PHILIPS
ADVANCE

LED Driver

Xitanium

180W 0.1-1.25A 0-10V Dimming with SimpleSet
XI180C125V200BSF1

RoHS COMPLIANT

Intertek Class P
Conforms to UL STD 8750
Certified to CAN/CSA STD
C22.2 No. 250.13
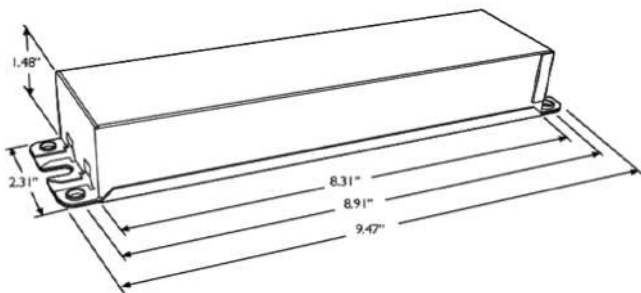
LISTED
E321253 Class P
For Dry and Damp Location

Philips Advance Xitanium outdoor LED drivers with SimpleSet technology are designed to give OEMs ultimate flexibility. With wide operating windows and simple programming, the drivers make it easy for luminaire manufacturers to design luminaires of different sizes and lumen levels for outdoor applications.
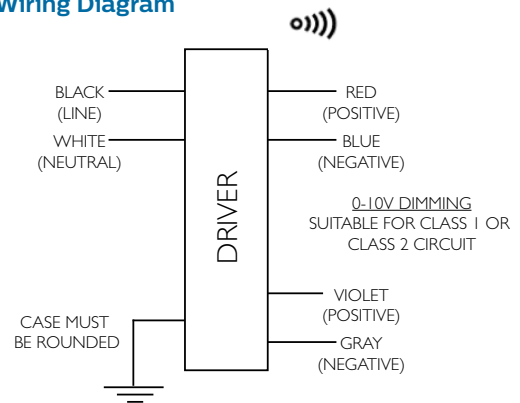
Specifications

Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load and 75°C Case	Max Case Temp. (°C)	Input Current (A)	Max. Input Power (W)	THD @ Max Load (%)	Power Factor @ Max Load	Surge Protection (Combi-Wave, KV)	Envir. Protection Rating
120	180	70–200	0.1 – 1.25	91.5	Life – 85°C UL – 90°C	1.87	198	<10%	>0.95	6	UL damp & dry and Type HL
277				94		0.72		<15%			

Enclosure

	In. (mm)
Case Length	8.31 (211)
Case Width	2.31 (58.6)
Case Height	1.48 (37.6)
Mounting Length	8.91 (226.3)
Overall Length	9.47 (240.5)

Wiring Diagram

BLACK (LINE)
WHITE (NEUTRAL)
RED (POSITIVE)
BLUE (NEGATIVE)
0-10V DIMMING SUITABLE FOR CLASS 1 OR CLASS 2 CIRCUIT
DRIVER
CASE MUST BE ROUNDED
VIOLET (POSITIVE)
GRAY (NEGATIVE)

Dimming	Dimming Range (with specified dimmers)	Minimum Output Current (A)
0–10V Analog Class 1 and 2 Wiring	10% ~ 100%	0.07

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Features

- 50,000+ hour lifetime[1]
- Programmable output current through SimpleSet
- Large operating window
- 6kV combi-wave surge rating to comply with ANSI C82.77-5 CAT C low

Benefits

- Enables long life luminaire designs
- Fast and simple way of programming
- Enables fixture designs with wide variety of loads and adjustable current options
- No external surge protection required to pass C82.77-5 CAT C low

Application

- Area
- Roadway
- Parking garages
- Floodlights

Electrical Specifications

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

Product Data

Order Information	
Full Product Code	XI180C125V200BSF1M (Mid-Pack, 10pcs/Box)
Line Frequency	50/60Hz
Min. Mains Voltage Operational	108 Vac
Max. Mains Voltage Operational	305 Vac
Output Information	
Maximum Open Circuit Voltage	270Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max Iout (Low frequency ripple (≤120Hz) content <5%)
Output Current Tolerance (in performance window)	<5%
Protections	Short Circuit, Open Circuit Protection for LED + and LED − and Temperature Foldback
Features	
0-10V Dimming	150µA (±3%) source current from driver. See dim curve for detail.
AOC (Adjustable Output Current)	0.1A-1.25A via SimpleSet (Factory Default at 1.05A)
Additional SimpleSet Configurable Features	Adjustable Min Dim level, Adjustable Lumen Output, Adjustable Lumen Output Min, OEM Write Protection
Environment & Approbation	
Operating Ambient Temp. Range	−40°C to +55°C
Max Case Temperature (Tcase)	85°C for Life & 90°C for UL Safety
Agency Approbations	UL 8750, CSA 250.13, UL Listed, ETL Class P
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Audible Noise	<24dB Class A
Weight	2.1 Lbs / 0.95 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 MTTF modeling.

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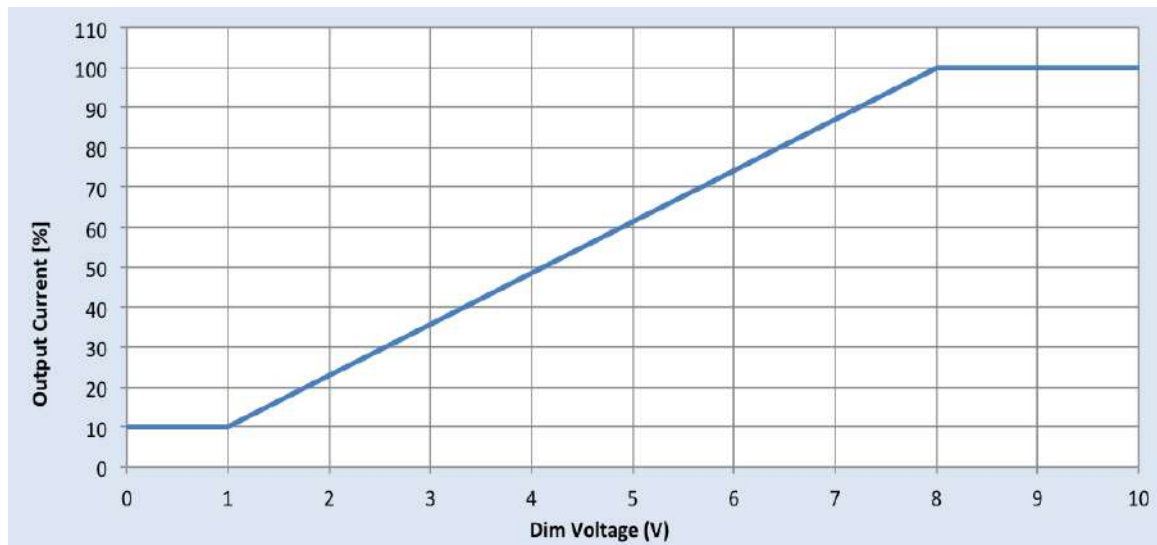
0-10V Dimming Curve

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

Minimum dim level: 10% of Iout setting as default

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 this driver
Leviton	IllumaTech IP7 series
Philips	Sunrise – SR1200ZTUNV

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Driver Output Window
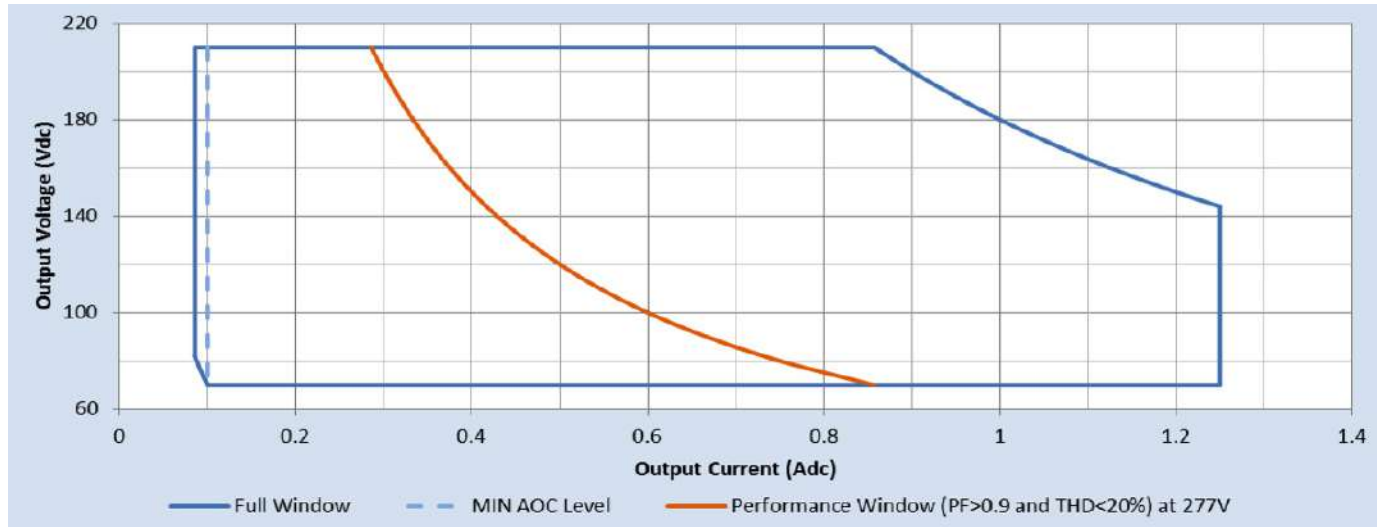
Notes

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 ≥ 700mA.

3. Factory default minimum dimming level is 10%. This can be adjusted between 10% and 100% using Philips MultiOne.

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Electrical Specifications

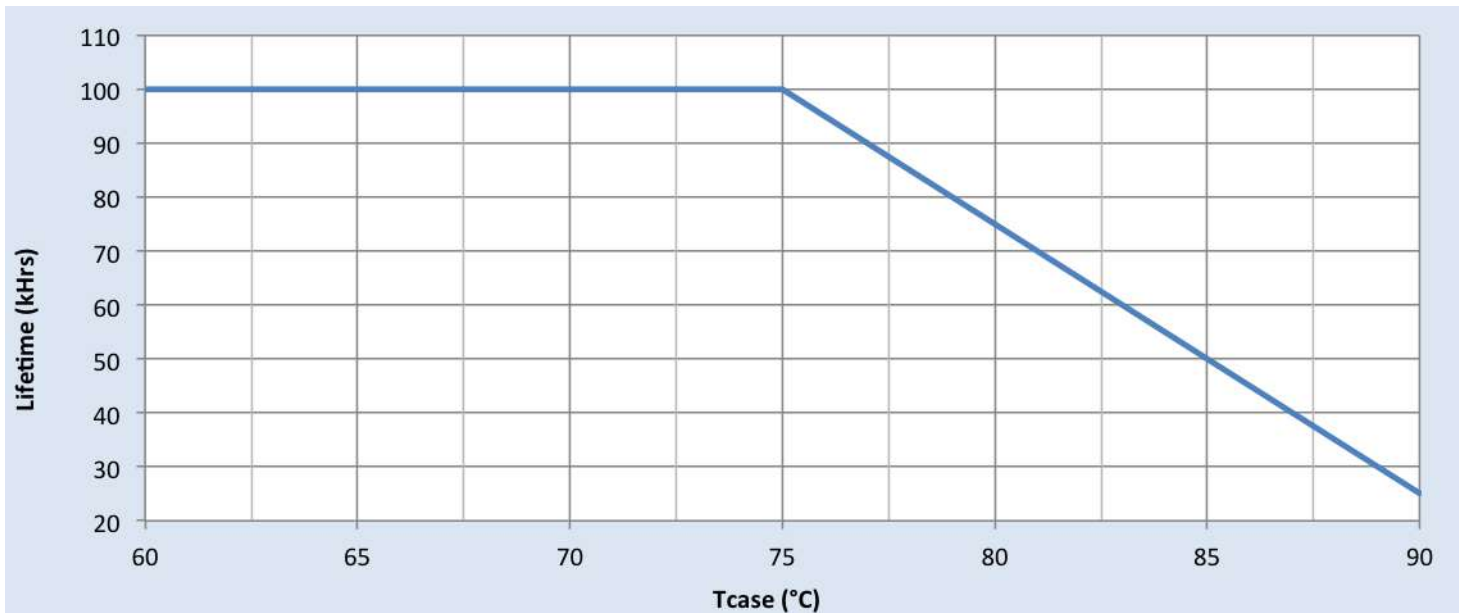All the specifications are typical and at 25°C Tcase unless specified otherwise.

Output Current Vs. Driver Case Temperature
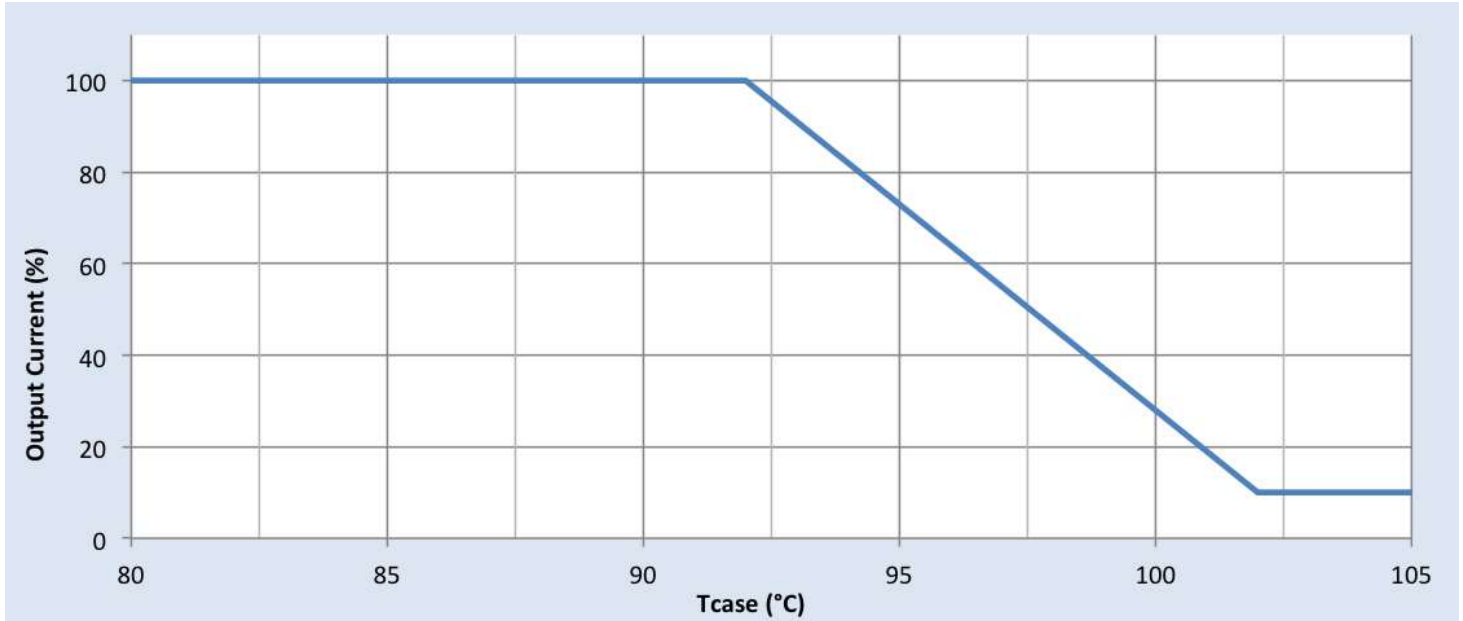
Note

There is ±5°C tolerance on the driver case temperature.

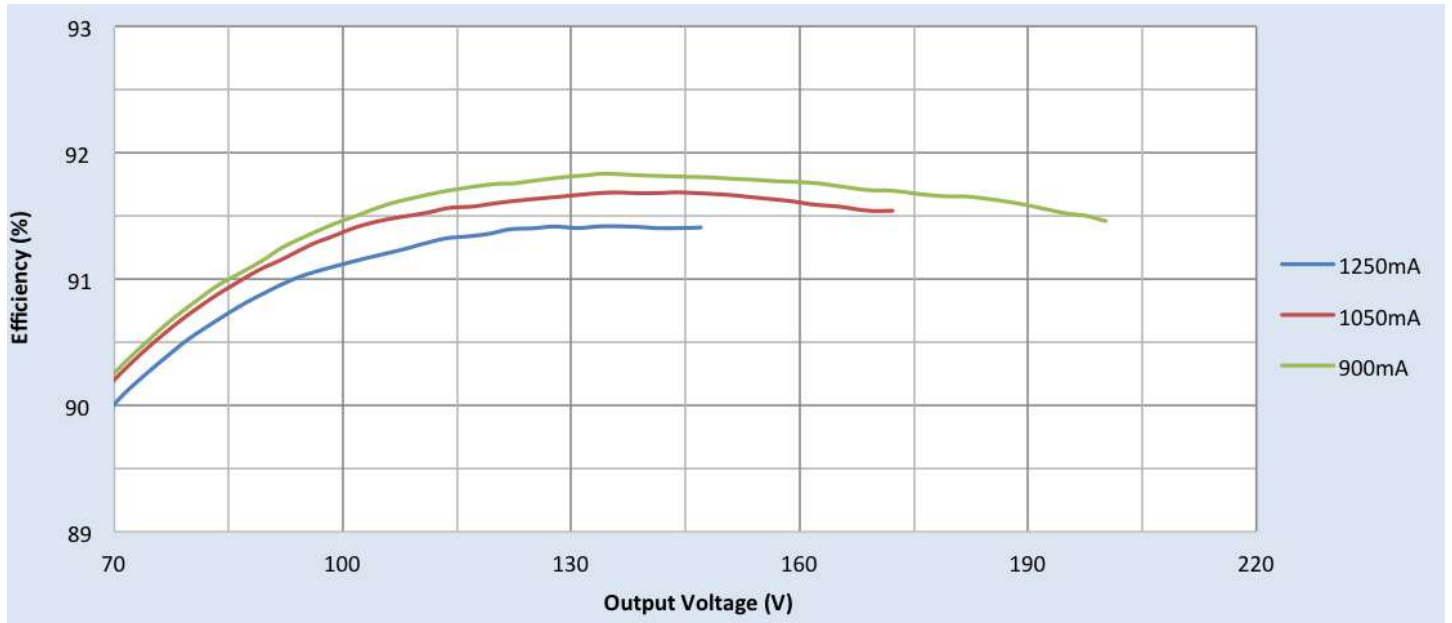### Driver Lifetime vs. Driver Case Temperature

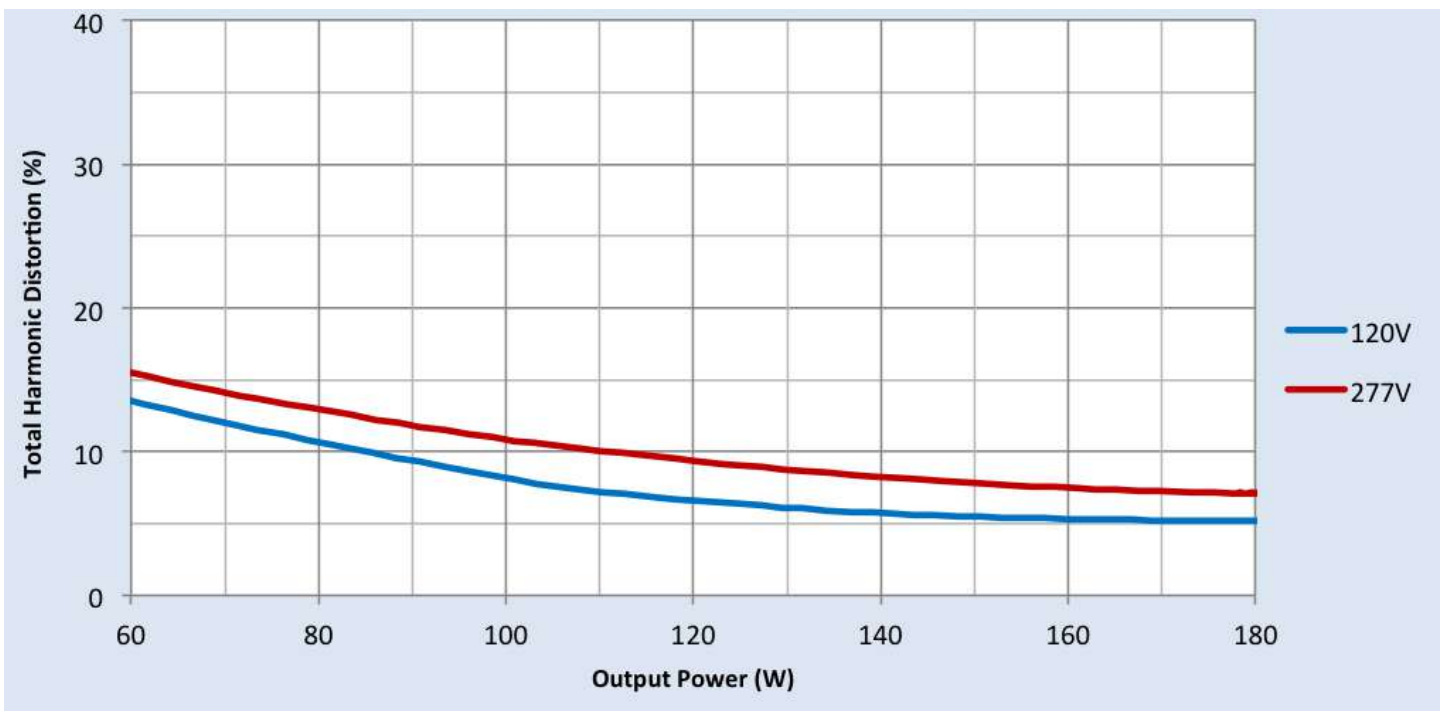# Xitanium 180W 0.1-1.25A 0-10V Dimming with SimpleSet

Performance Characteristics

Based on measurements on a typical sample at 70°C case. The accuracy of the measurements is within the tolerance of the measurement instruments.

Efficiency Vs. Output Voltage at 120Vac

Efficiency Vs. Output Voltage at 277Vac

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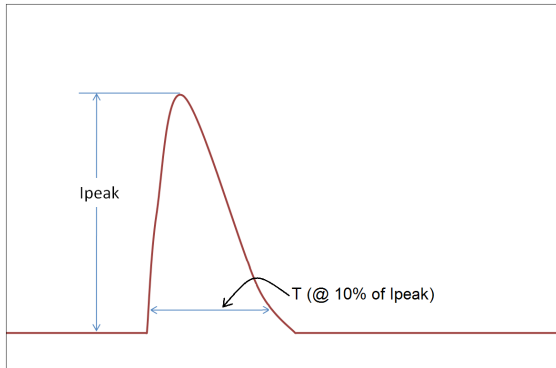
Power Factor Vs. Output Power
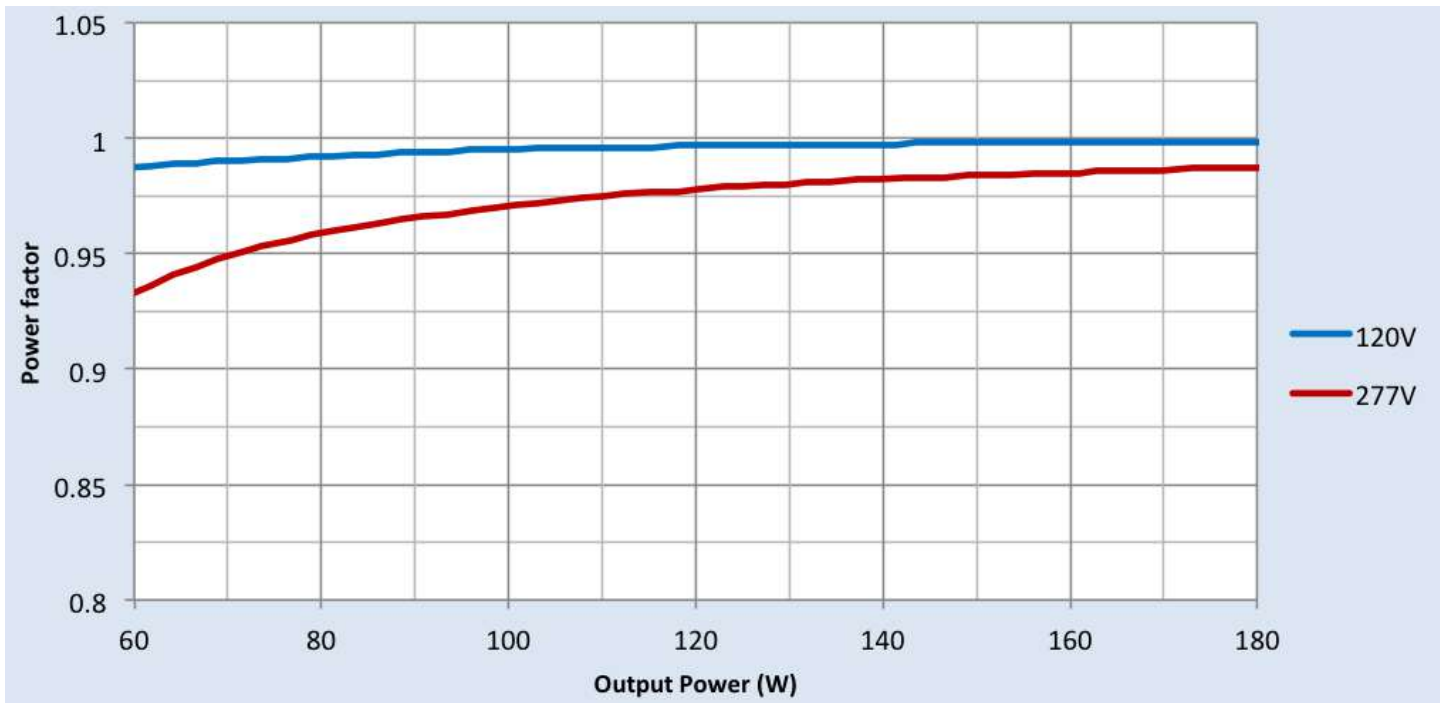
Total Harmonic Distortion (THD) Vs. Output Power

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Inrush Current Info

Vin	Ipeak	T (@ 10% of Ipeak)
120 Vrms	53A	270µS
277 Vrms	138A	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	Output	0–10V	Enclosure
Input	NA	2xU+1kV	2.5kV	2xU+1kV
Output	2xU+1kV	NA	2.5kV	2xU+1kV
0–10V	2.5kV	2.5kV	NA	2.5kV
Enclosure	2xU+1kV	2xU+1kV	2.5kV	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).