ADVANCE
by signify

LED Driver

Xitanium

XH180C090V285BSF2

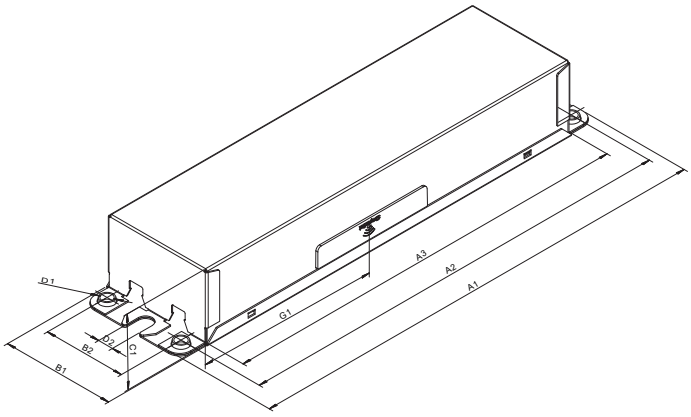
Long-lasting and low maintenance, LED-based light sources are an excellent solution for all lighting applications. For optimal performance, these solutions require reliable drivers matching the long lifetime of the LEDs. **The Advance Xitanium LED outdoor driver portfolio** offers a range of products specially designed to operate LED solutions in outdoor applications. These drivers are designed for hard-wired integration into outdoor luminaires for the most rugged applications. They operate to specification under wide temperature and electrical ranges to ensure reliability.

Specifications

Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency @ Max Load and 70°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. Protect. 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	0.55	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		0.4									

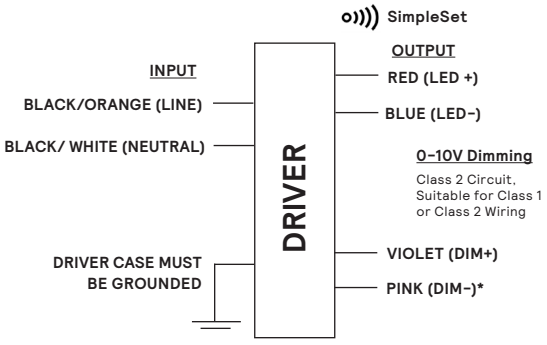
Enclosure

	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 XH180C090V285BSF2

180W 0.1–0.9A 0–10V Dimming

Features

- 50,000+ hour lifetime[1]
- Excellent thermal performance
- 0–10V Dimming suitable for UL Class 1 and Class 2 wiring

Benefits

- Enables long life luminaire designs
- Allows luminaire designs for a wide range of ambient environments

Application

- Area
- Roadway
- Parking garages
- Floodlights

Electrical Specifications

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

Product Data

Order Information	
Full Product Code	XH180C090V285BSF2M (Mid-Pack, 10pcs/Box), 12NC: 929001783013
Line Frequency	50/60Hz
Min. Mains Voltage Operational	312 Vac
Max. Mains Voltage Operational	528 Vac
Output Information	
Maximum Open Circuit Voltage	390Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max Iout (Low frequency ripple (≤120Hz) content <5%)
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)
Environment & Approbation	
Operating Ambient Temp. Range	-40°C to +55°C
Max Case Temperature (Tcase)	85°C for Life and 90°C for UL Safety
Agency Approbations	UL 8750, 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.

Xitanium XH180C090V285BSF2

180W 0.1–0.9A 0–10V Dimming

Electrical Specifications

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0–10V Dimming Curve

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

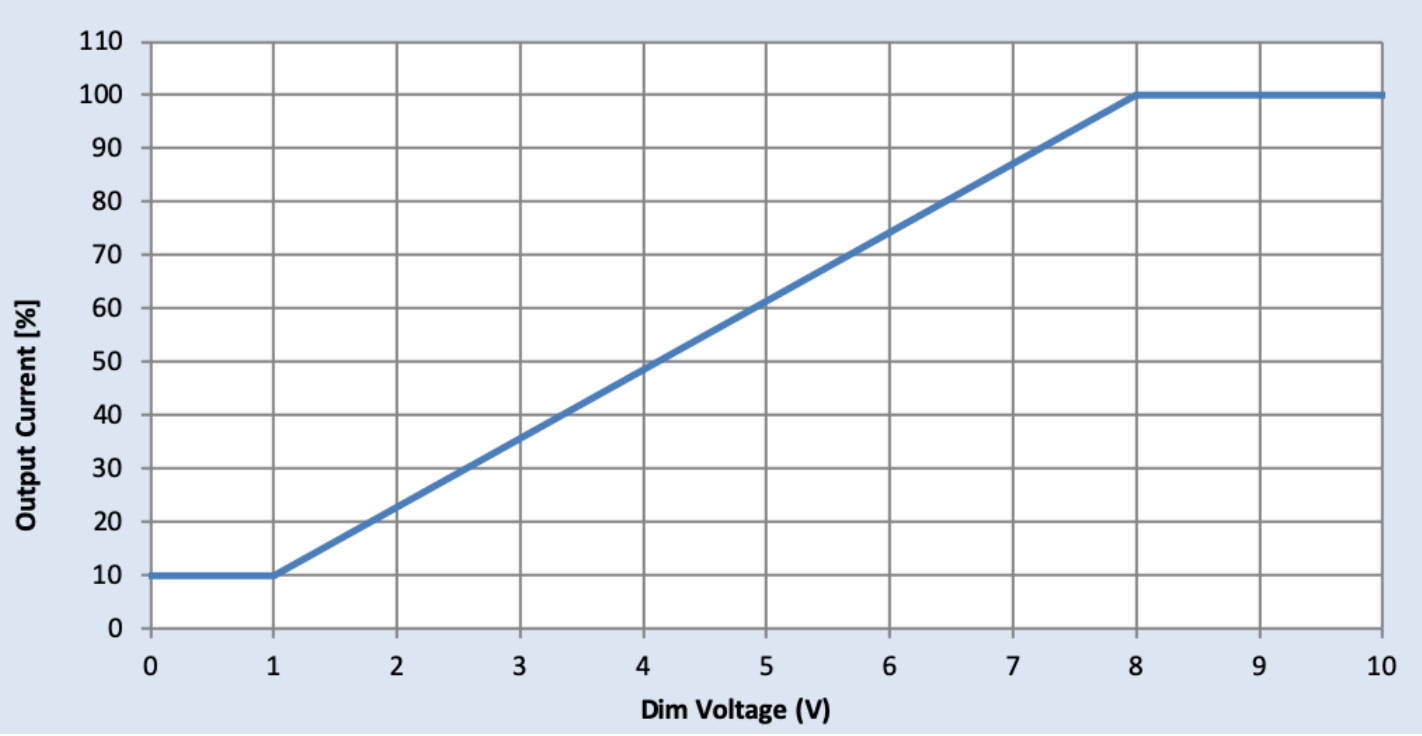
Minimum dim level: 10% of Iout setting as default

Maximum output voltage on the dimming wires: 12V

Leakage current of dimming leads: 0.042mA, 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



Xitanium XH180C090V285BSF2

180W 0.1–0.9A 0–10V Dimming

Electrical Specifications

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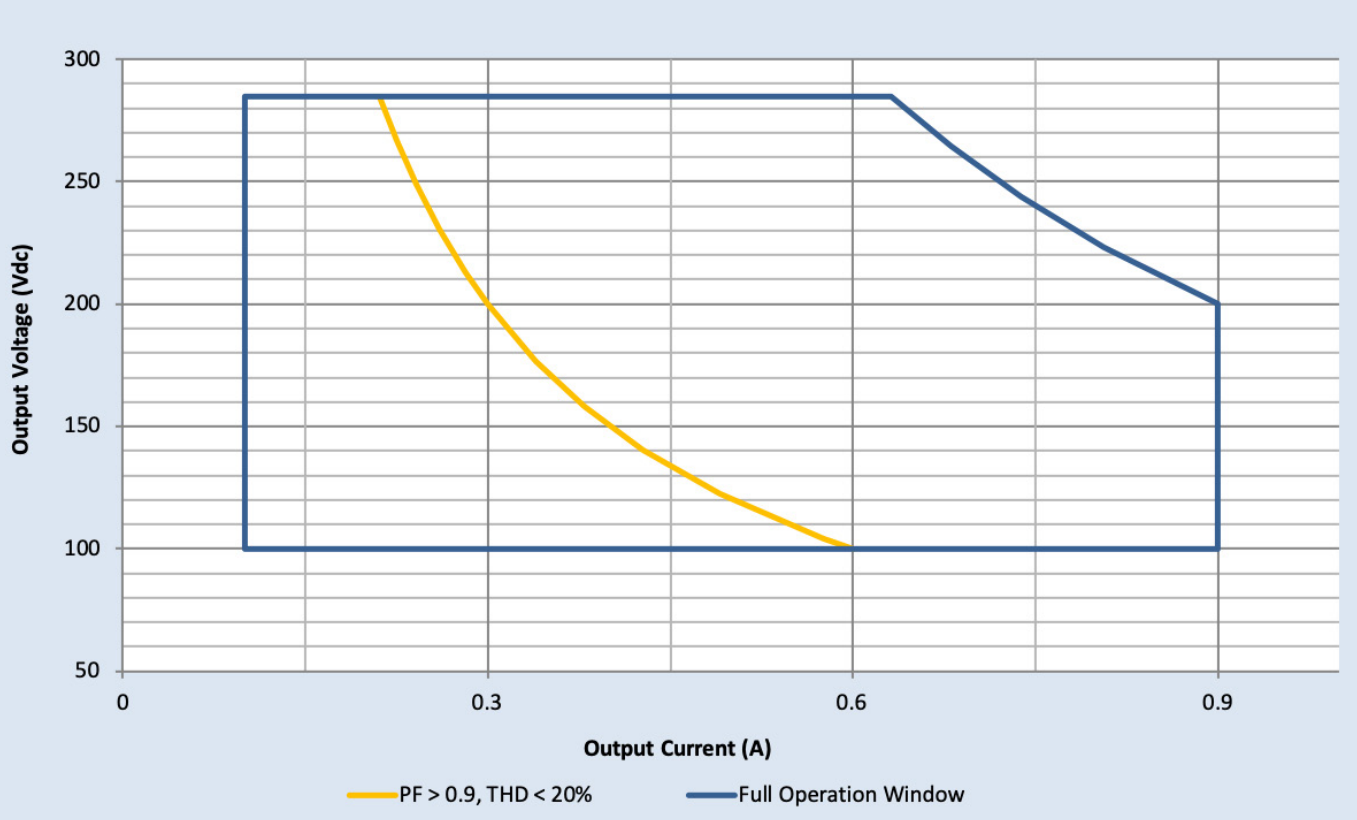
Driver Output Window



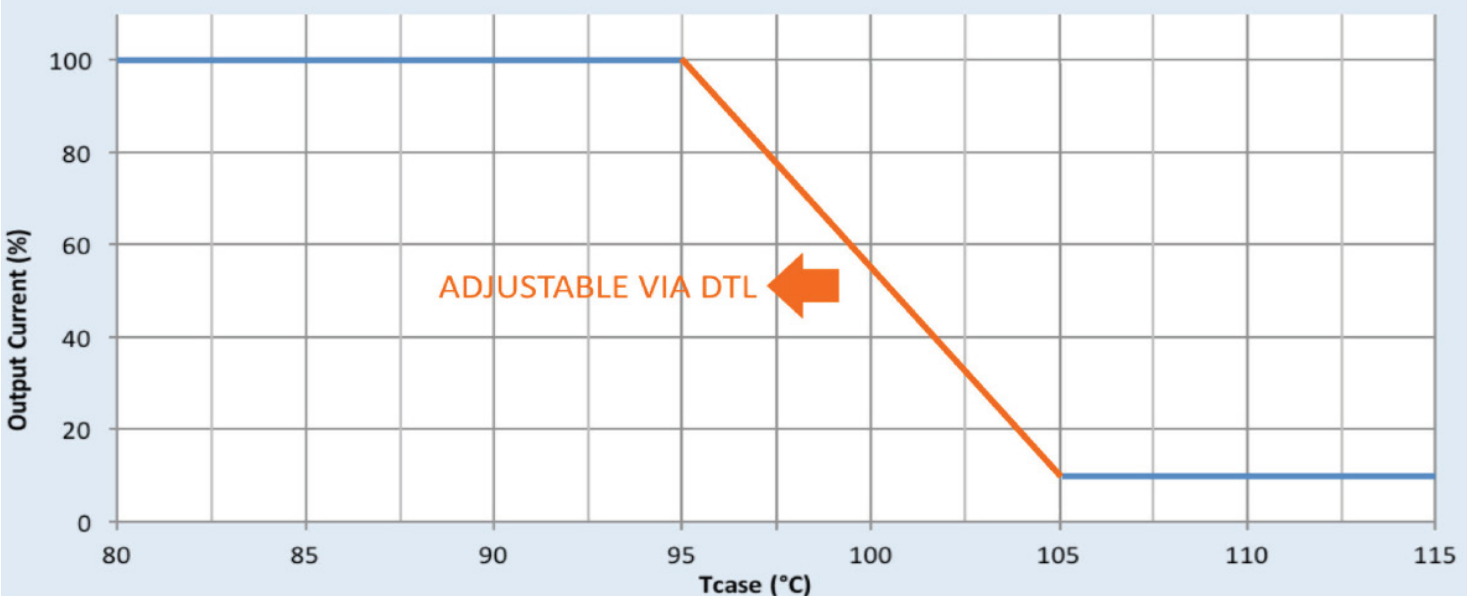
Notes

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 ≥ 0.5A.
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 Ta unless specified otherwise.

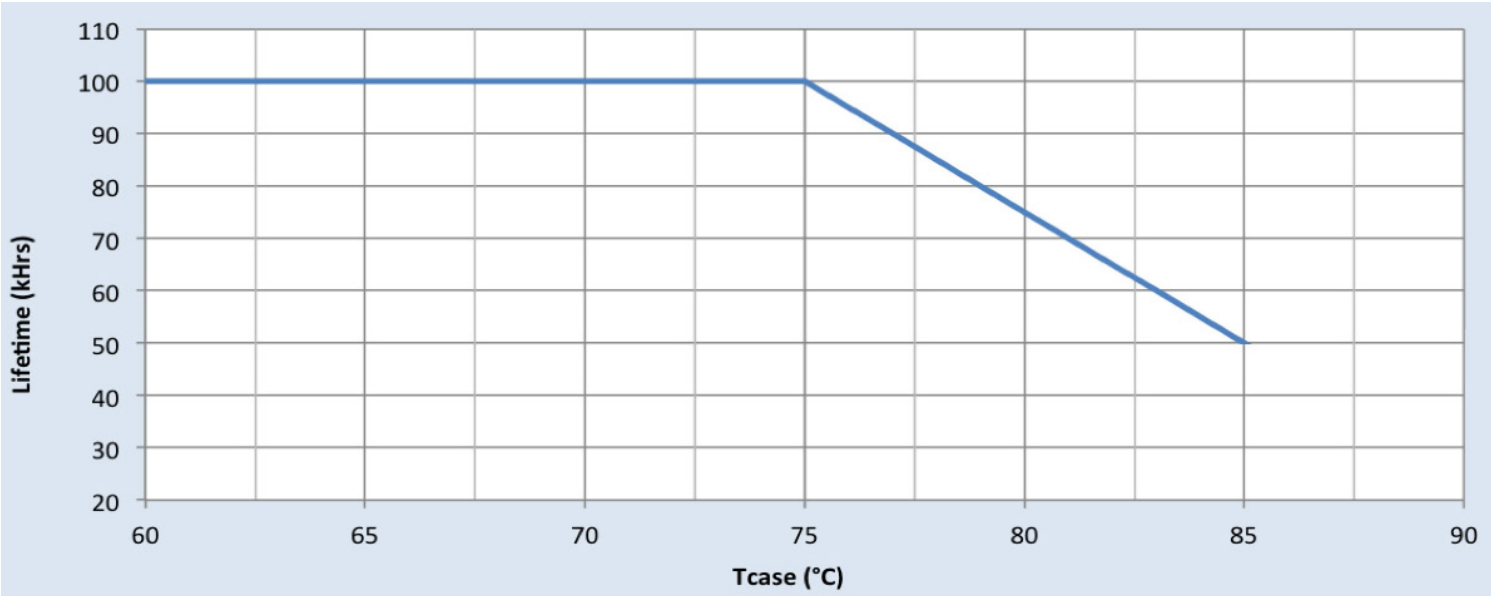
Output Current Vs. Driver Case Temperature



Note

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

Driver Lifetime Vs. Driver Case Temperature



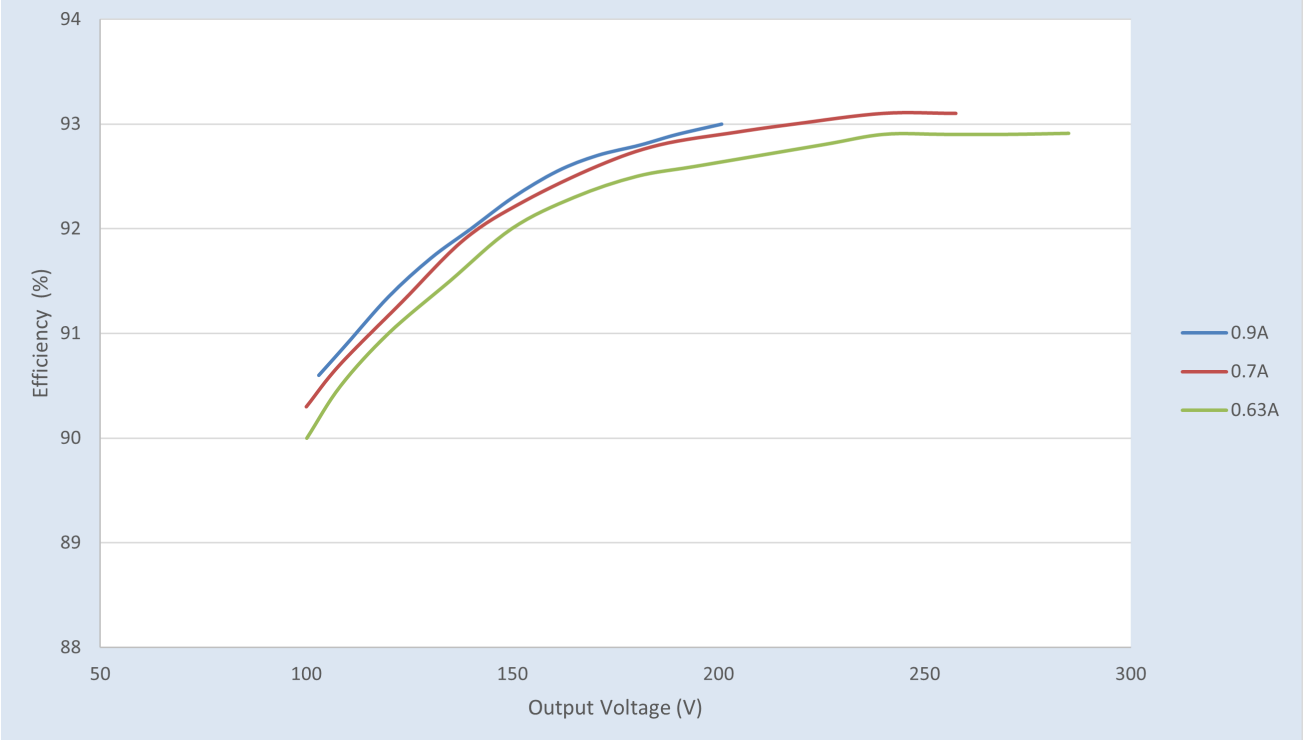
Xitanium XH180C090V285BSF2

180W 0.1–0.9A 0–10V Dimming

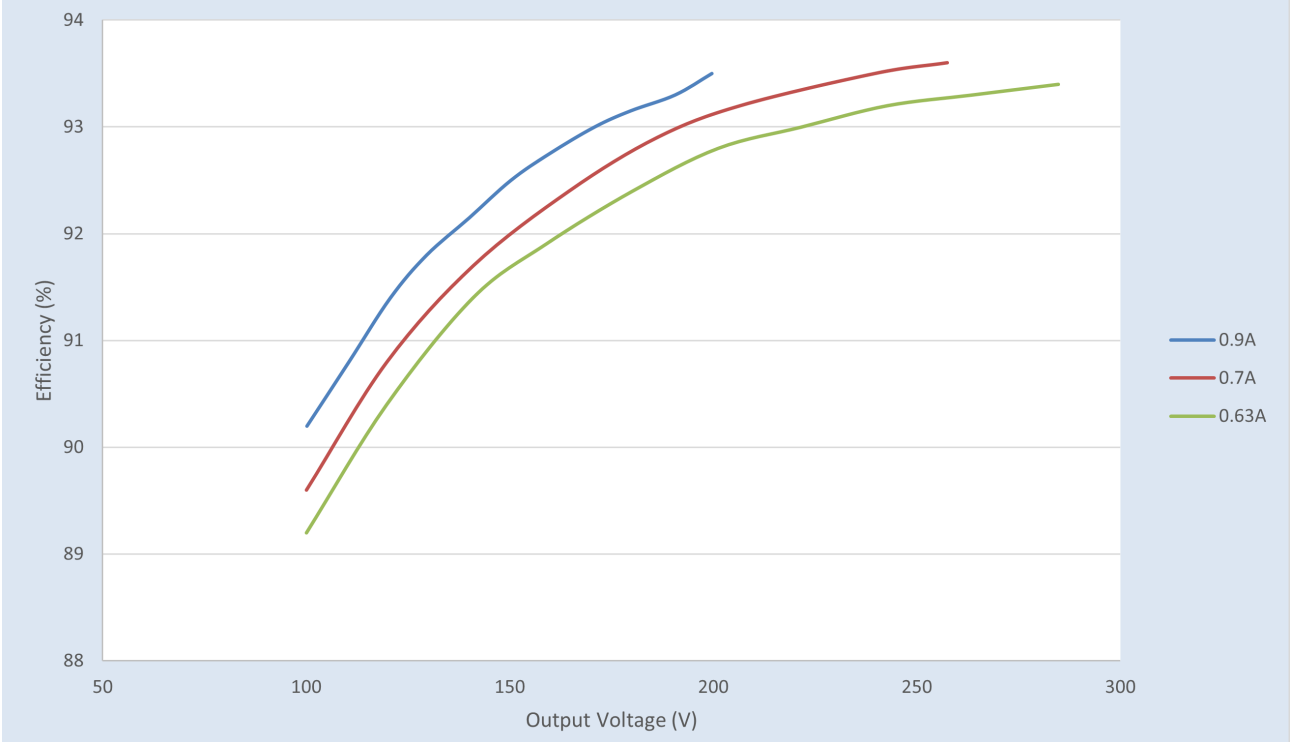
Performance Characteristics

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 347Vac



Efficiency Vs. Output Voltage at 480Vac



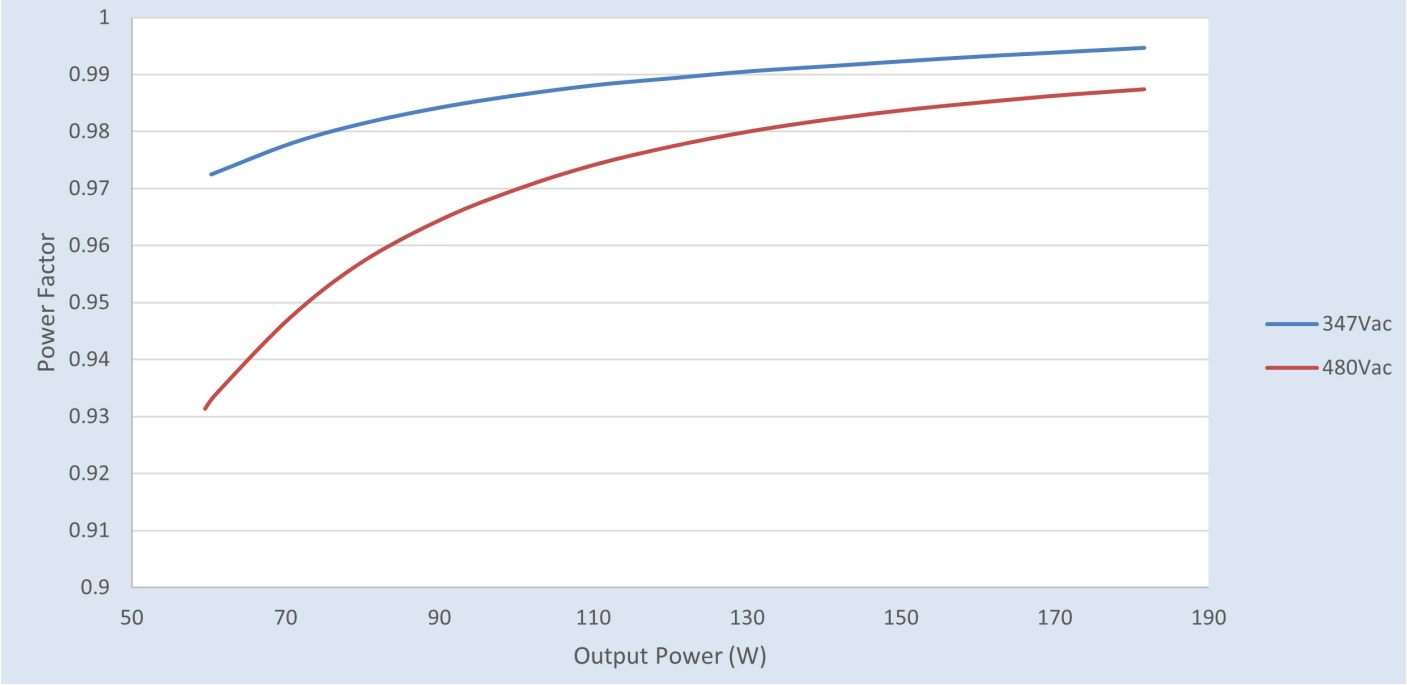
Xitanium XH180C090V285BSF2

180W 0.1–0.9A 0–10V Dimming

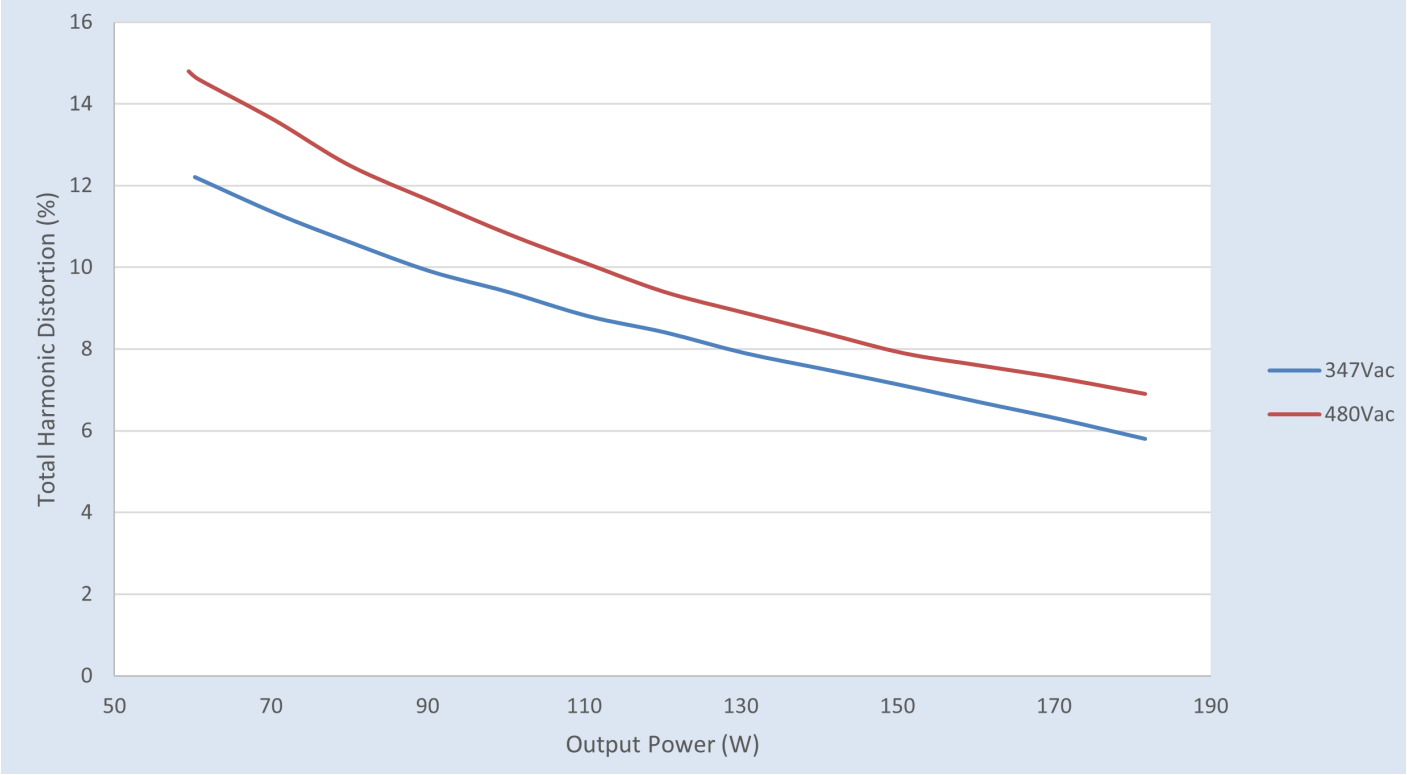
Performance Characteristics

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

Power Factor Vs. Output Power



Total Harmonic Distortion (THD) Vs. Output Power



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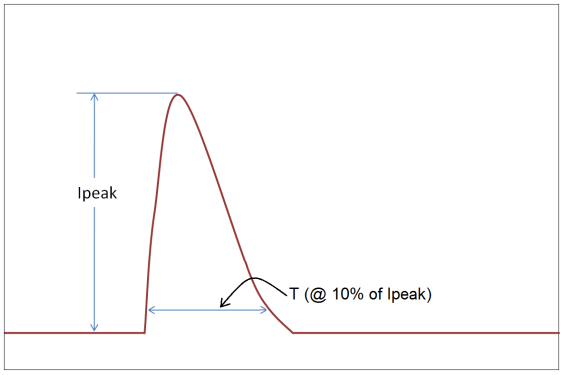
180W 0.1–0.9A 0–10V Dimming

Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
347 Vrms	59.6A	231µS
480 Vrms	82A	229µS

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)
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
Enclosure	2xU+1kV	2xU+1kV	2xU+1kV	NA

U = Max input voltage

Signify North America Corporation
400 Crossing Blvd, Suite 600
Bridgewater, NJ 08807
Telephone: 855-486-2216

Signify Canada Ltd.
281 Hillmount Road,
Markham, ON, Canada L6C 2S3
Telephone: 800-668-9008