PHILIPS ADVANCE

LED Driver

Xitanium

180W 0.1-0.9A 0-10V Dimming with SimpleSet XH180C090V285BSF1









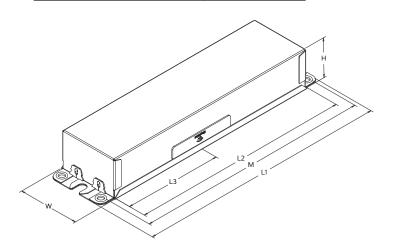
Philips Advance Xitanium outdoor LED drivers with SimpleSet technology are designed to give OEMs ultimate flexibility. With wide operating windows and simple programming, the drivers make it easy for luminaire manufacturers to design luminaires of different sizes and lumen levels for outdoor applications.

Specifications

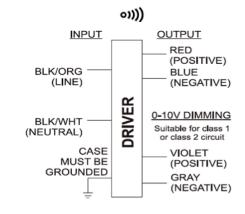
Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load and 75°C Case	Max Case Temp. (°C)	Input Current (A)	Max. Input Power (W)	THD @ Max Load (%)	Power Factor @ Max Load	Surge Protection (Combi- Wave, KV)	Envir. Protection Rating
347	180	100-285 0	92.4	92.4	Life - 85°C	0.56	200 <10%	>0.95	6	UL damp & dry	
480	160	100-265	0.1 - 0.9	93	UL - 90°C	0.40	200	10%	~U.95	0	and Type HL

Enclosure

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



Wiring Diagram



Dimming	Dimming Range (with specified dimmers)	Minimum Output Current (A)	
0-10V Analog Class 1 and 2 Wiring	10% ~ 100%	0.05	

Features

- · 50,000+ hour lifetime¹
- 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)				
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 lout				
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, CSA 250.13, UL Listed, ETL Class P				
Electromagnetic Compliance	FCC Title 47 Part 15 Class A				
Audible Noise	<24dB Class A				
Weight	2.1 Lbs / 0.95 kgs				
weignt	2.1 LD2 \ 0.32 KB2				

l. 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.

Electrical Specifications

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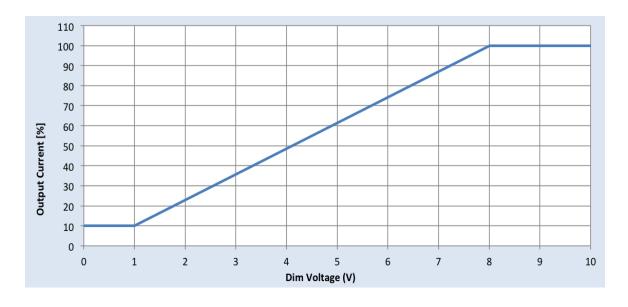
0-10V Dimming Curve

Dimming source current from the driver: $150\mu A$ (@ 0<Vdim<8V) Minimum dim level: Factory default 10% of lout setting as default

Maximum output voltage on the dimming wires: 12V

Approved Dimmer List

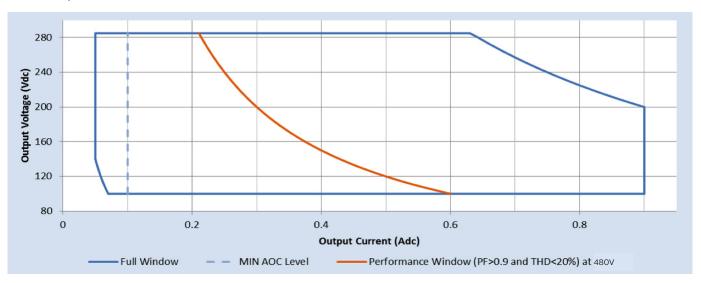
Manufacturer	Manufacturer Part Number	
Lutron	Visit www.lutron.com/ advance for a list of dimmers (Mark VII) that will work with this driver	
Leviton	IllumaTech IP7 series	
Philips	Sunrise - SR1200ZTUNV	



Electrical Specifications

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Driver Output Window



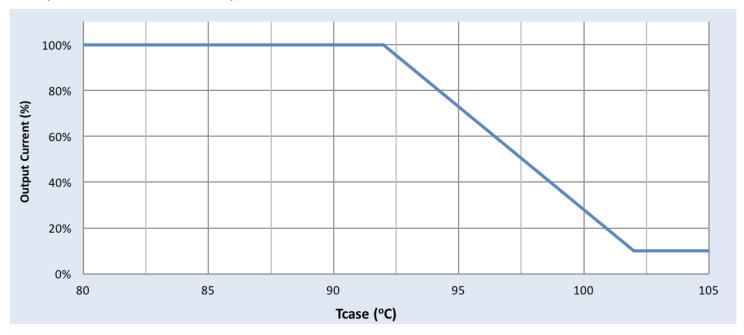
Notes

- 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 \geq 500mA.
- 3. Factory default minimum dimming level is 10%. This can be adjusted between 10% and 100% using Philips MultiOne.

Electrical Specifications

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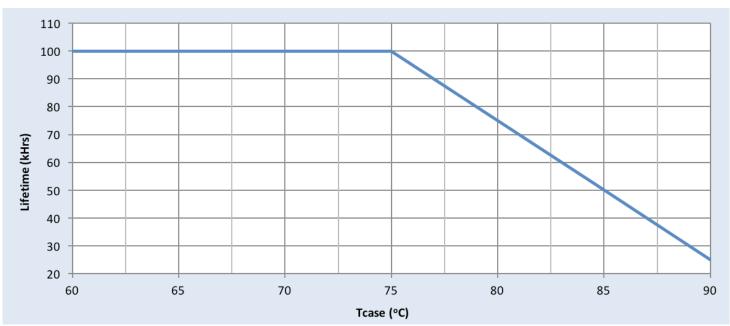
Output Current Vs. Driver Case Temperature



Note

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

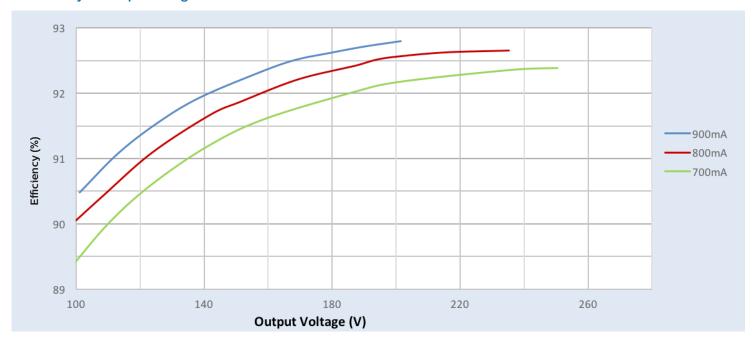
Driver Lifetime Vs. Driver Case Temperature



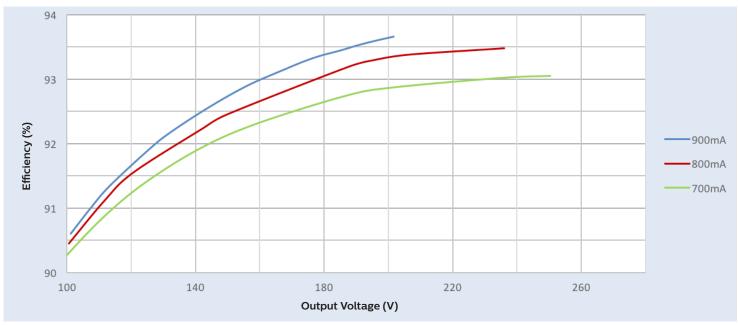
Performance Characteristics

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



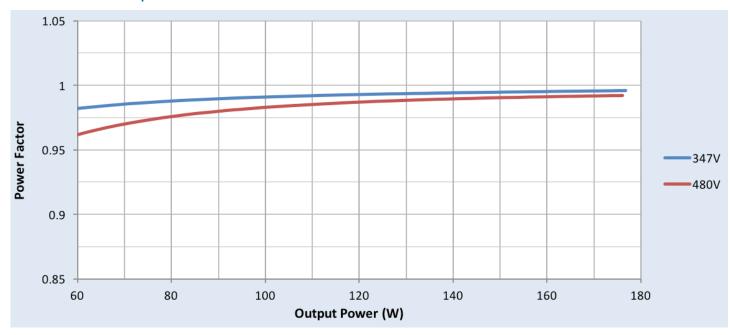
Efficiency Vs. Output Voltage at 480Vac



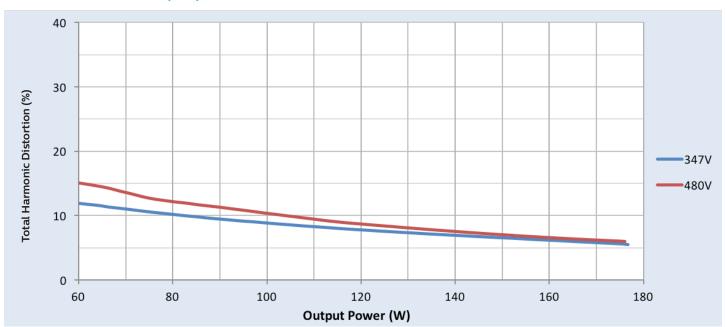
Performance Characteristics

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

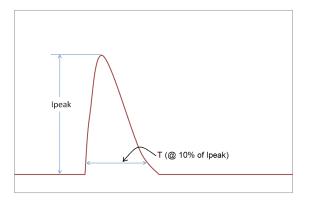
Power Factor Vs. Output Power



Total Harmonic Distortion (THD) Vs. Output Power



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

U = Max input voltage

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