



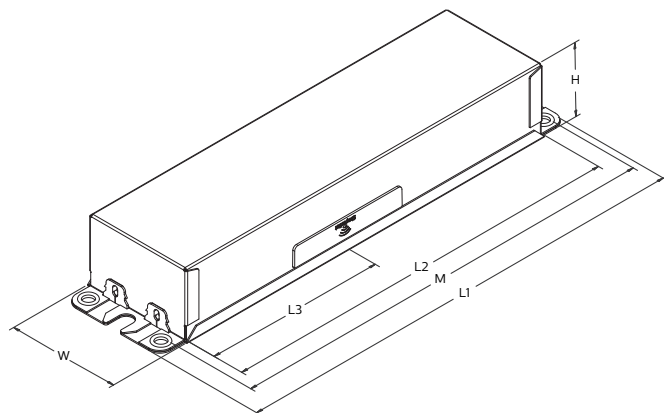
**Advance Xitanium LED drivers** with SimpleSet technology and auxiliary power supply extend the driver application scope to include simple self-contained control solutions for luminaires. The driver provides an additional auxiliary output for powering simple sensors (occupancy/photocell), and the driver has a built-in standby mode through the 0-10V leads. The additional auxiliary power output eliminates the need for a mains relay or power pack for the sensor and allows the sensor to turn the driver on/off and also operate the dimming function.

### 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	Dimming	Dimming Range (with specified dimmers)	Min. Output Current (A)
347	180	70-210	0.1 - 1.25	92	Life - 85°C UL - 90°C	0.56	200	<10%	>0.95	6	UL damp & dry and Type HL	0-10V Analog Class 1 and 2 Wiring	10% ~ 100%	0.07
480				93		0.4								

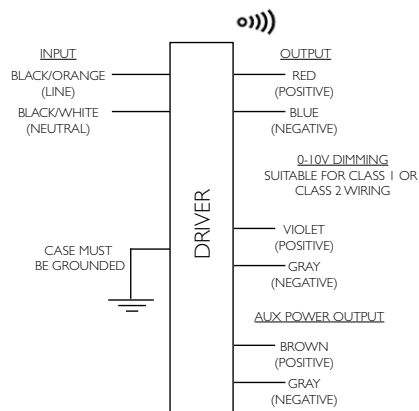
### Enclosure

	In. (mm)	Tolerance
Case Length (L2)	8.31 (211.0)	± 0.5mm
Case Width (W)	2.31 (58.0)	± 0.5mm
Case Height (H)	1.48 (37.6)	± 1.0mm
Mounting Length (M)	8.91 (226.2)	± 0.5mm
Overall Length (L1)	9.45 (240.0)	± 1.0mm
Center of SimpleSet Antenna (L3)	3.75 (95.3)	± 1.0mm



### Wiring Diagram

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



Class P  
For Dry and Damp Location



# Xitanium XH180C125V200PSF1

180W 0.1-1.25A 0-10V Dimming with SimpleSet and Aux. Output

## Features

- 50,000+ hour lifetime<sup>1</sup>
- Programmable output current through SimpleSet technology
- Large operating window
- 6kV combi-wave surge rating to comply with ANSI C82.77-5 CAT C low
- Auxiliary power output
- 0-10V dimming with ON/OFF functionality

## Benefits

- Enables long life luminaire designs
- Fast and simple way of programming
- No external surge protection required to pass C82.77-5 CAT C low
- Aux power output is a great alternative to using 347V or 480V power packs which are expensive.
- The driver can be turned ON/OFF using a passive low-voltage control device or relay

## Application

- Area
- Roadway
- Parking garages
- Floodlights
- High-bay and mid-bay

## Electrical Specifications

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

## Product Data

Order Information	
Full Product Code	XH180C125V200PSF1M (Mid-Pack, 10pcs/Box), 12NC: 929001705513
Line Frequency	50/60Hz
Min. Mains Voltage Operational	312 Vac
Max. Mains Voltage Operational	528 Vac
Output Information	
Maximum Open Circuit Voltage	290Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max lout (Low frequency ripple ( $\leq 120$ Hz) content <5%)
Output Current Tolerance (in performance window)	<5%
Protections	Short Circuit, Open Circuit Protection for LED + and LED – and Temperature Foldback
Features	
Auxiliary Power Supply Output	
Nominal Aux. Output Voltage	24Vdc ( $\pm 10\%$ , including line and load regulation)
Maximum Aux. Output Voltage Ripple (peak/average)	2%
Rated Aux. Output Power	0.5W
Peak Power (<10s)	4W
Max. Output Current at Aux output port	20mA
Turn-on Time (from mains applied to output within 90%)	<220 milliseconds
Max. Voltage Overshoot during Turn ON	30Vdc
Max. Voltage Undershoot during Turn ON	8Vdc
Max. Hold-up Time after Mains Power OFF (20mA load)	75 milliseconds (until the aux output voltage drops out of nominal range)
Protections	Short Circuit & Open Circuit Protection for Aux. + and Aux. – and Over-temperature Foldback

1. 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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## Electrical Specifications

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### Product Data (continued)

0-10V Dimming Interface	
Dimming Source Current	150µA +/-3% (for dimming voltage >1V)
0-10V Active Range	1V to 8V. See dim curve for details.
0-10V Turn OFF Threshold	<0.5V
0-10V Turn ON Threshold	>0.8V
Protections	Short Circuit & Open Circuit Protection for Dim + and Dim – and protected against accidental mains applied on dimming input
Programmable Features	
AOC (adjustable output current)	0.1A-1.25A via SimpleSet (Factory Default at 1.05A)
Additional 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)	90°C
Agency Approbations	UL8750, CSA-C22.2 NO.250.13, CSA Class P, ETL Class P, UL Class P
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Audible Noise	<24dB Class A
Weight	2.1 Lbs / 0.95 kgs

2. Input standby power is < 0.5W when no load on aux. output. With about 0.3W load on aux. output, the input standby power is < 1W.

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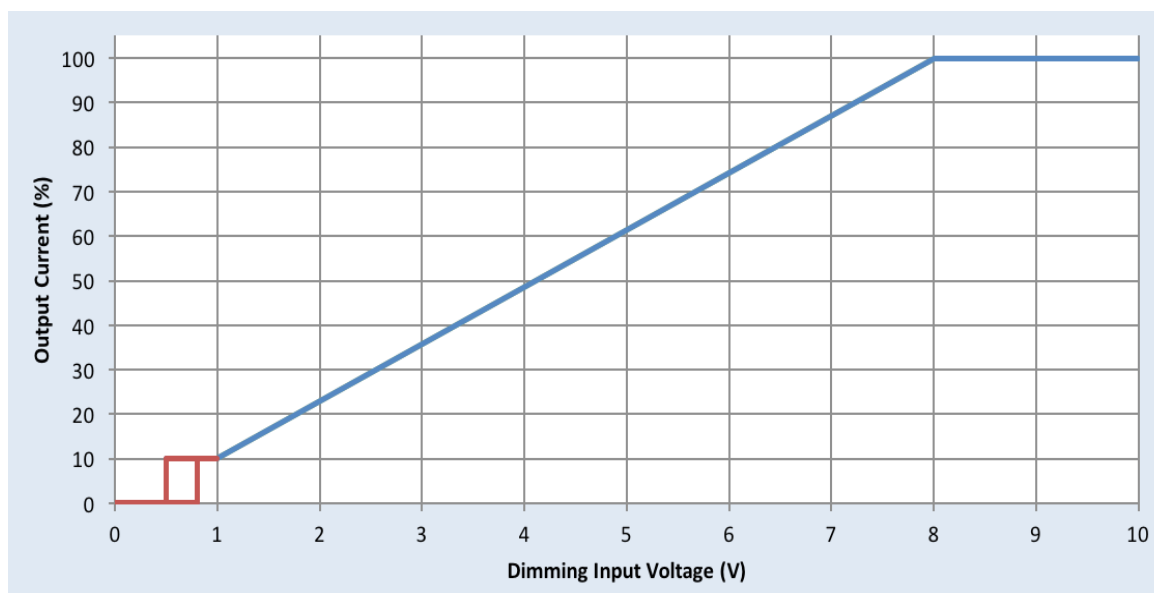
## 0-10V Dimming

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

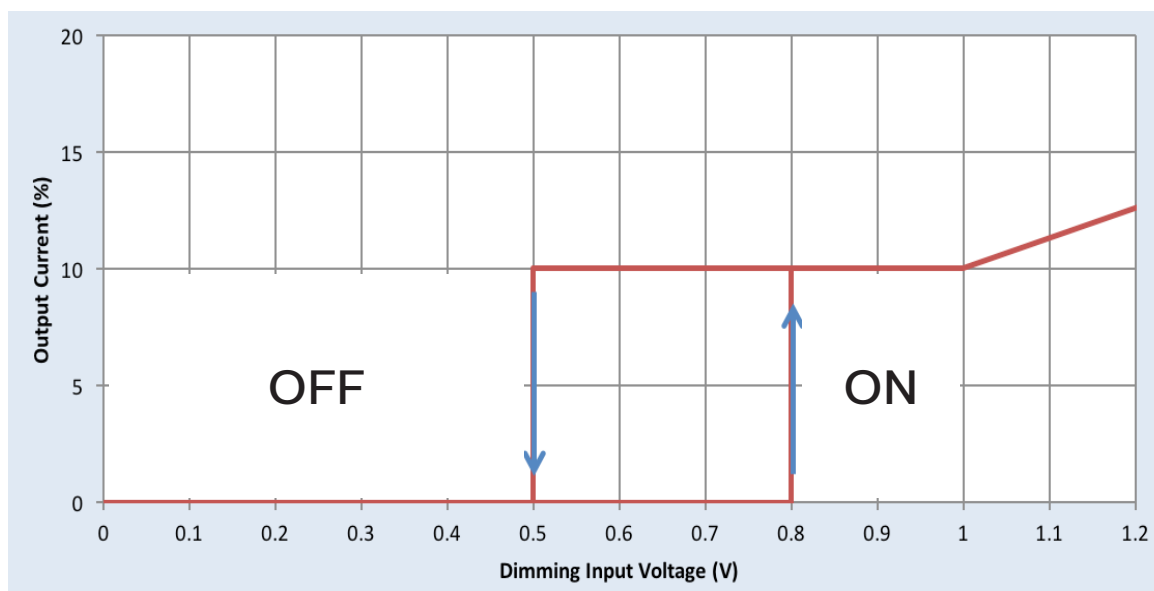
Minimum dim level: 10% of Iout setting as default

Maximum output voltage on the dimming wires: 12V

## 0-10V Dimming Curve



## Detail on Hysteresis for ON-OFF



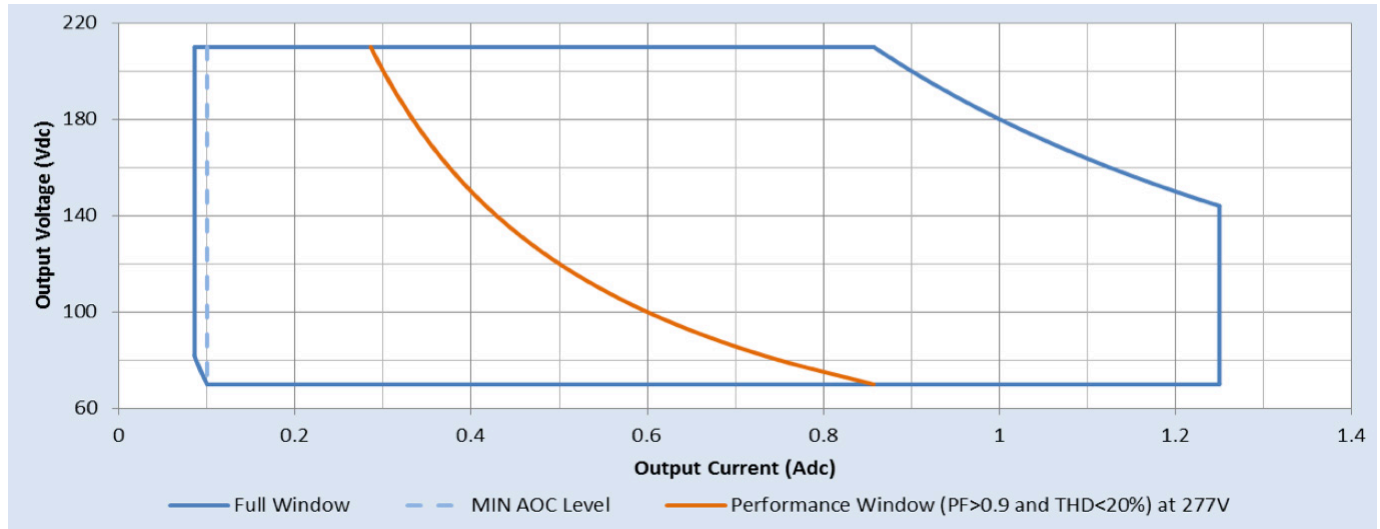
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180W 0.1-1.25A 0-10V Dimming with SimpleSet and Aux. Output

## Electrical Specifications

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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  $\geq 700\text{mA}$ .
3. Factory default minimum dimming level is 10%. This can be adjusted between 10% and 100% using Advance MultiOne.

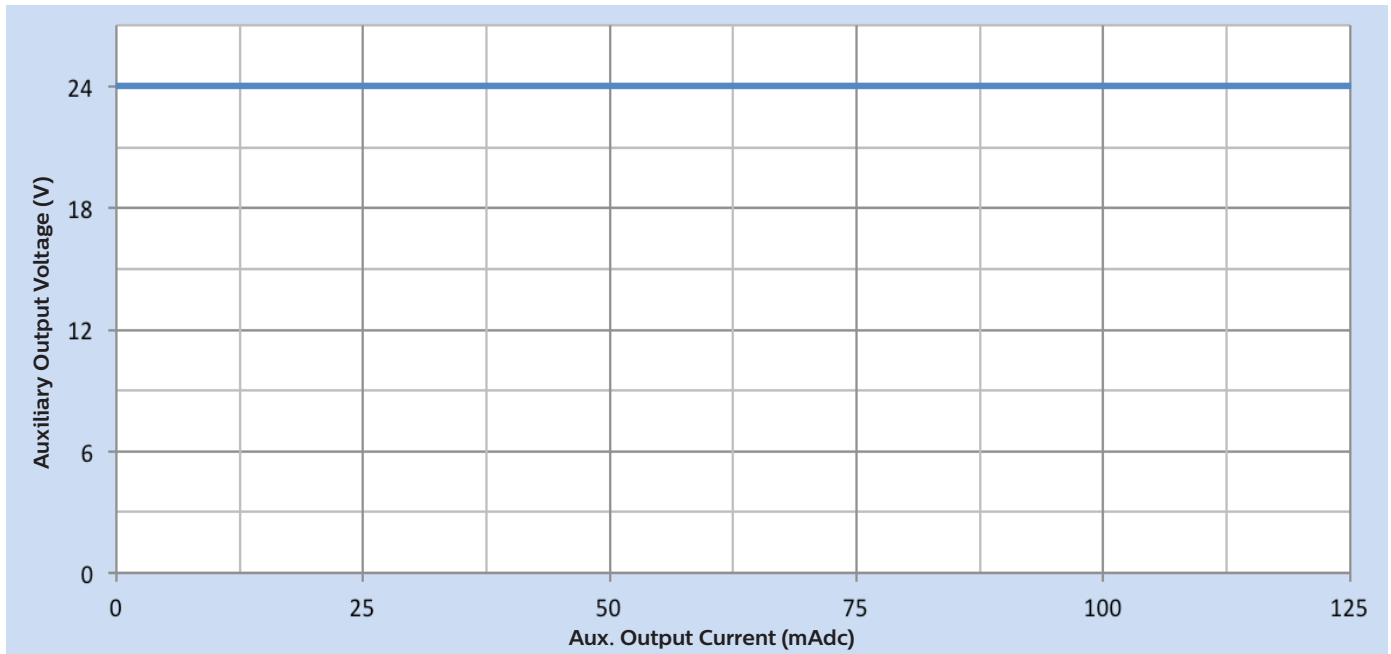
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## Electrical Specifications

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## Auxiliary Power



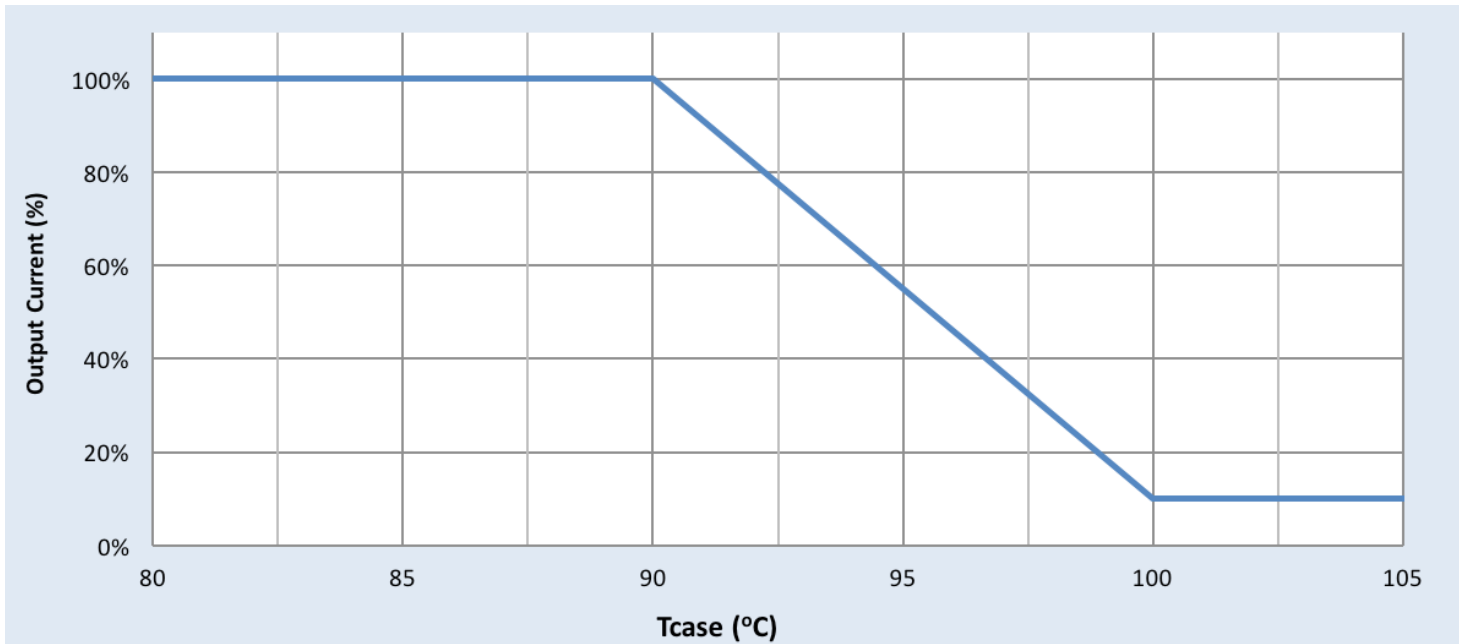
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180W 0.1-1.25A 0-10V Dimming with SimpleSet and Aux. Output

## Electrical Specifications

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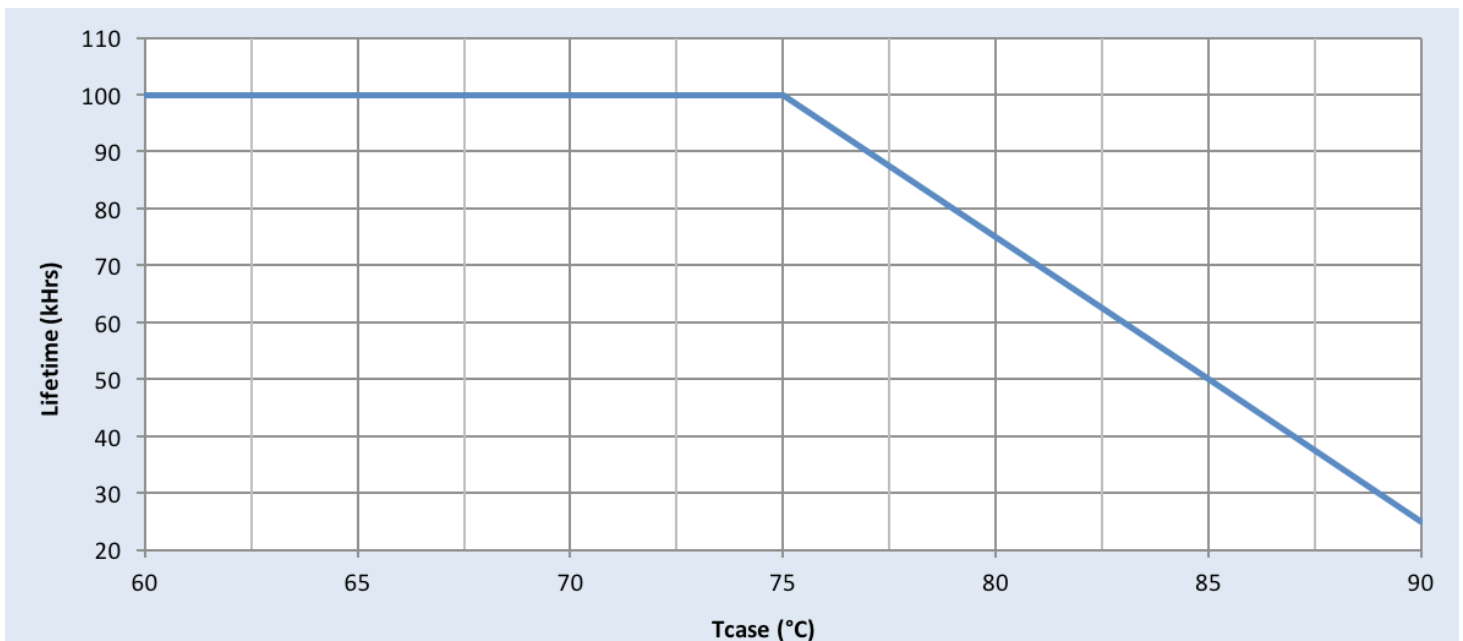
## Output Current Vs. Driver Case Temperature



## Note

There is  $\pm 5^\circ\text{C}$  tolerance on the driver case temperature.

## Driver Lifetime Vs. Driver Case Temperature



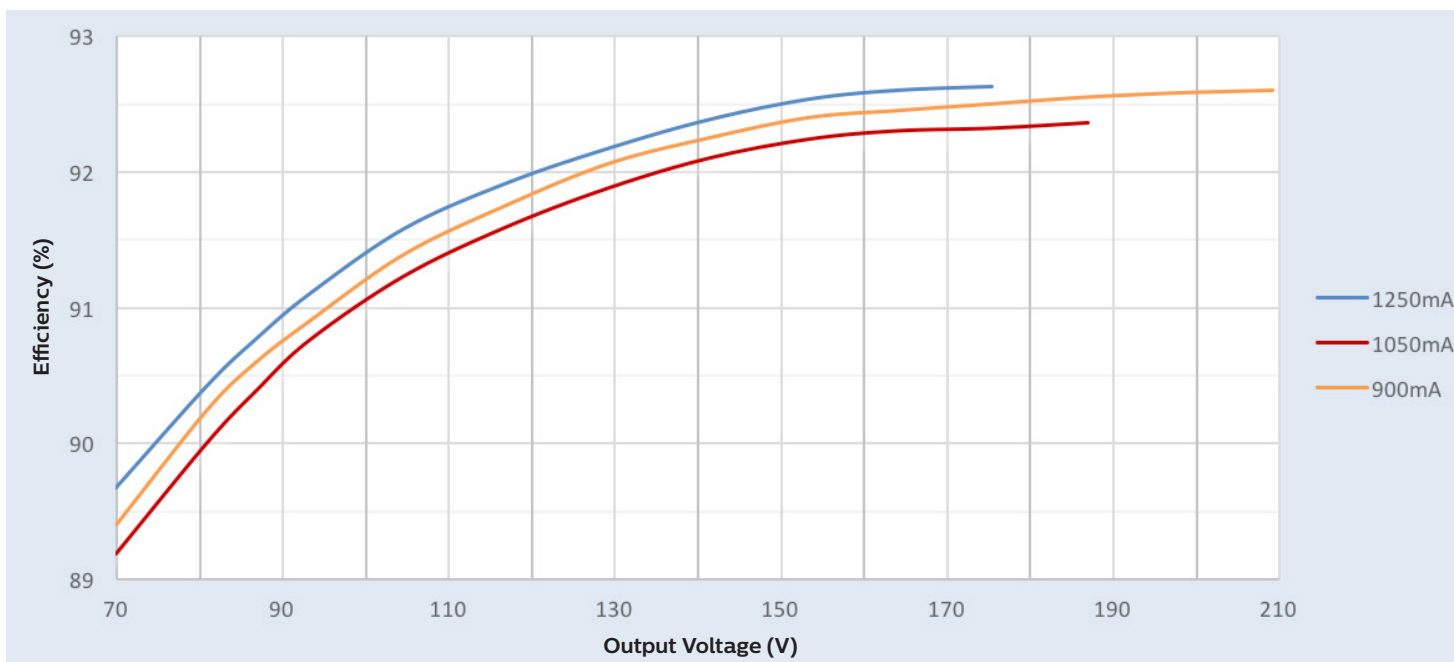
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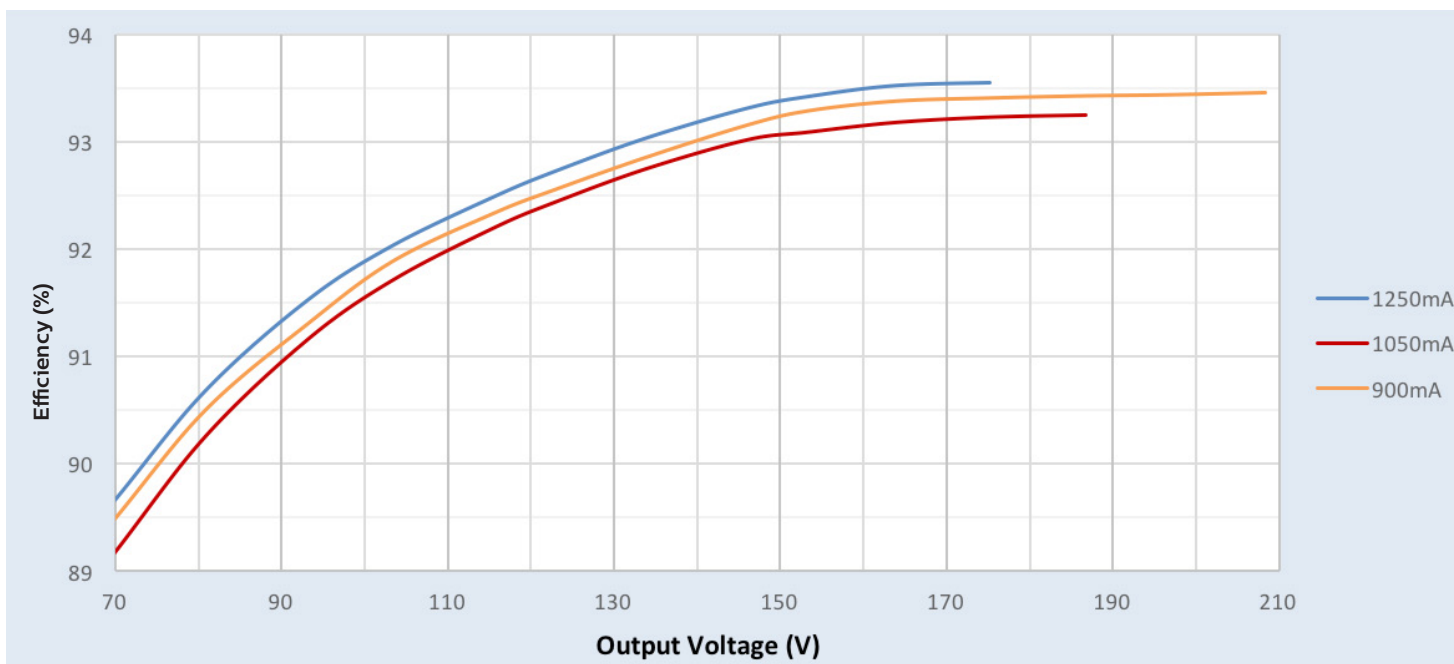
## Performance Characteristics

Based on measurements on a typical sample at 75°C case. The accuracy of the measurements is within the tolerance of the measurement instruments. Measurements were made with no load on the auxiliary output port.

### Efficiency Vs. Output Voltage at 347Vac



### Efficiency Vs. Output Voltage at 480Vac





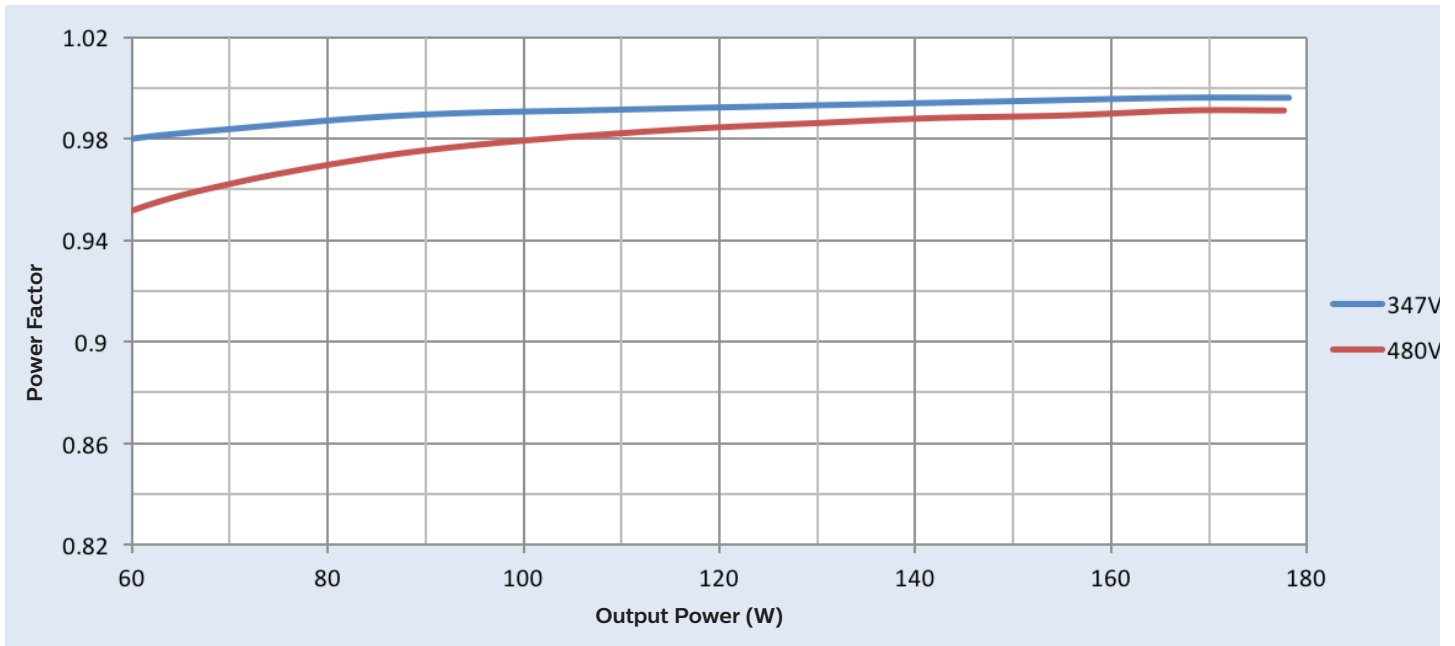
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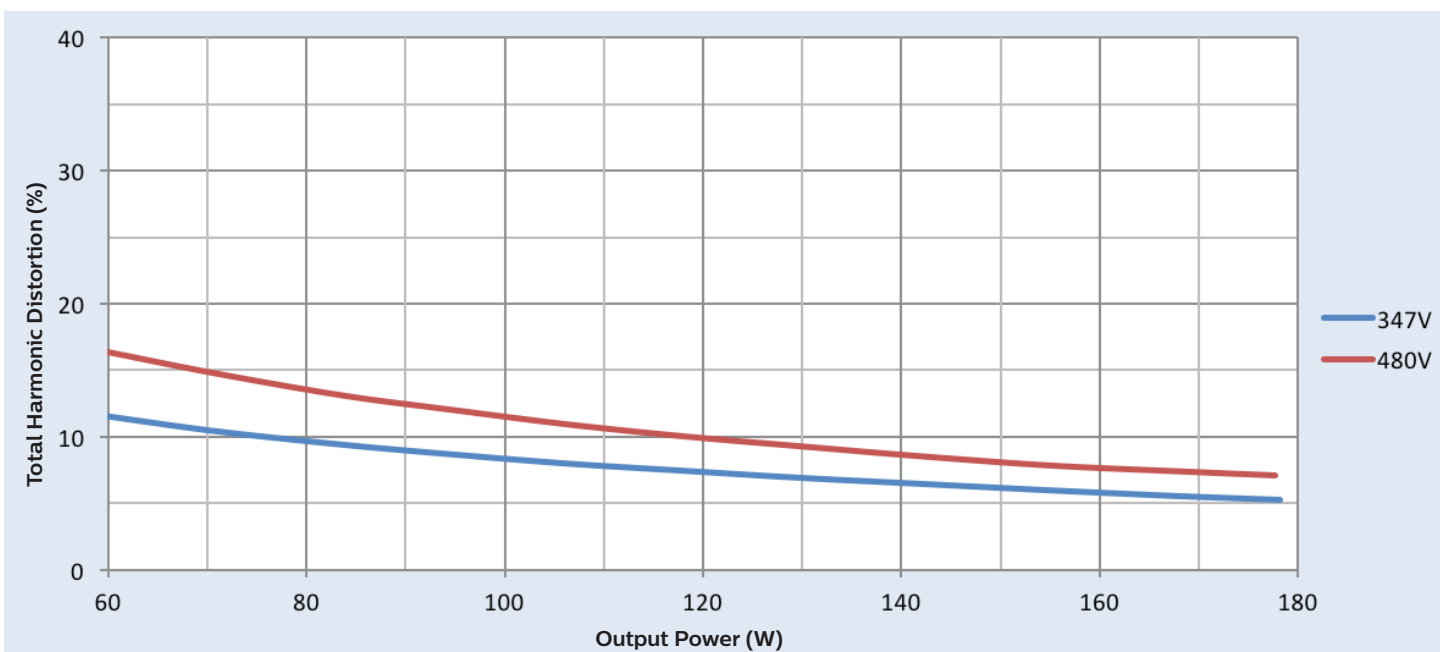
## Performance Characteristics

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## Power Factor Vs. Output Power



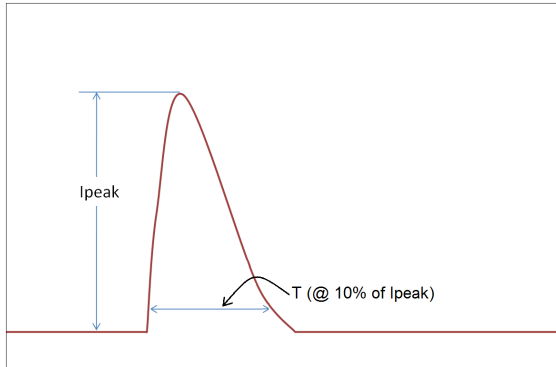
## Total Harmonic Distortion (THD) Vs. Output Power



# Xitanium XH180C125V200PSF1

180W 0.1-1.25A 0-10V Dimming with SimpleSet and Aux. Output

## Inrush Current Info



V <sub>in</sub>	I <sub>peak</sub>	T (@ 10% of I <sub>peak</sub> )
347 Vrms	58A	244μS
480 Vrms	75A	244μS

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	Aux. Output	Enclosure
Input	NA	2xU+1kV	2.5kV	2.5kV	2xU+1kV
Output	2xU+1kV	NA	2.5kV	2.5kV	2xU+1kV
0-10V	2.5kV	2.5kV	NA	NA	2.5kV
Aux. Output	2.5kV	2.5kV	NA	NA	2.5kV
Enclosure	2xU+1kV	2xU+1kV	2.5kV	2.5kV	NA

U =Max. working voltage (Working voltage ≥ Input voltage)

