

**PHILIPS  
ADVANCE**



**LED Driver**

**Xitanium**

190W 2.75A 0-10V Dimming  
with SimpleSet  
XI190C275V054BSG1



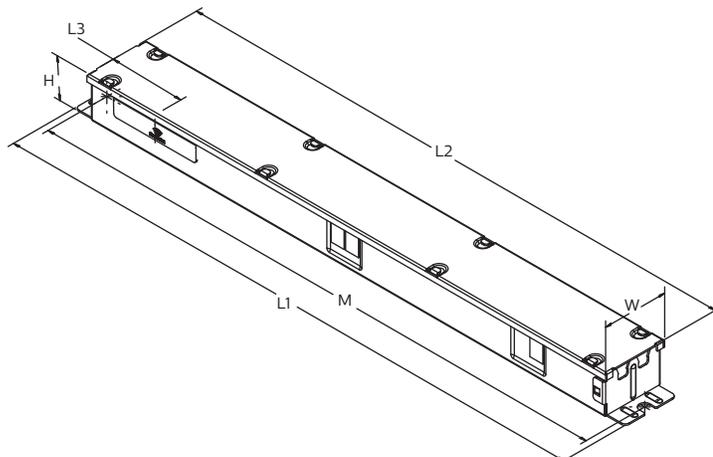
Philips Advance Xitanium LED drivers with SimpleSet technology are designed to give OEMs ultimate flexibility with one driver to serve a complete portfolio. The operating window optimizes coverage for Class 2 in terms of power, output voltage and current. With two independent channels this driver allows the user to get much more than 100W in a compact form factor, while still complying with Class 2 limits. High driver efficiency enables very high system efficacies.

**Specifications**

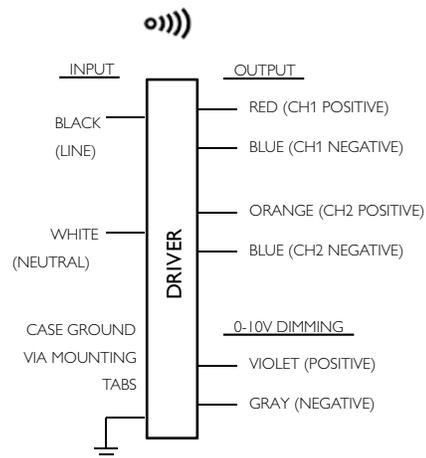
Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load and 75°C Case	Max Case Temp. (°C)	Input Current (A)	Max. Input Power (W)	THD @ Max Load (%)	Power Factor @ Max Load	Surge Protection (Combi-Wave, KV)	Envir. Protection Rating
120	95W per channel	27-54	0.1 - 2.75	88	Life - 85°C UL - 90°C	1.83	220	<10%	>0.95	6	UL damp & dry, Type HL
277				89		0.77					

**Enclosure**

	In. (mm)
Case Length (L2)	15.75 (400)
Case Width (W)	1.8 (45.6)
Case Height (H)	1.22 (31)
Mounting Length (M)	16.33 (414.8)
Overall Length (L1)	16.70 (424.2)
Center of SimpleSet Antenna (L3)	2.05 (52)



**Wiring Diagram**



Driver case must be grounded.

Dimming	Dimming Range (with specified dimmers)	Minimum Output Current (A)
0-10V Analog Class 1 and 2 Wiring	5% ~ 100%	0.035

# Xitanium 190W 2.75A 0-10V Dimming with SimpleSet

## Features

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

## Benefits

- Designed for Class 2 luminaires
- Fast and simple way of programming
- Perfect for wide range of lumen outputs 12,000 to 24,000 lumens with single driver
- Dual channel allows high power up to 190W with UL Class 2 outputs
- No external surge protection required to pass C82.77-5 CAT C low

## Application

- Linear high-bay fixtures

## Electrical Specifications

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

## Product Data

Order Information	
Full Product Code	XI190C275V054BSG1M (Mid-Pack, Qty/box: 6)
Line Frequency	50/60Hz
Min. Mains Voltage Operational	108 Vac
Max. Mains Voltage Operational	305 Vac
Output Information	
Maximum Open Circuit Voltage	< 60Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max Iout
Output Current Tolerance (in the performance window)	<5%
Protections	Short Circuit, Open Circuit Protection for LED + and LED – and Temperature Foldback
Features	
# Of Output Channels	2 Channels of 95W each
0-10V Dimming	150µA (±3%) source current from driver. See dim curve for detail.
AOC (Adjustable Output Current)	0.1A-2.75A via SimpleSet (Factory Default at 2.3A)
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)	90°C
Agency Approbations	UL8750, UL1310, UL Listed, CSA
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Audible Noise	<24dB Class A
Weight	0.991 Kg

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.

# Xitanium 190W 2.75A 0-10V Dimming with SimpleSet

## Electrical Specifications

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

## 0-10V Dimming Curve

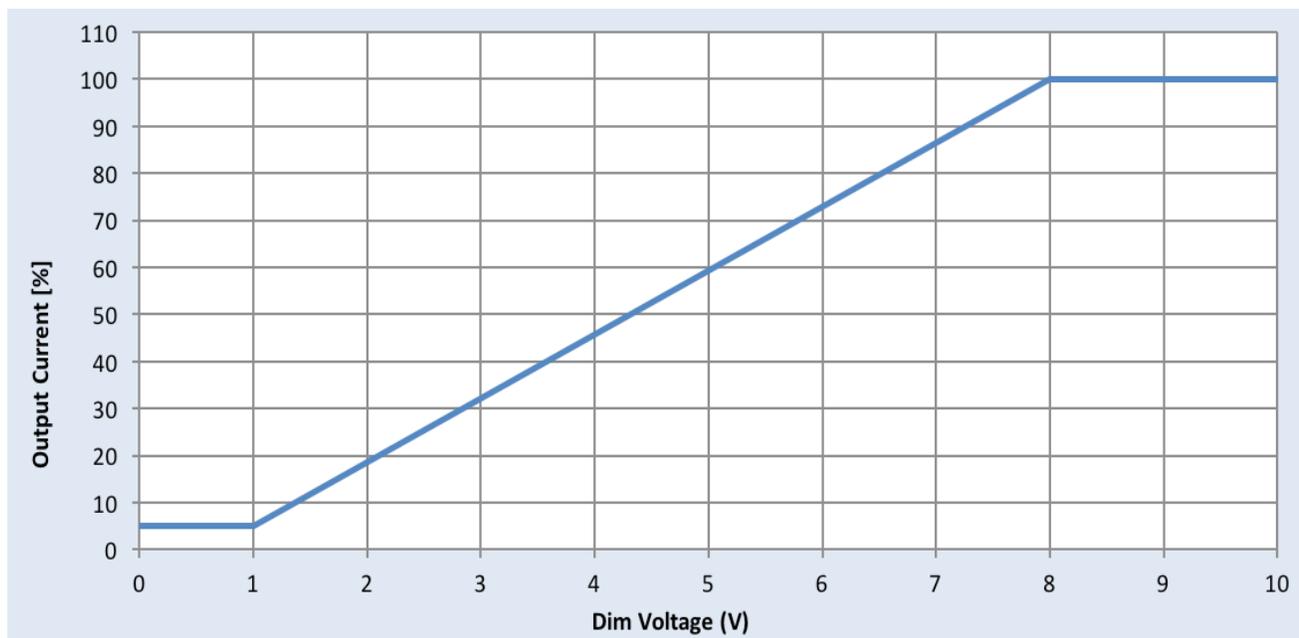
Dimming source current from the driver: 150µA (@ 0<Vdim<8V)

Minimum dim level: 5% of lout setting as default

Maximum output voltage on the dimming wires: 12V

## 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

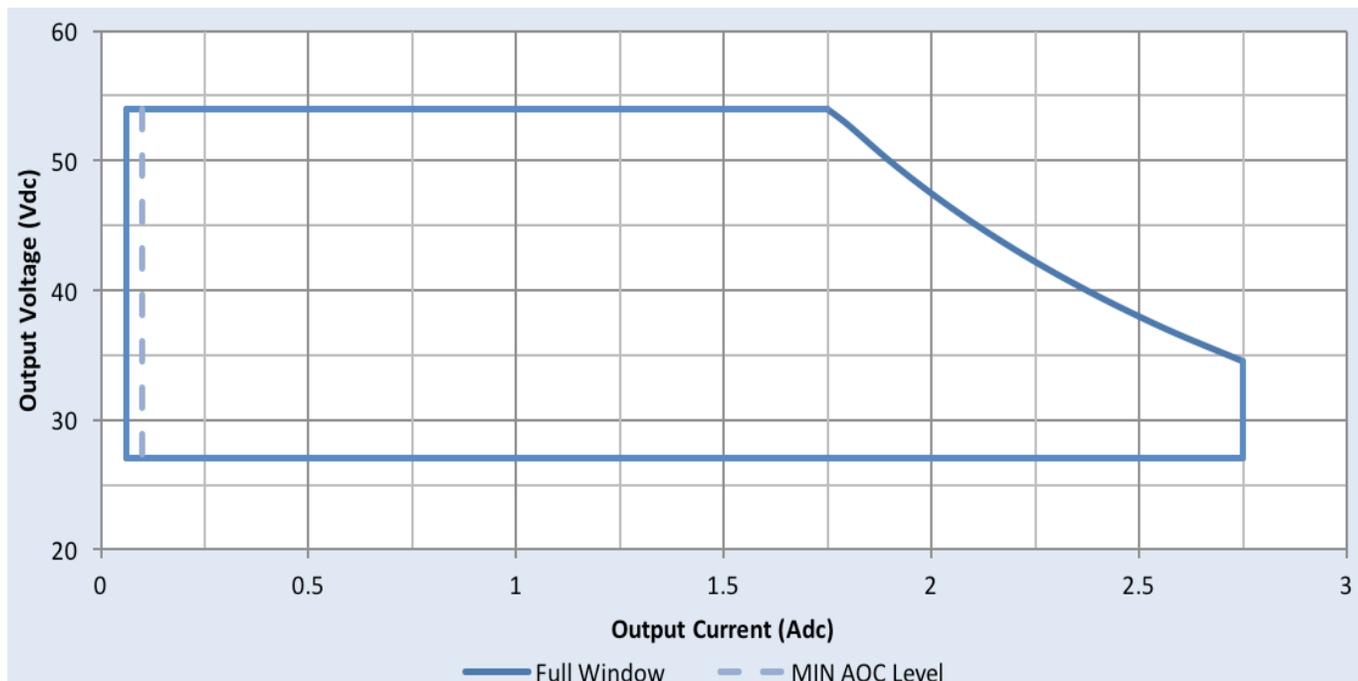


# Xitanium 190W 2.75A 0-10V Dimming with SimpleSet

## Electrical Specifications

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

## Driver Output Window



## Notes

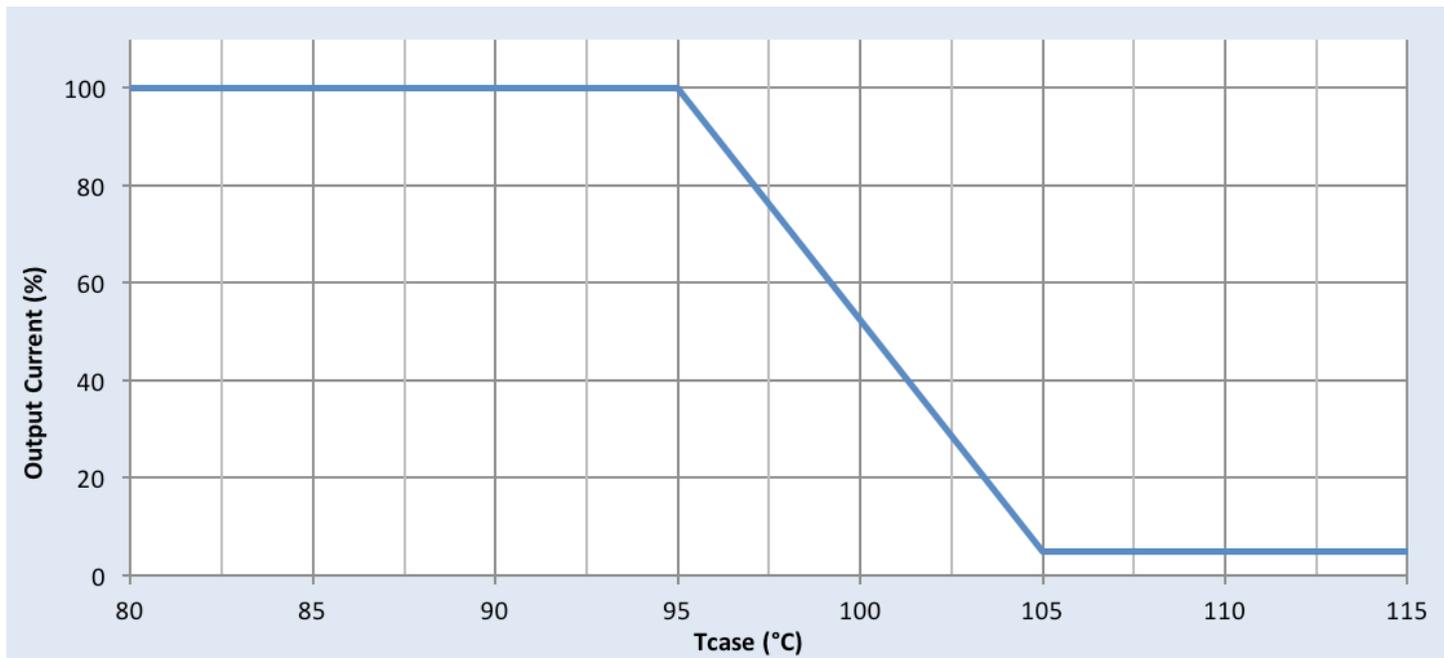
1. Factory default output current is 2.3A.
2. To get a 100% to 5% dimming range, the output current setting through AOC should be  $\geq 700\text{mA}$  (at 5% min dim).
3. Factory default minimum dimming level is 5%. This can be adjusted between 5% and 100% using Philips MultiOne.
4. See page 7 for Power Factor and Total Harmonic Distortion graphs.

# Xitanium 190W 2.75A 0-10V Dimming with SimpleSet

## Electrical Specifications

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

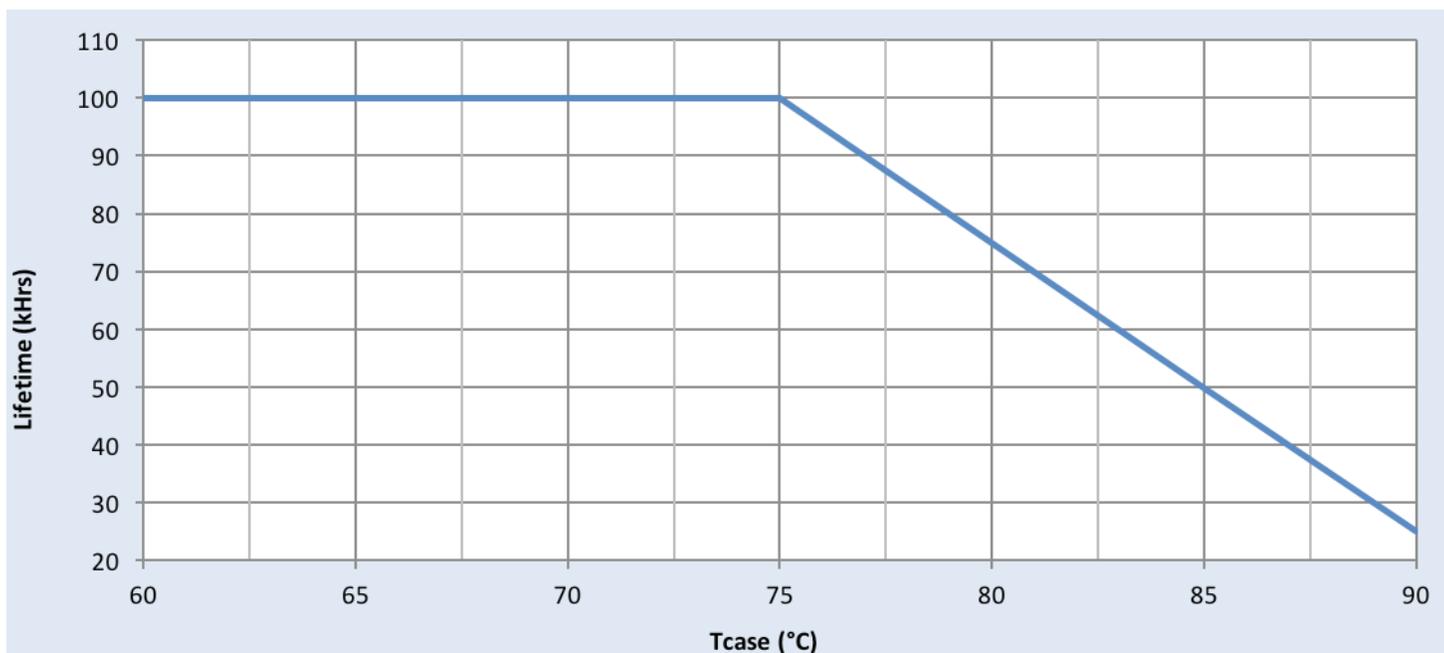
### Output Current Vs. Driver Case Temperature



### Note

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

### Driver Lifetime Vs. Driver Case Temperature

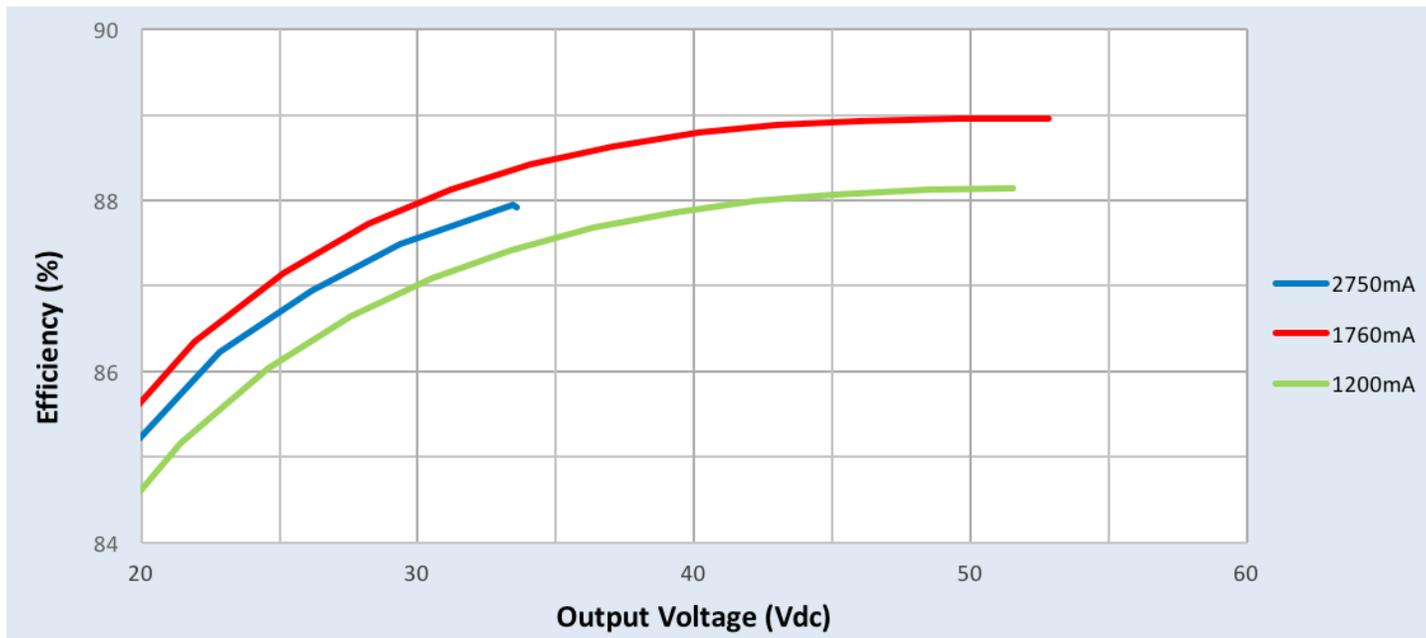


# Xitanium 190W 2.75A 0-10V Dimming with SimpleSet

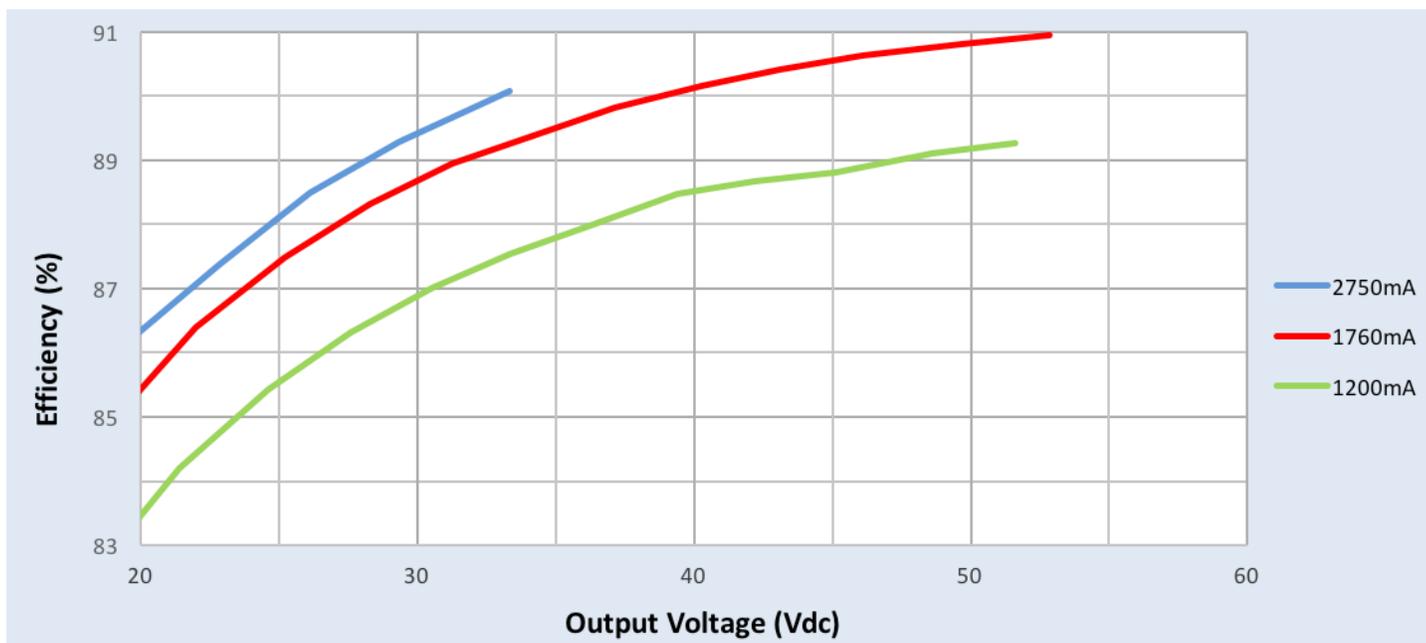
## Performance Characteristics

Based on measurements on a typical sample at 75°C case. The accuracy of the measurements is within the tolerance of the measurement instruments.

### Efficiency Vs. Output Voltage at 120Vac



### Efficiency Vs. Output Voltage at 277Vac

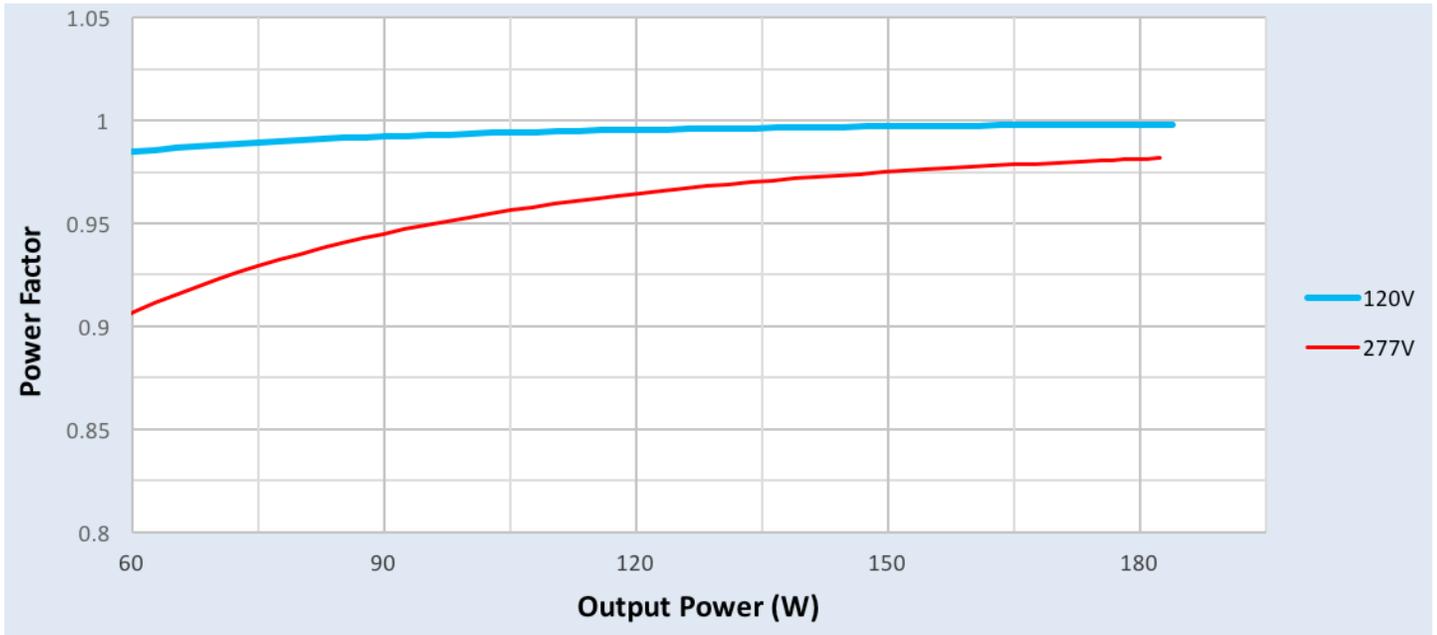


# Xitanium 190W 2.75A 0-10V Dimming with SimpleSet

## 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.

### Power Factor Vs. Total Output Power\*



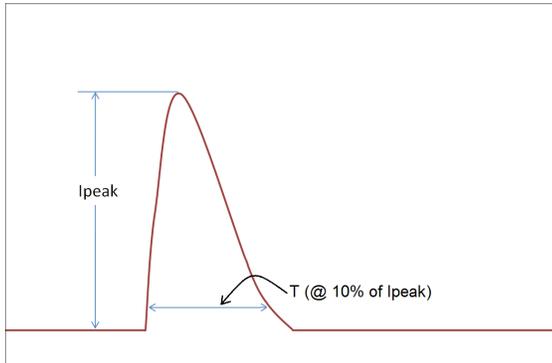
### Total Harmonic Distortion (THD) Vs. Total Output Power\*



\* Power Factor and Total Harmonic Distortion graphs are shown for combined output power of both channels.

# Xitanium 190W 2.75A 0-10V Dimming with SimpleSet

## Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
120 Vrms	51A	360μS
277 Vrms	119.2A	353μS

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

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