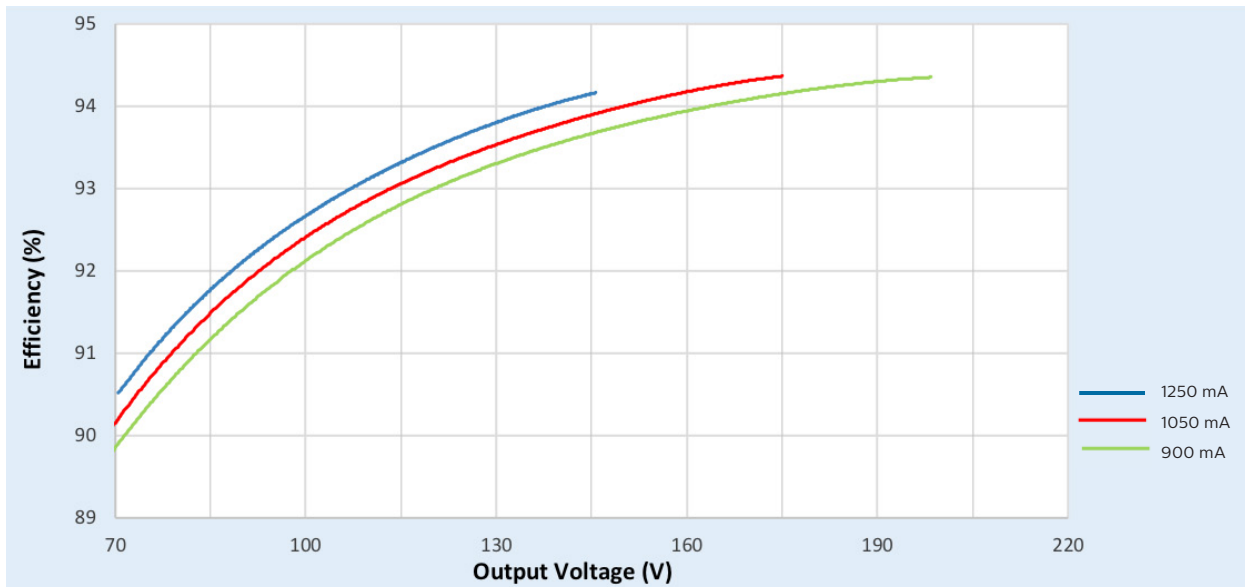
Performance Characteristics

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. Data below at 75°C Tcase.

Efficiency Vs. Output Voltage @ 120VAC



Efficiency Vs. Output Voltage @ 277VAC

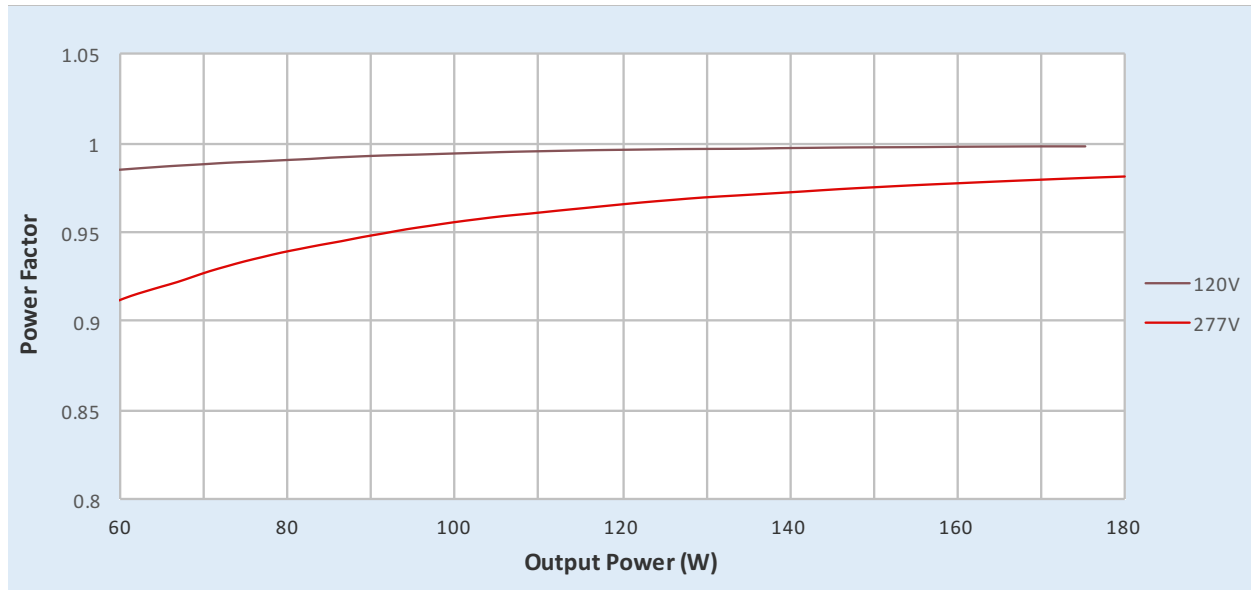


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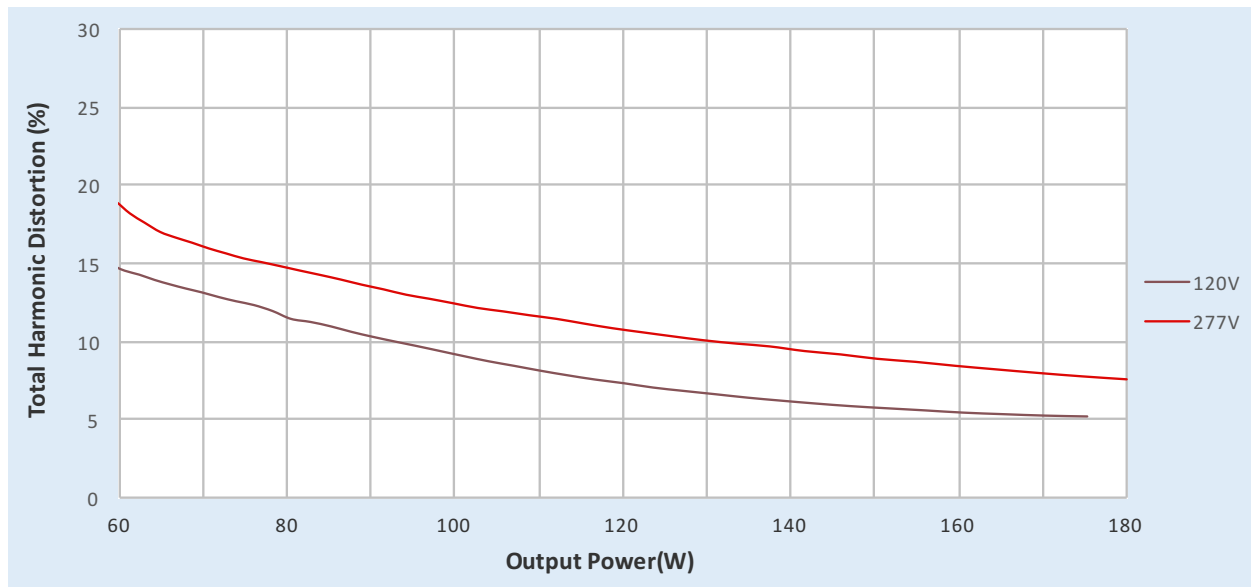
Performance Characteristics

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Power Factor Vs. Output Power

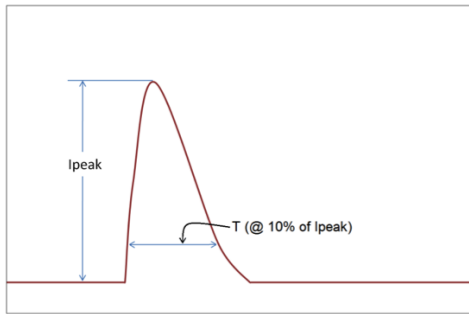


Total Harmonic Distortion Vs. Output Power



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Inrush Current Info



V _{in}	I _{peak}	T (@ 10% of I _{peak})
120 Vac	66A	254μs
277 Vac	154A	256μs

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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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

Philips Lighting Canada Ltd.
281 Hillmount Rd, Markham, ON, Canada L6C 2S3
Tel. 800-668-9008