

# ADVANCE

by @signify

## LED Driver

Xitanium

XH055C180V054BSY1



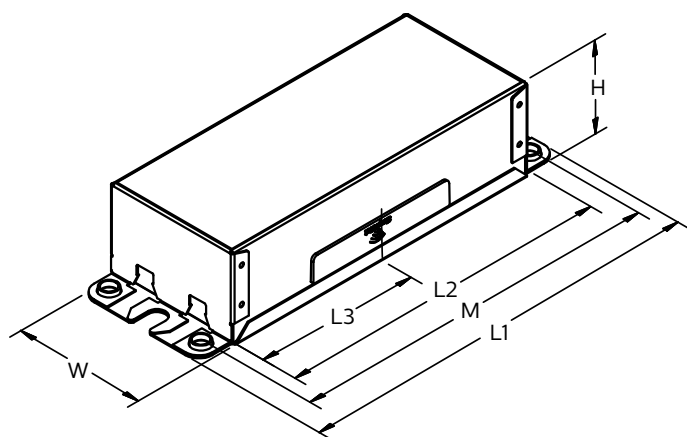
Advance Xitanium outdoor LED drivers with SimpleSet technology are designed to give OEMs ultimate flexibility. With the drivers' wide operating windows and simple programming, luminaire manufacturers can design luminaires of different sizes and lumen levels for outdoor applications.

### Specifications

Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max. Load and 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. Protection Rating	Dimming	Dimming Range (with specified dimmers)	Minimum Output Current (A)
347	55	18 - 54	0.1 - 1.8	88	90°C	0.18	64	<10%	>0.95	6	UL damp & dry and Type HL	0-10V Analog Class 1 and 2 Wiring	10% ~ 100%	0.07
480				88.5		0.13								

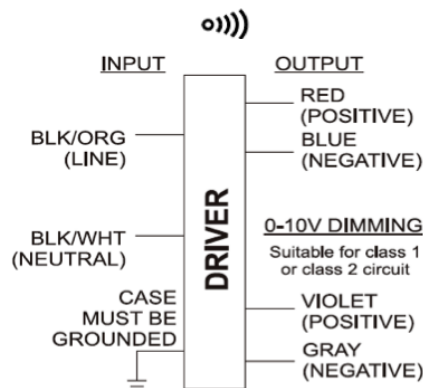
### Enclosure

	In. (mm)
Case Length (L2)	5.43 (138.0)
Case Width (W)	2.32 (58.8)
Case Height (H)	1.48 (37.6)
Mounting Length (M)	6.03 (153.2)
Overall Length (L1)	6.59 (167.5)
Center of SimpleSet Antenna (L3)	2.71 (68.9)



### 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)



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

# Xitanium XH055C180V054BSY1

55W 347-480V 0.1-1.8A 0-10V 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

- Enables long life luminaire designs
- Fast and simple way of programming
- Enables fixture designs with a 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
- Mid-bay and low-bay fixtures

## Electrical Specifications

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

## Product Data

Order Information	
Full Product Code	XH055C180V054BSY1M (Mid-Pack, 12pcs/Box), 12NC: 929001711113
Line Frequency	50/60Hz
Min. Mains Voltage Operational	312 Vac
Max. Mains Voltage Operational	528 Vac
Output Information	
Maximum Open Circuit Voltage	< 60V
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	
0-10V Dimming	150µA (±3%) source current from driver. See dim curve for detail
AOC (Adjustable Output Current)	0.1A-1.8A 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
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	1.44 Lbs / 0.65 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.

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## Electrical Specifications

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## 0-10V Dimming Curve

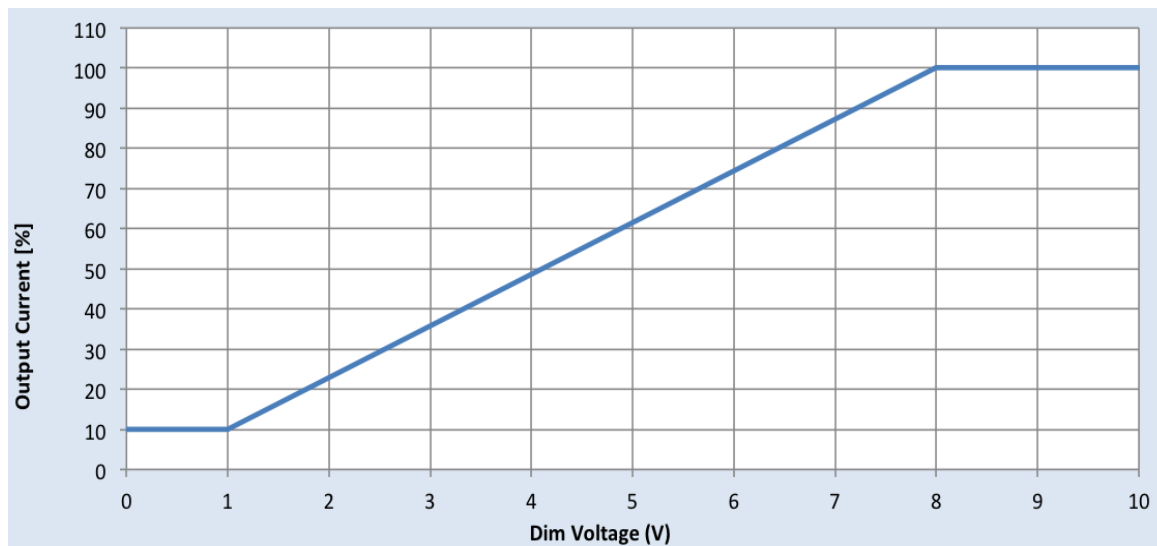
Dimming source current from the driver: 150µA (@ 0<Vdim<8V)

Minimum dim level: Factory default 10% of Iout (minimum 100mA), can be programmed to a higher level via SimpleSet

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
Advance	Sunrise - SR1200ZTUNV



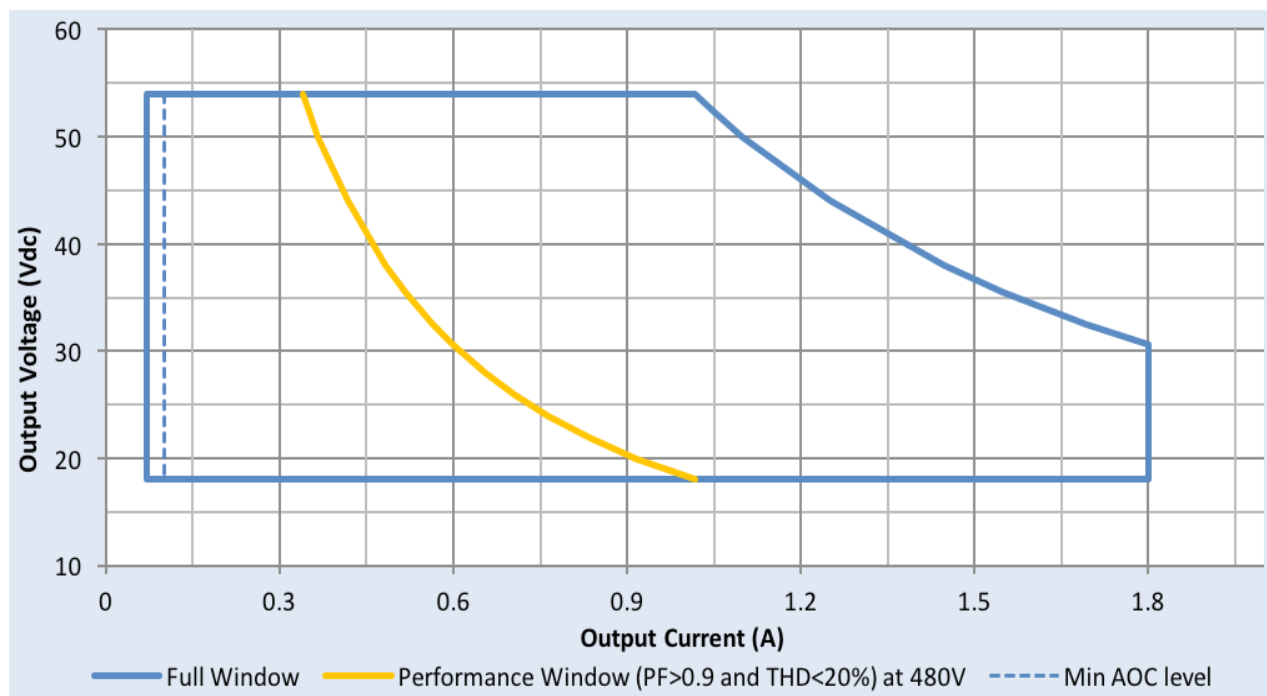
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## Driver Output Window



## 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 > 0.7A.

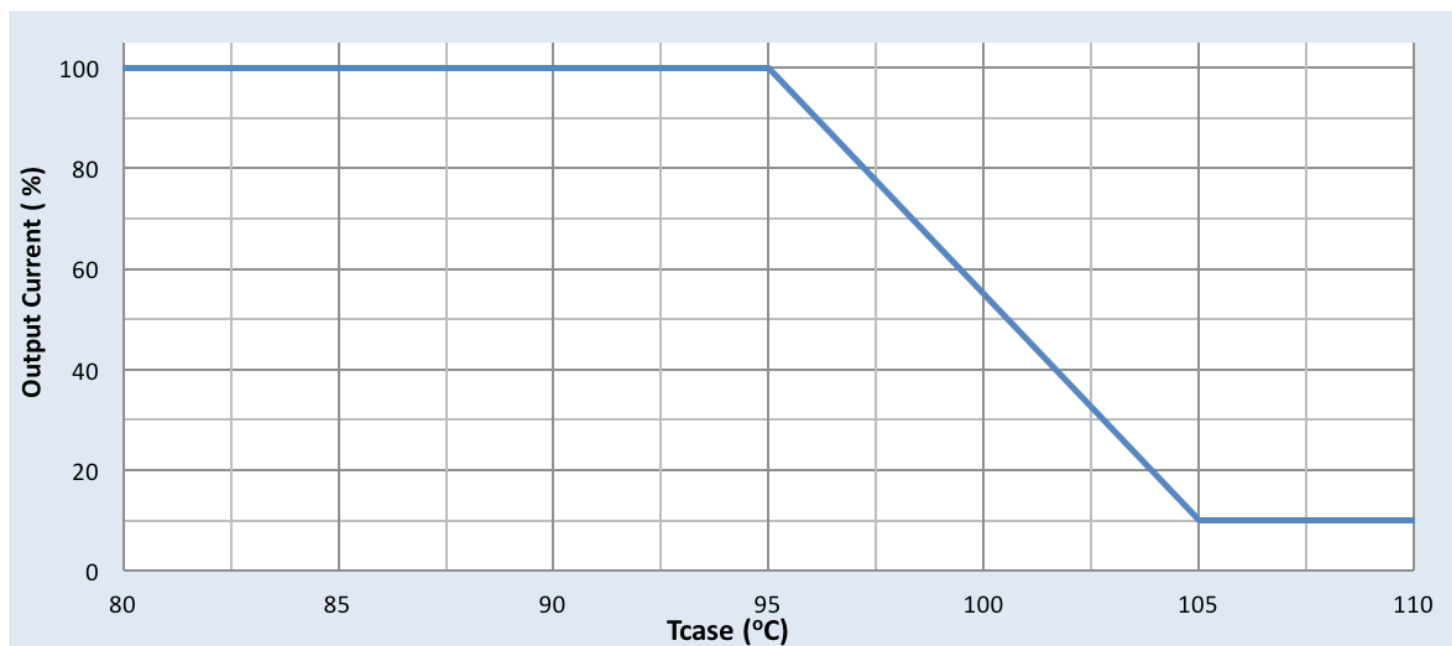
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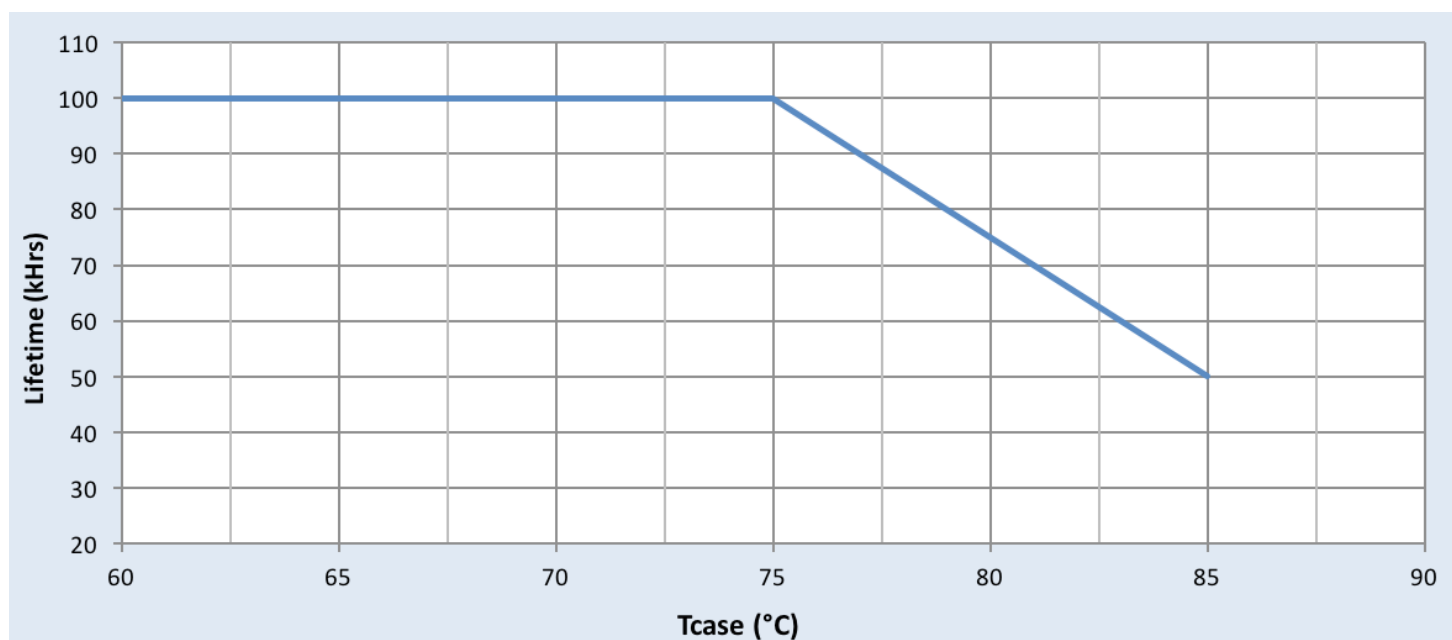
## Output Current Vs. Driver Case Temperature



## Note

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

## Driver Lifetime Vs. Driver Case Temperature



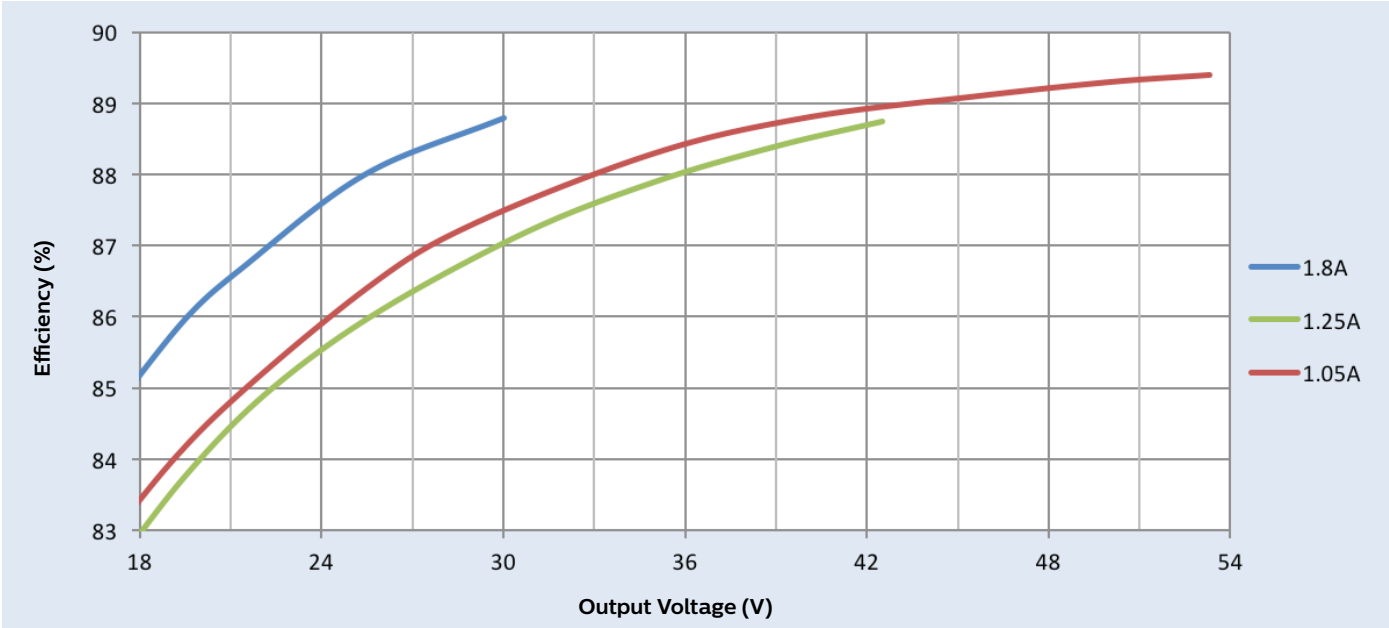
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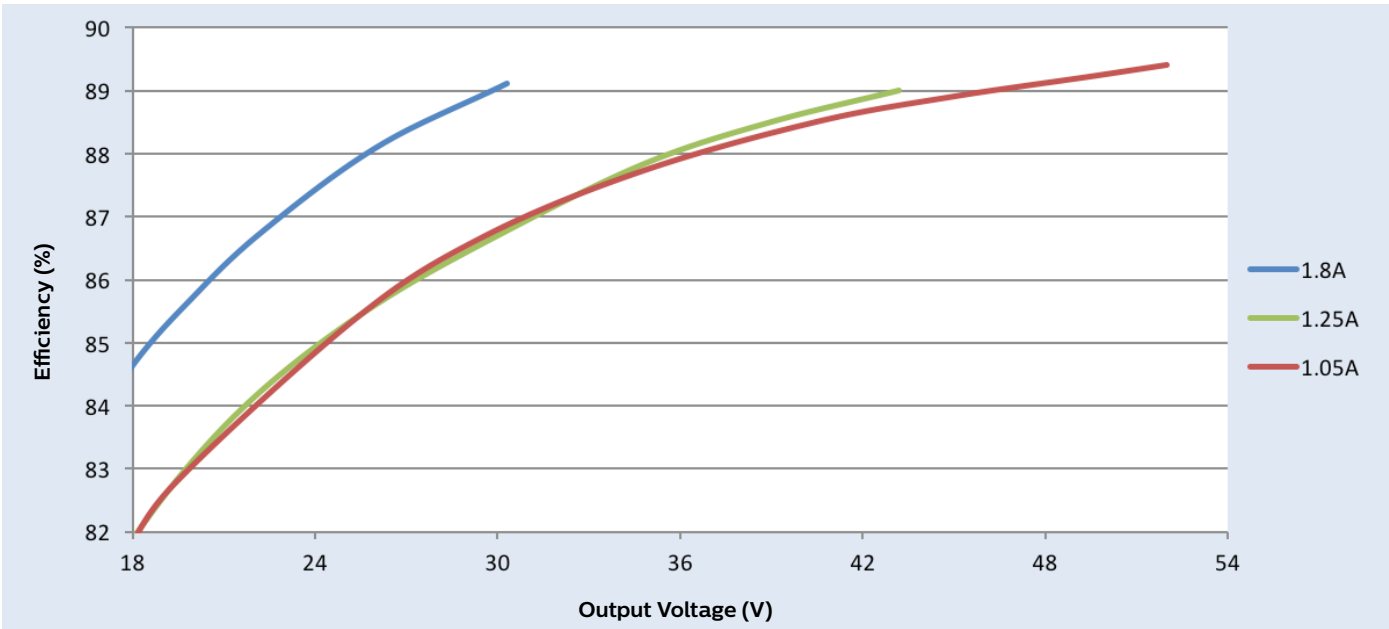
## Performance Characteristics

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

### Efficiency Vs. Output Voltage at 347Vac



### Efficiency Vs. Output Voltage at 480Vac



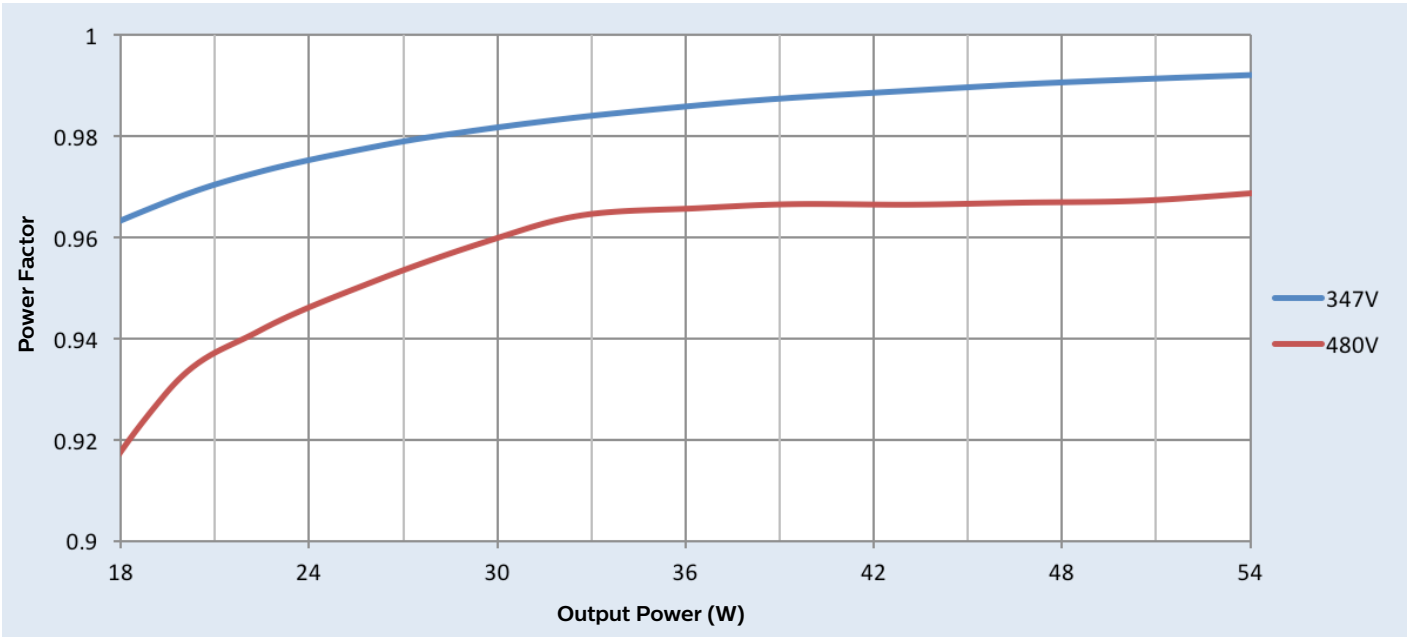
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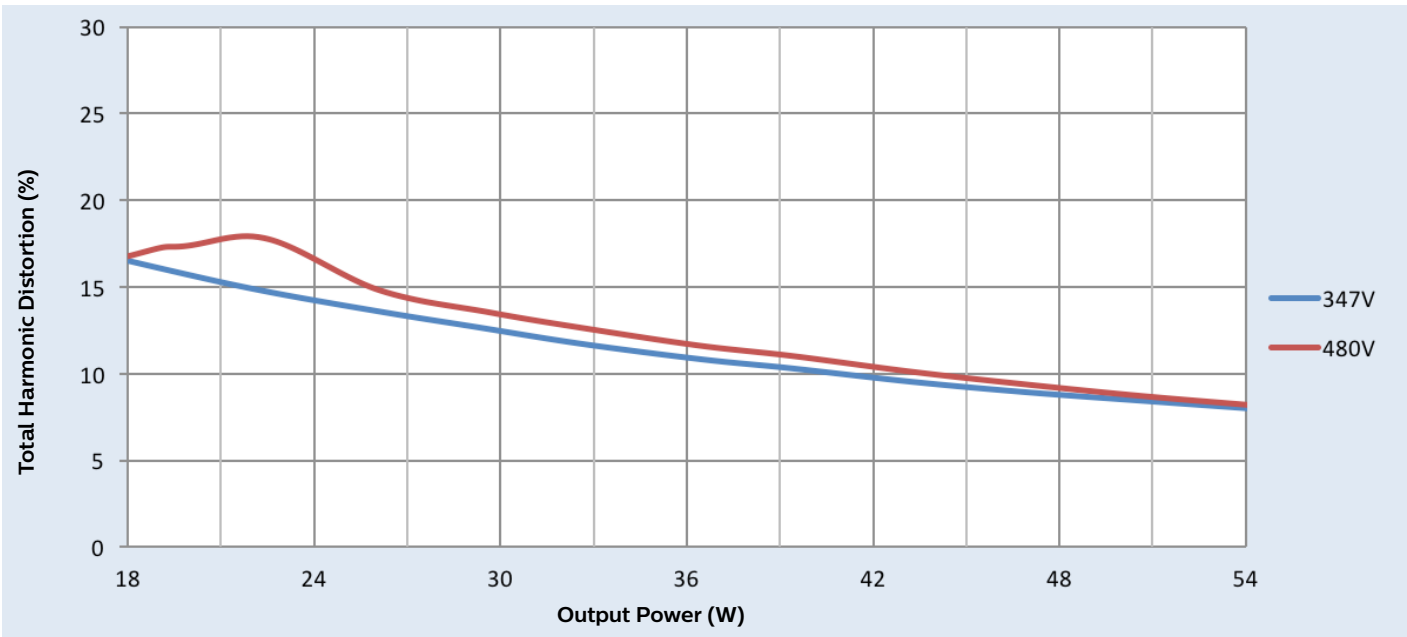
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### Power Factor Vs. Output Power



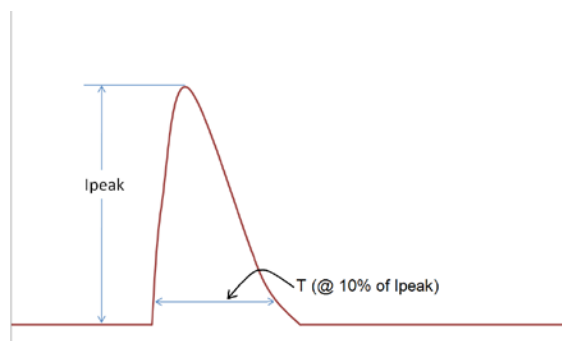
### Total Harmonic Distortion (THD) Vs. Output Power



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## Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
347 Vrms	28A	151 $\mu$ s
480 Vrms	40A	146 $\mu$ s

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)
1.2/50 $\mu$ s Combination Wave (w/t 2 $\Omega$ )	6kV	6kV

## Isolation

Isolation	Input	Output	0-10V	Enclosure
Input	NA	2xU+1kV	2.5kV	2xU+1kV
Output	2xU+1kV	NA	2.5kV	500
0-10V	2.5kV	2.5kV	NA	2.5kV
Enclosure	2xU+1kV	500	2.5kV	NA

U = Max. input voltage

