

**PHILIPS
ADVANCE**

LED Driver

Xitanium

19W 0.45A 42V LE+TE 120V
XR019C045V042RNP1



**LED Class 2
For Dry and Damp Location**

Intertek
5005458
Conforms to UL STD 8750
Certified to CAN/CSA STD
C22.2 No. 250.13

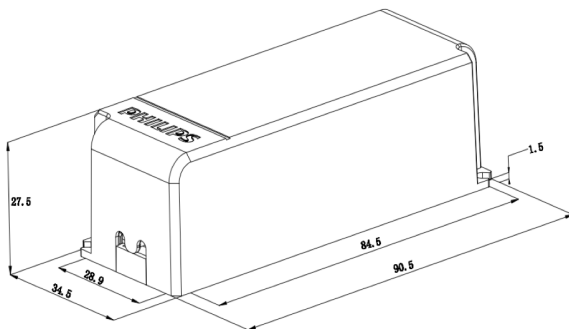
The Philips Advance Xitanium range of phase-cut dimming LED drivers are perfectly suited for commercial fittings in downlight and track lighting applications. These models offer the flexibility of precise output of drive currents from selectable settings and are compatible with a variety of electronic low voltage dimmers to deliver reliably smooth dimming performance. The drivers are offered in a compact form factor suitable for use in elegantly unobtrusive fixture designs. Rated for long life with efficient performance, these drivers are excellent design choices for LED downlight fixtures offering the benefits of long-lasting energy savings with low maintenance costs.

Specifications

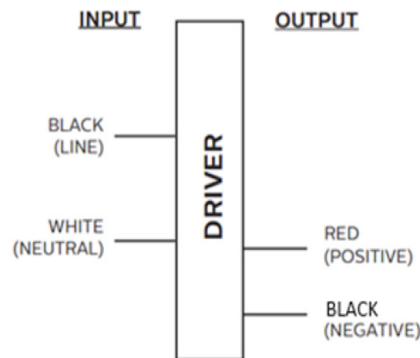
Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load and 75°C Case	Max Case Temp. (°C)	Input Current (A)	Max. Input Power (W)	THD @ Max Load (%)	Power Factor @ Max Load	Surge Protection (Ring-Wave, KV)	Envir. Protection Rating
120	19	21 - 42	0.45	83	Life-85°C Max-85°C	0.2	23	<20%	>0.90	2.5	UL damp & dry

Enclosure

	In. (mm)
Case Length	3.56 (90.5)
Case Width	1.35 (34.5)
Case Height	1.08 (27.5)
Mounting Length	3.32 (84.5)



Wiring Diagram



Input and output use lead wires.

Lead-wires are 18AWG 105C/600V multi-stranded.

Output lead-wires are 22AWG 105C/600V multi-stranded wires.

Input lead length outside enclosure: 130mm (±10mm).

Output lead length outside enclosure: 100mm (±10mm).

All wires have tinned ends.

Dimming	Dimming Range (with specified dimmers)	Minimum Output Current (A)	Other Comments
LE + TE Leading Edge & Trailing Edge	5% ~ 100%	0.0225	Only @ 120V

Xitanium 19W 0.45A 42V LE+TE INT

Features

- 50,000+ hour lifetime¹
- UL Class 2 output with adjustable drive current
- Leading edge/Trailing edge dimming
- Compact form factor

Benefits

- Enables easy design-in with excellent thermal performance
- Enables simple, fast, flexible application-specific configurations
- Enables light levels suited for the application
- Enables design of low-profile fixtures

Application

- Indoor downlight and track applications
- Retail, hospitality

Electrical Specifications

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

Product Data

Order Information	
Full Product Code	XR019C045V042RNP1M (Mid-Pack, 48pcs/Box), 12NC: 929001705213
Line Frequency	50/60Hz
Min. Mains Voltage Operational	108 Vac
Max. Mains Voltage Operational	132 Vac
Output Information	
Maximum Open Circuit Voltage	< 60Vdc
Output Current Ripple	30% max @ max Iout
Output Current Tolerance (within full output operating range)	450mA: (-8% / +8%) Output Current variation includes effects of line & load regulation, temperature variation and component tolerances
Protections	Short Circuit, Open Circuit Protection for LED + and LED – and Temperature Foldback
Features	
Dimming	LE + TE dimming
AOC (Adjustable Output Current)	NA
Environment & Approbation	
Operating Ambient Temp. Range	-20°C to +50°C
Max. Case Temperature (Tcase)	Max. 85°C, Tcase Life: 85°C
Agency Approbations	UL8750, CSA250.13-14
Electromagnetic Compliance	FCC Title 47 Part 15 Class B
Audible Noise	<24dB Class A
Weight	0.243 Lbs / 0.110 kgs

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 MTBF modeling.

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Electrical Specifications

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LE + TE Dimming

Minimum Dim Level: 5% of Iout (minimum 13.5mA)

Approved Dimmer List

Leading Edge Dimmers

Manufacturer	Manufacturer Part Number	Max. Number of Drivers per Dimmer
Lutron	DVLV-600P	Dimmers can be loaded up to 80% of their maxpower rating. The minimum number of drivers perdimmer is 1.
Philips	SR150LED120	

Trailing Edge Dimmers

Manufacturer	Manufacturer Part Number	Max. Number of Drivers per Dimmer
Lutron	NTELV-600	Dimmers can be loaded up to 80% of their maxpower rating. The minimum number of drivers perdimmer is 1.
	SELV-300P	
	MAELV-600	
	SELV-300P	
Leviton	IPE04-1LZ	
	6615-PO	

Notes:

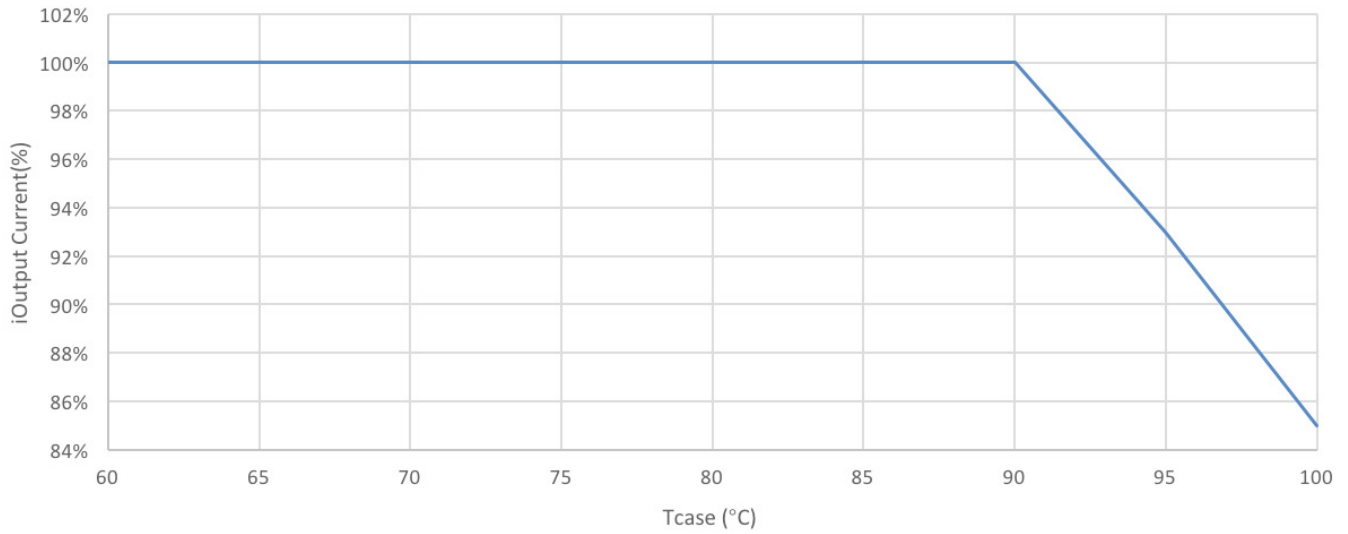
1. During Philips' lab tests Trailing Edge dimmers demonstrated the best dimmer performance. Philips' recommends TE dimmers as the first choice for dimming this driver.
2. Minimum Dimming level varies between 5%-10% depending on the dimmer.
3. The approved dimmer list above is the result of the tests performed in Philips' lab with a specific LED load. Several factors (including the LED engine) can affect dimming performance so Philips recommends the OEM perform their own test using their specific light engine to determine the dimming performance within the actual application.
4. Other factors that can affect dimming:
 - Impedance on the input line
 - Utilization of driver (percent of driver load)
 - Utilization of the dimmer (percent dimmer load)
 - Over or under voltage in the input line
 - Other loads in the same circuit where the driver is installed

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Electrical Specifications

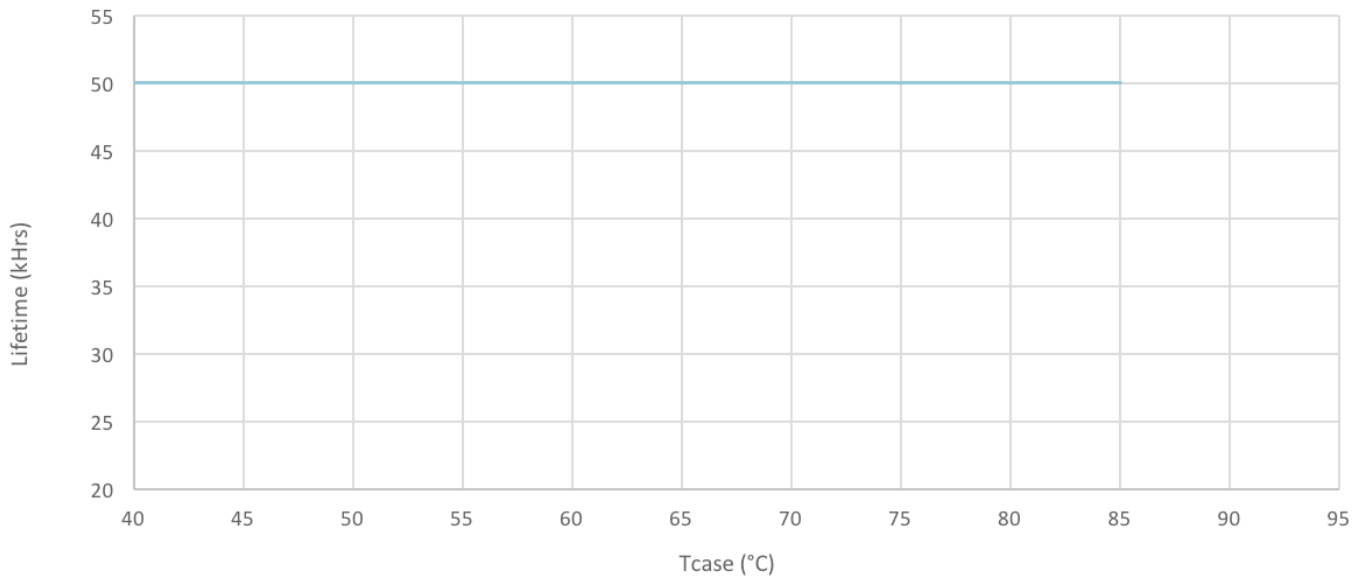
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Output Current Vs. Driver Case Temperature



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

Driver Lifetime Vs. Driver Case Temperature

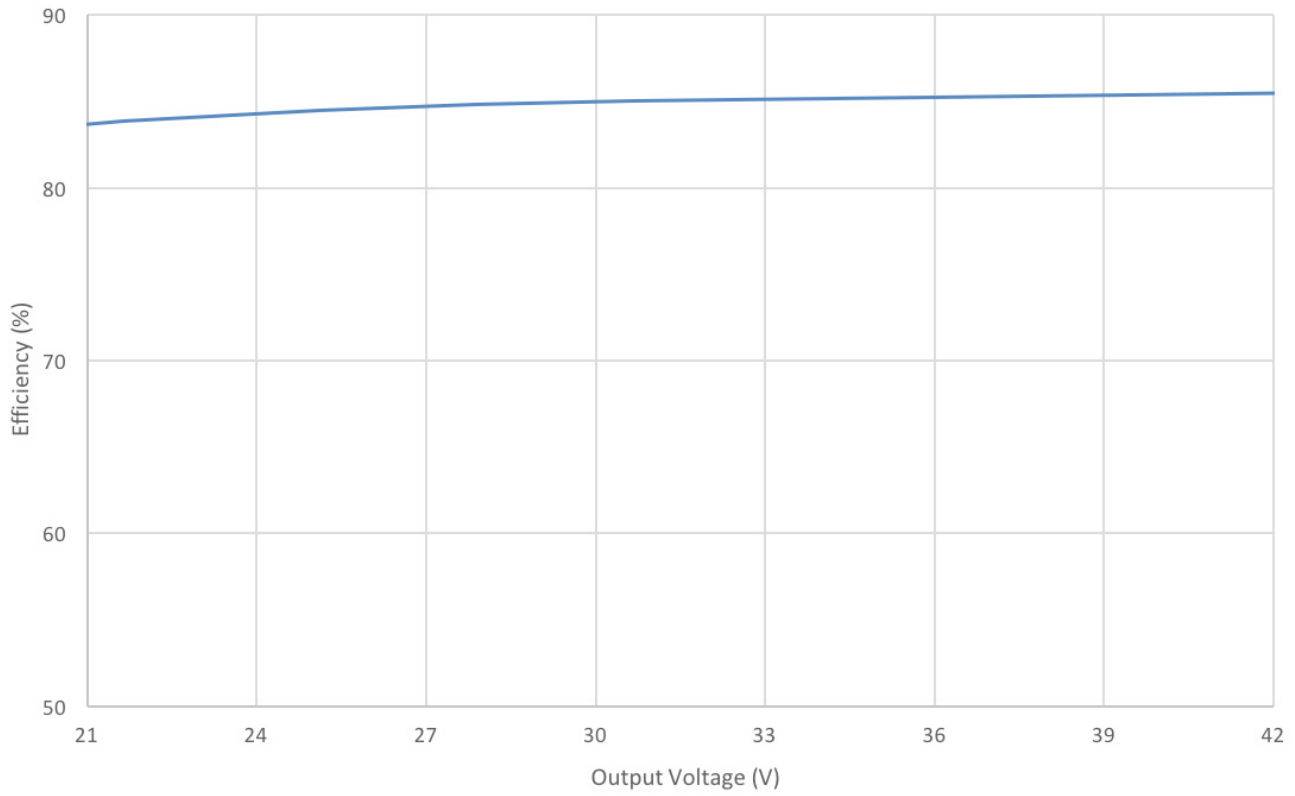


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Performance Characteristics

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

Efficiency Vs. Output Voltage at 120Vac

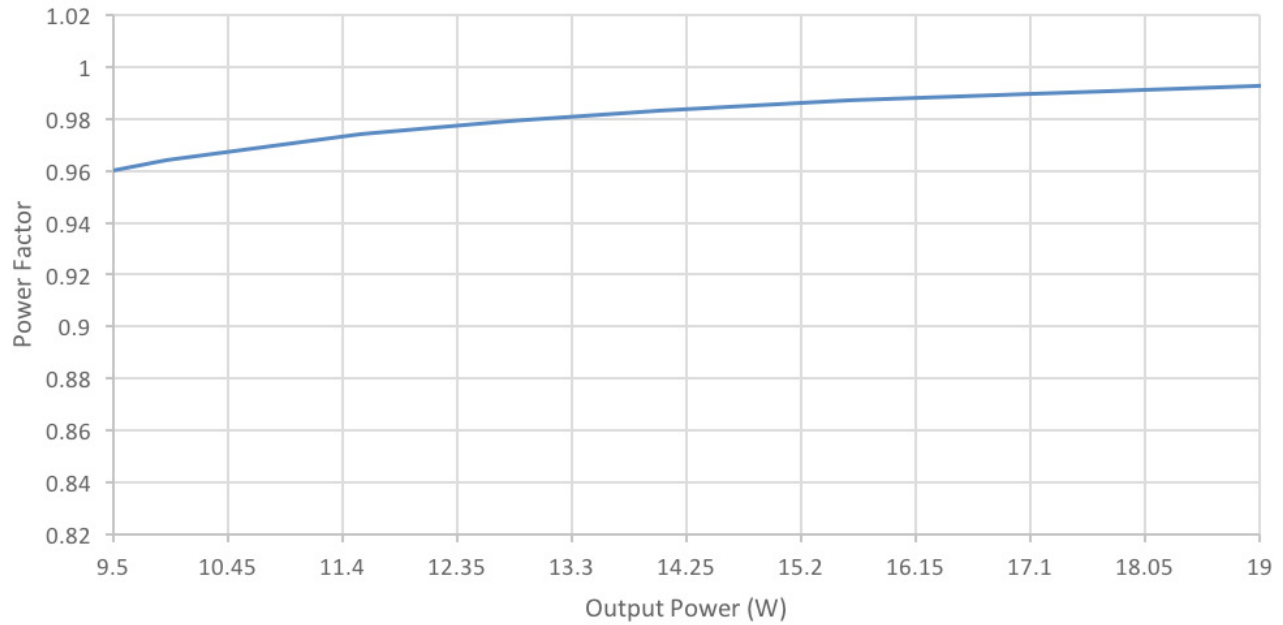


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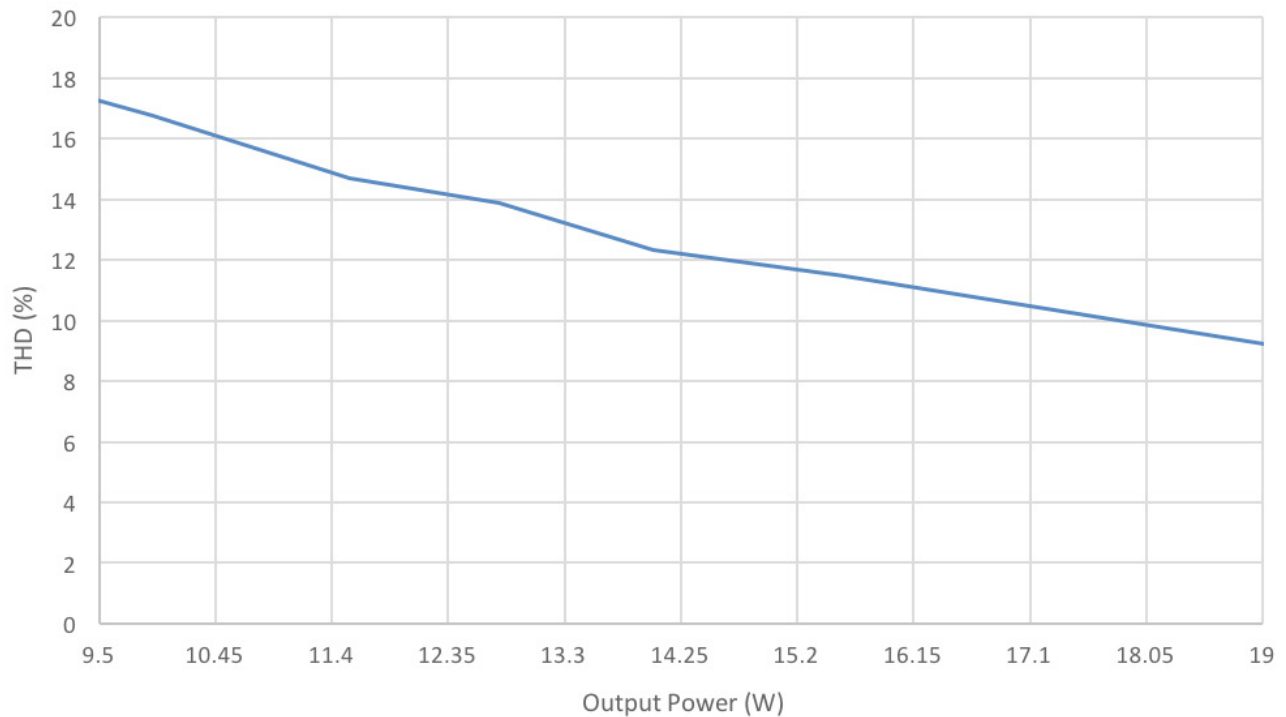
Performance Characteristics

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Power Factor Vs. Output Power

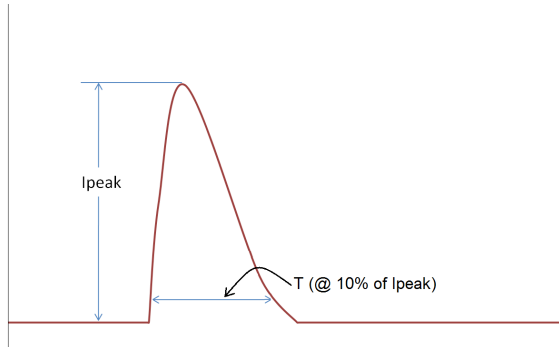


Total Harmonic Distortion (THD) Vs. Output Power



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Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
120 Vrms	1.54A	60µS

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)
100kHz Ring Wave (w/t 30Ω)	2.5KV

Isolation

Isolation	Input	Output
Input	NA	2xU+1kV
Output	2xU+1kV	NA

U = Max working voltage

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