ADVANCE
by signify

LED Driver

Xitanium

XH180C090V285BSF1

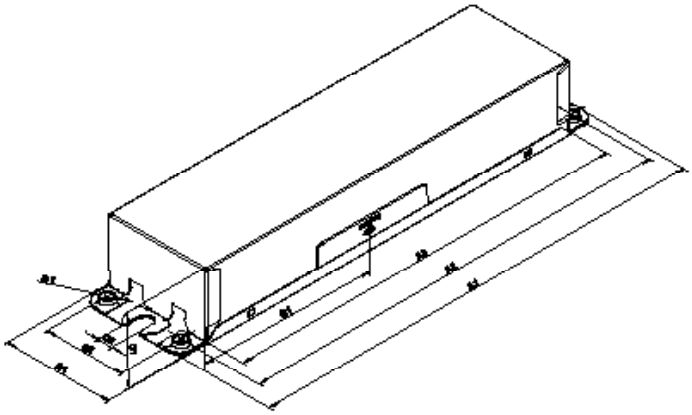
Advance Xitanium outdoor LED drivers with SimpleSet technology are designed to give OEMs ultimate flexibility. With wide operating windows and simple programming, the drivers make it easy for luminaire manufacturers to design luminaires of different sizes and lumen levels for outdoor applications.

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	Dimming	Dimming Range (with specified dimmers)	Min. Output Current (A)	Driver Type
347	180	100-285	0.1 - 0.9	92.4	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%	0.05	Constant Current
480				93		0.40									

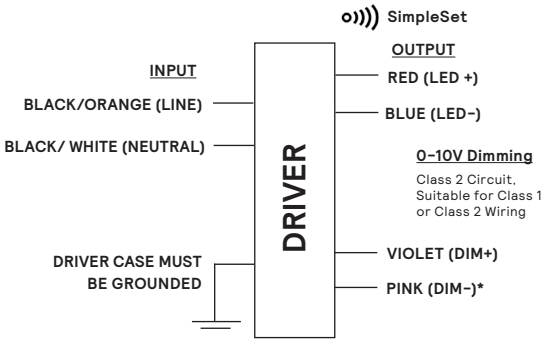
Enclosure

	In. (mm)	Tolerance (mm)
Overall Length (A1)	9.47 (240.5)	± 0.5
Mounting Length (A2)	8.91 (226.2)	± 0.5
Case Length (A3)	8.31 (211)	± 0.5
Case Width (B1)	2.31 (58.6)	± 0.5
Mounting Width (B2)	1.69 (42.9)	± 0.5
Case Height (C1)	1.48 (37.6)	± 1.0
Mounting Hole Diameter (D1)	0.23 (5.9)	± 0.5
Mounting Hole Diameter (D2)	0.31 (7.9)	± 0.5
Center of SimpleSet Antenna (G1)	3.77 (95.8)	± 3.0



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)
Pink (Negative, 0-10V)	270 (± 30)



*DIM- will change from GREY to PINK from 2021 onwards.

Warning

- Install in accordance with national and local electrical codes.
- The field-wiring leads or push-in terminals shall be enclosed.

RoHS COMPLIANT c UL us LISTED NOM

Xitanium XH180C090V285BSF1

180W 0.1–0.9A 0–10V Dimming with SimpleSet

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
- High-bay

Electrical Specifications

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

Product Data

Order Information	
Full Product Code	XH180C090V285BSF1M (Mid-Pack, 10pcs/Box), 12NC: 929000753613
Line Frequency	50/60Hz
Min. Mains Voltage Operational	312 Vac
Max. Mains Voltage Operational	528 Vac
Output Information	
Maximum Open Circuit Voltage	360Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max Iout
Output Current Tolerance (at maximum output current)	<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-0.9A via SimpleSet (Factory Default at 0.7A)
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	UL 8750, UL Listed, NOM, cUL, Class P (UL, cUL)
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Audible Noise	<24dB Class A
Weight	2.1 Lbs / 0.95 kgs

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.

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)

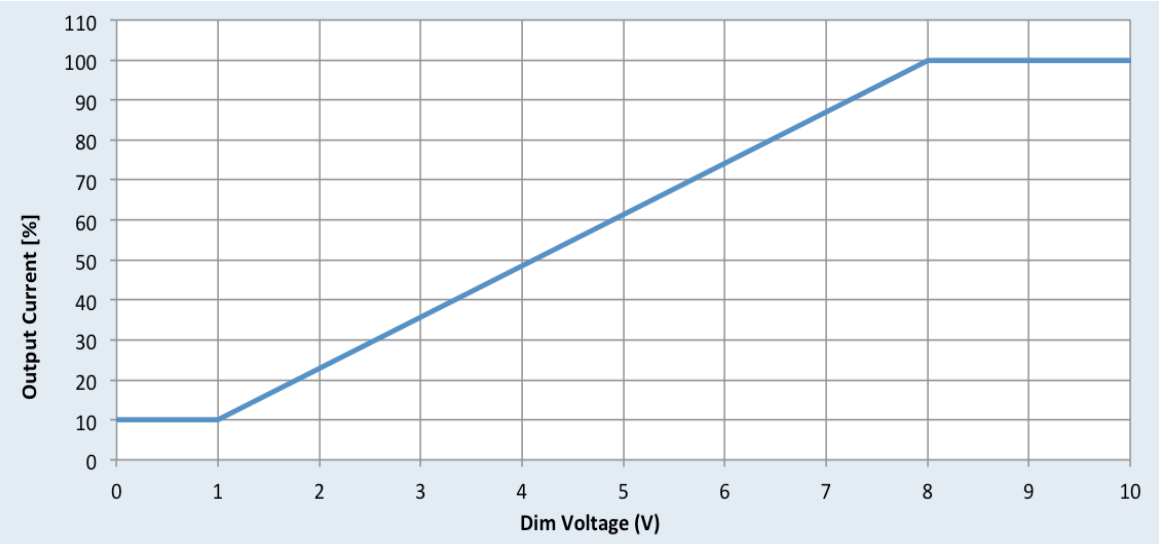
Minimum dim level: Factory default 10% of Iout setting as default

Maximum output voltage on the dimming wires: 12V

Leakage current of dimming leads: 0.010mA, recommended max number of control circuits in parallel refer to Design-in Guide

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
Advance	Sunrise – SR1200ZTUNV



Electrical Specifications

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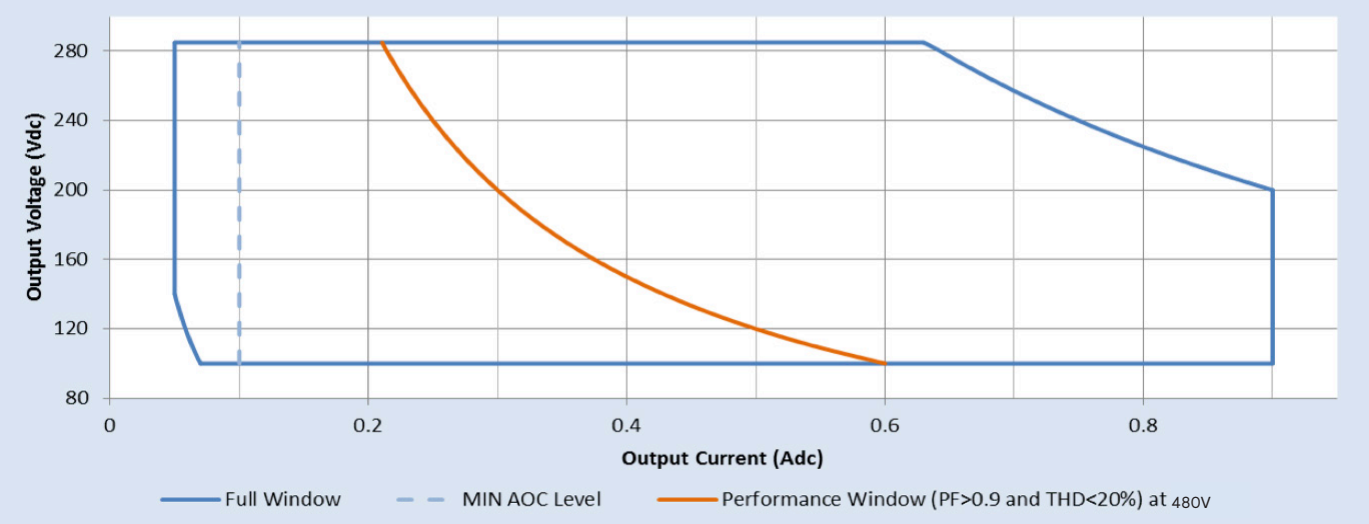
Driver Output Window



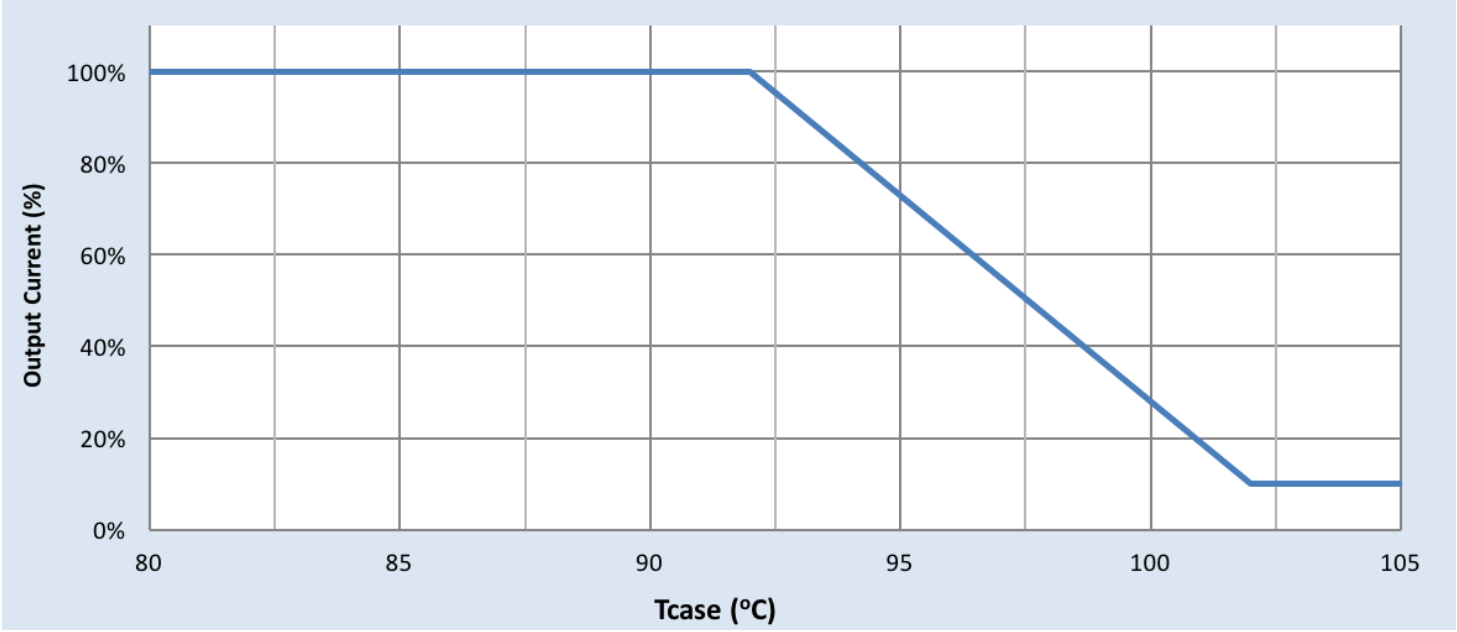
Notes

1. Factory default output current is 0.7A.
2. To get a 100% to 10% dimming range, the output current setting through AOC should be ≥ 500mA.
3. Factory default minimum dimming level is 10%. This can be adjusted between 10% and 100% using Advance MultiOne.

Electrical Specifications

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

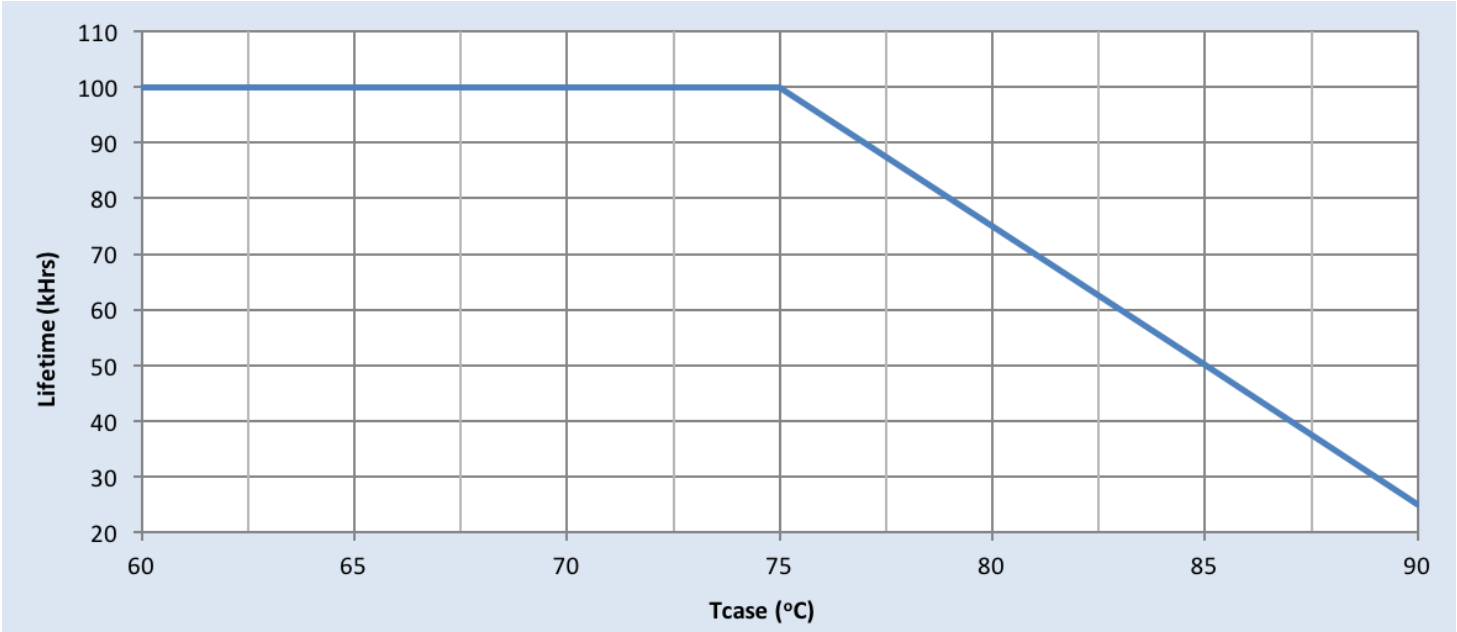
Output Current Vs. Driver Case Temperature



Note

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

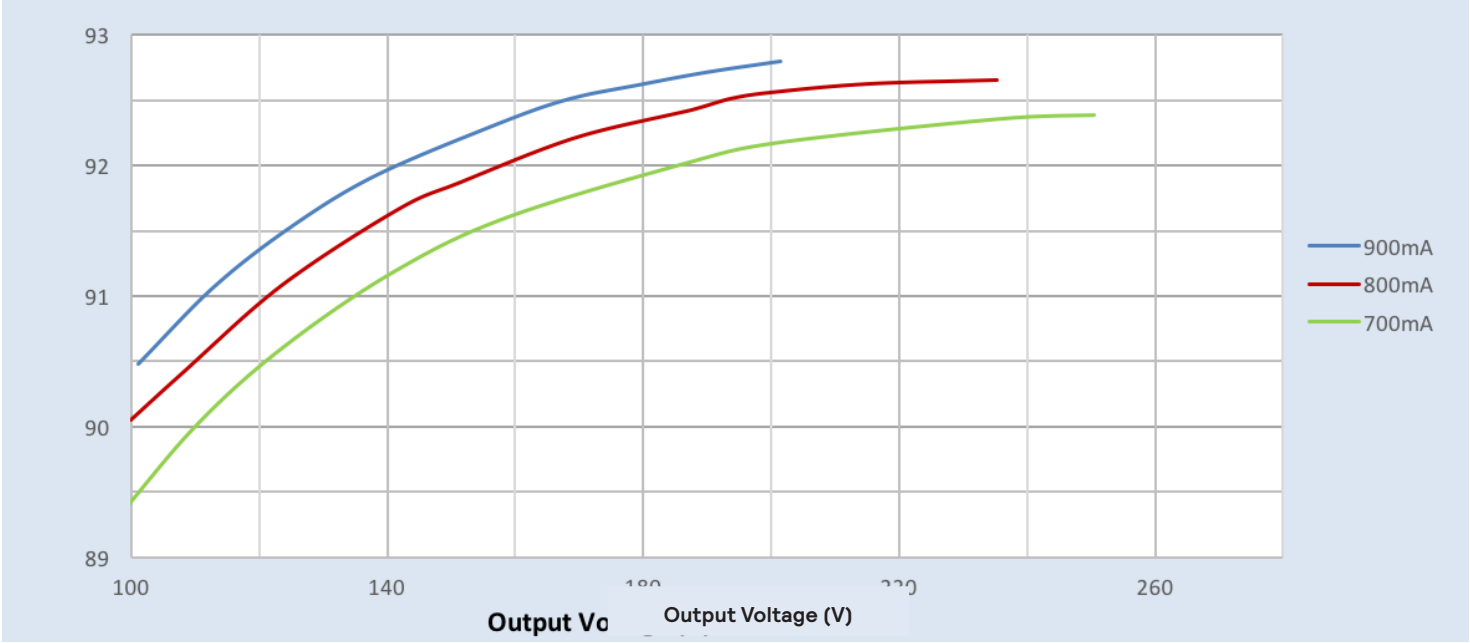
Driver Lifetime Vs. Driver Case Temperature



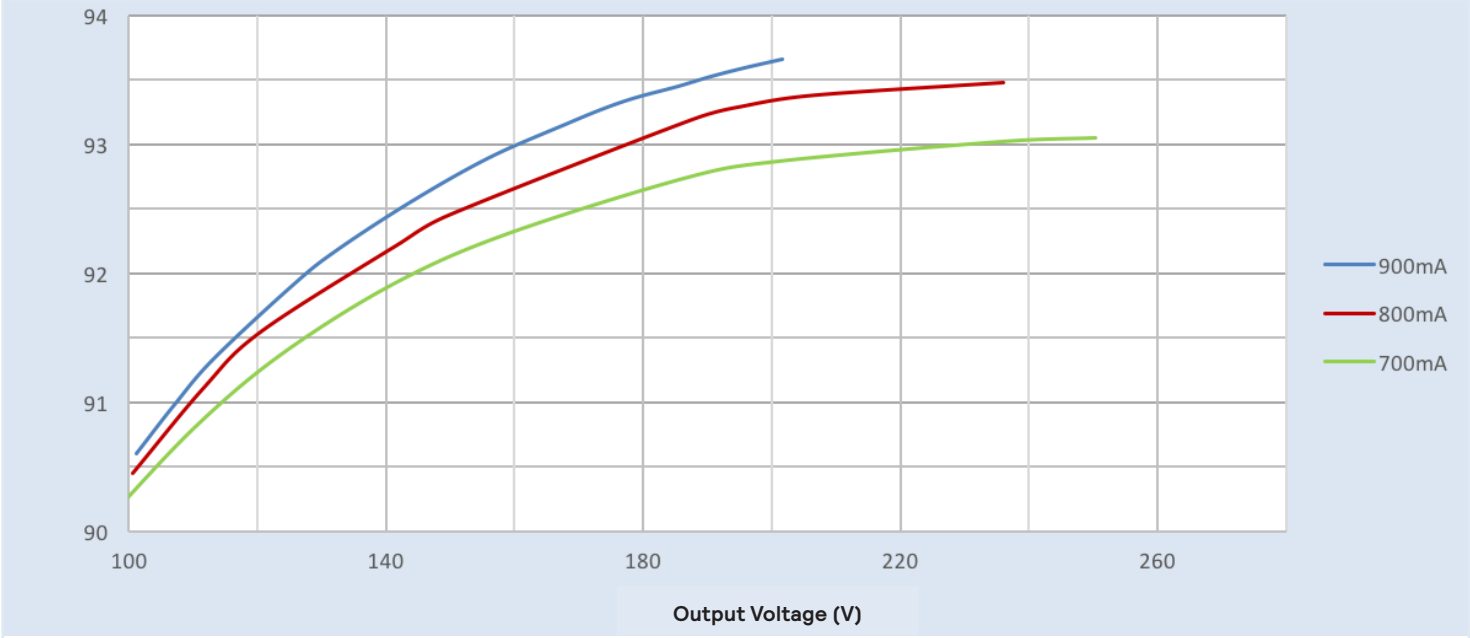
Performance Characteristics

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 347Vac



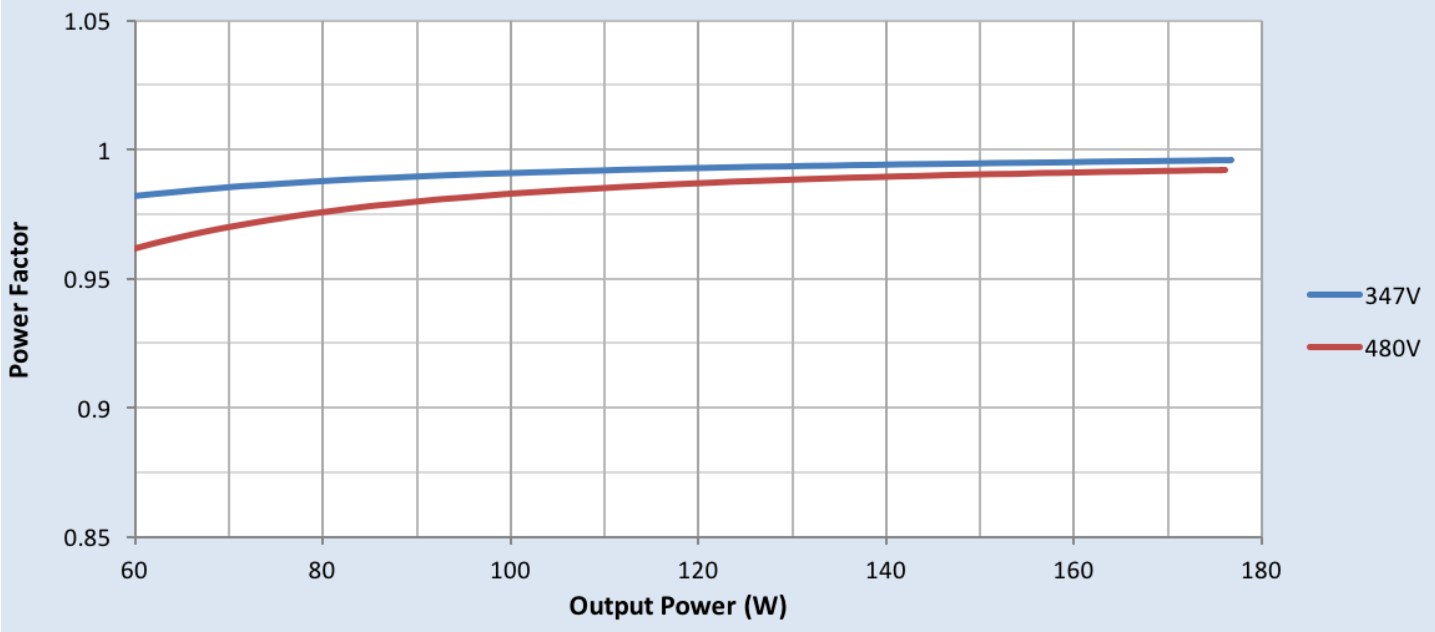
Efficiency Vs. Output Voltage at 480Vac



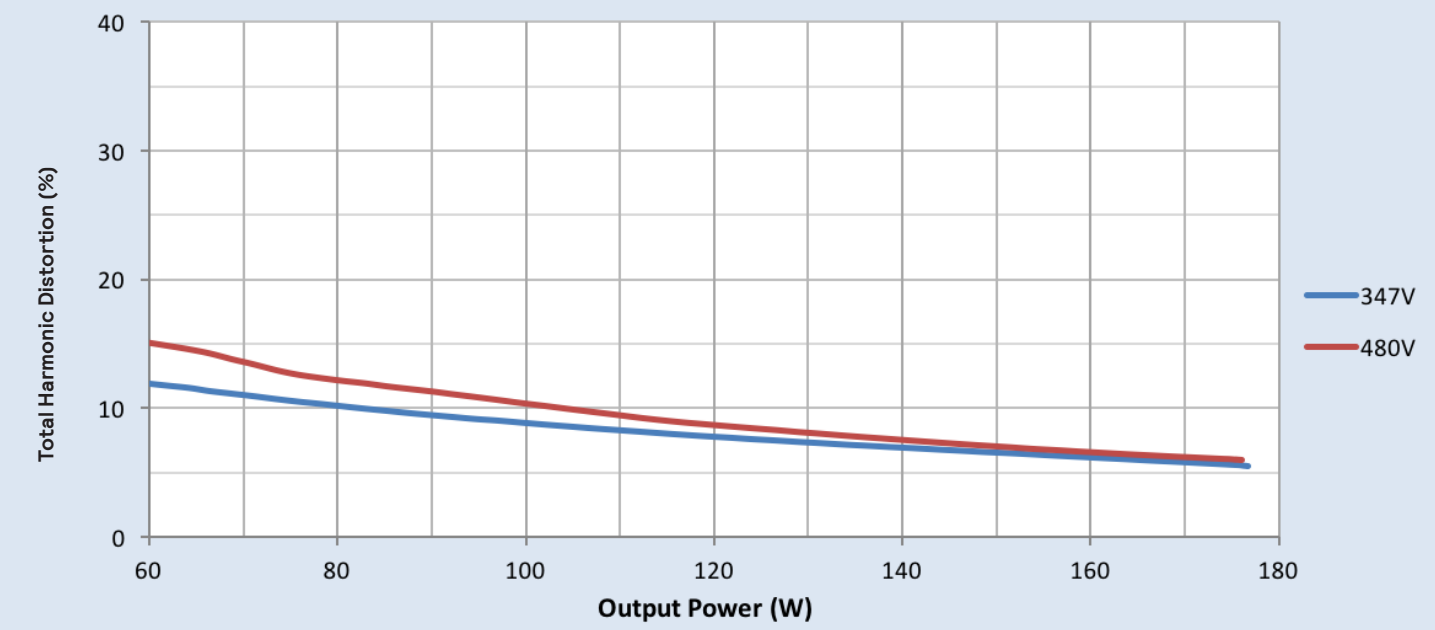
Performance Characteristics

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. Output Power



Total Harmonic Distortion (THD) Vs. Output Power



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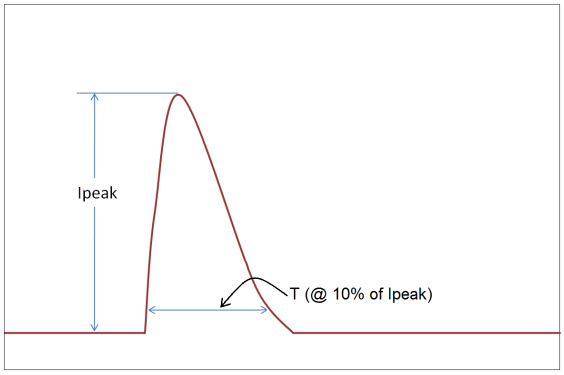
180W 0.1–0.9A 0–10V Dimming with SimpleSet

Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
347 Vrms	59.3A	177µS
480 Vrms	77.6A	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	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	2xU+1kV

U = Max input voltage

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