PHILIPS
ADVANCE

LED Driver

Xitanium

9W 120V 0.22A LE+TE
XR009C022V042RNO2

Class 2
Power Unit
Dry & Damp
Location

RoHS
COMPLIANT

The Philips Advance Xitanium range of phase-cut dimming LED drivers are perfectly suited for downlight fittings in residential and commercial applications. These models are compatible with a variety of incandescent and 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 that are specifically rated to meet EMI emissions per FCC 47CFR Part 18 Class B consumer limits.

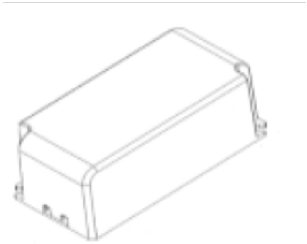
Rated for long life with efficient performance, these drivers are excellent design choices for LED downlight fixtures offering the benefits of long-lasting energy savings with low maintenance costs.

Specifications

Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load and 70°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	9	21-42	0.22	82%	85°C	0.09	12.1	<20%	>0.9	2.5	UL damp & dry

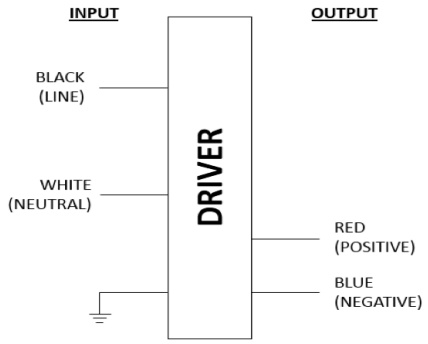
Enclosure

	In. (mm)
Case Length	2.78 (70.5)
Case Width	1.36 (34.5)
Case Height	1.08 (27.5)
Mounting Length	2.54 (64.5)
Overall Length	2.78 (70.5)



Dimming	Dimming Range (with specified dimmers)	Minimum Output Current (A)
LE and TE dimming	3% ~ 100% of the setting current	4.4mA

Wiring Diagram



Input and output use lead- wires.

Lead-wires are 18AWG 105C/600V solid copper.

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.

Driver case must be grounded.

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Features

- Compatible with both leading edge (incandescent) & trailing edge (electronic low voltage) phase-cut dimmers.
- 50,000+ hour lifetime[1]

Benefits

- Enables long life luminaire designs
- Allows luminaire designs for ambient environments
- Compact fit for elegant fixture designs

Application

- Indoor downlight applications
- Residential
- Commercial

Electrical Specifications

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

Product Data

Order Information	
Full Product Code	XR009C022V042RNO2M (Mid-pack – 48pcs/box)
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 (ripple = peak to average / average)	<=30% @full load
Protections	Short Circuit, Open Circuit Protection for LED + and LED –
Output Voltage (V out)	21V - 42V
Output Current (I out)	220mA [I out variation: (+/-) 8%, see note below]
Environment & Approbation	
Operating Ambient Temp. Range	-20°C to +50°C
Max Case Temperature (Tcase)	85°C
Environmental Protection Rating	UL dry and damp
Agency Approbations	UL8750, UL1310, CSA 250.13
Electromagnetic Compliance	FCC Title 47 Part 15 Class B
Audible Noise	<24dB Class A
Weight	.22Lbs/ .10kgs

Note:

Power Factor (PF) and Total Harmonic Distortion (THD) may deviate under adverse mains voltage conditions outside nominal operation.

Output Current (I out) variation includes effects of line & load regulation, temperature variation and component tolerances.

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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Dimmer Compatibility List

Leading edge dimmers

Manufacturer	Manufacturer Part Number	Additional Considerations
Lutron	SLV-600X	Dimmers can be loaded up to 80% of their max power rating. The minimum number of drivers per dimmer is 1.
	S2-LX	
	GL-600H	
	NFTU-5A	
	DVLV-600P	
Leviton	6602-X	
	6681-X	
	6683-X	
	6684-X	
	700-X	
	705-X	
	6633	
	6674	
	IPI06-1LZ	
Cooper	9530XXX	
Lightolier	MP600X	
Philips	SR150LED120	

Trailing edge dimmers

Manufacturer	Manufacturer Part Number	Additional Considerations
Lutron	NTELV-600-XX	Dimmers can be loaded up to 80% of their max power rating. The minimum number of drivers per dimmer is 1.
	SELV-303P	
	MAELV-600-XX	
	DVELV-300P-XX	
	SELV-300P-XX	
Leviton	IPE04-1LZ	
	VZE06-1LX	
	6615-P0T	
Philips	SR400RPC120	

Note:

1. Minimum Dimming level: Up to 3% @ conduction angle of 30 degrees (performance dependant on dimmer model).

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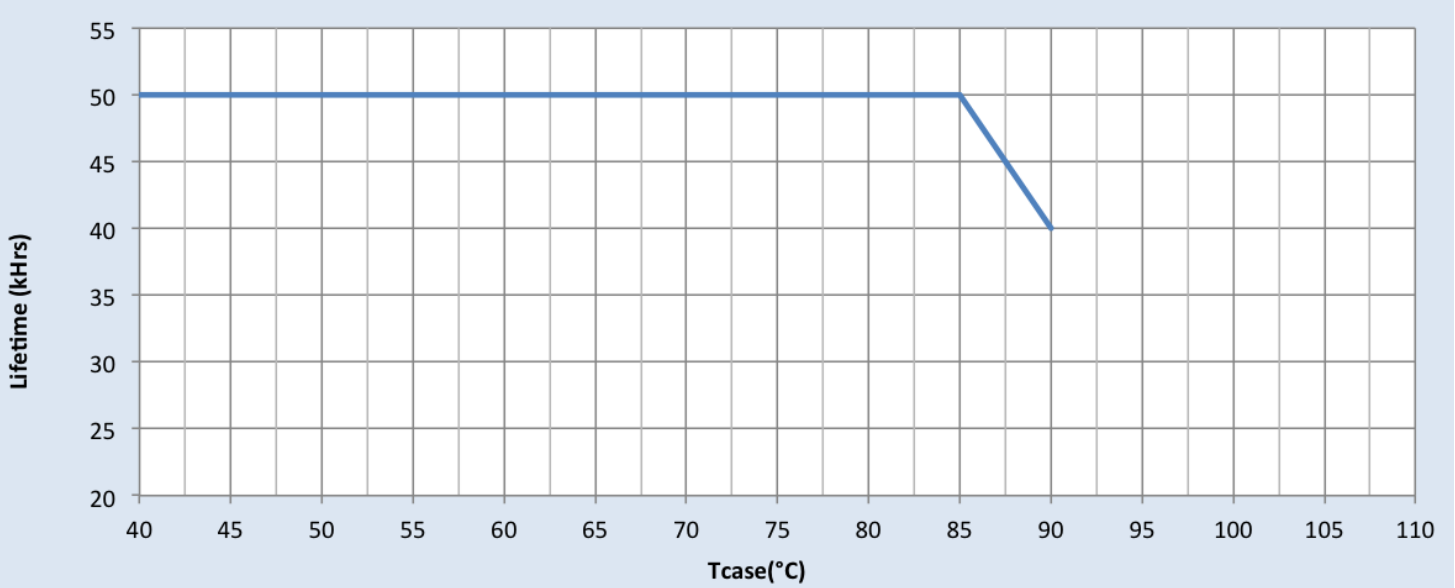
Driver Lifetime Vs. Driver Case Temperature



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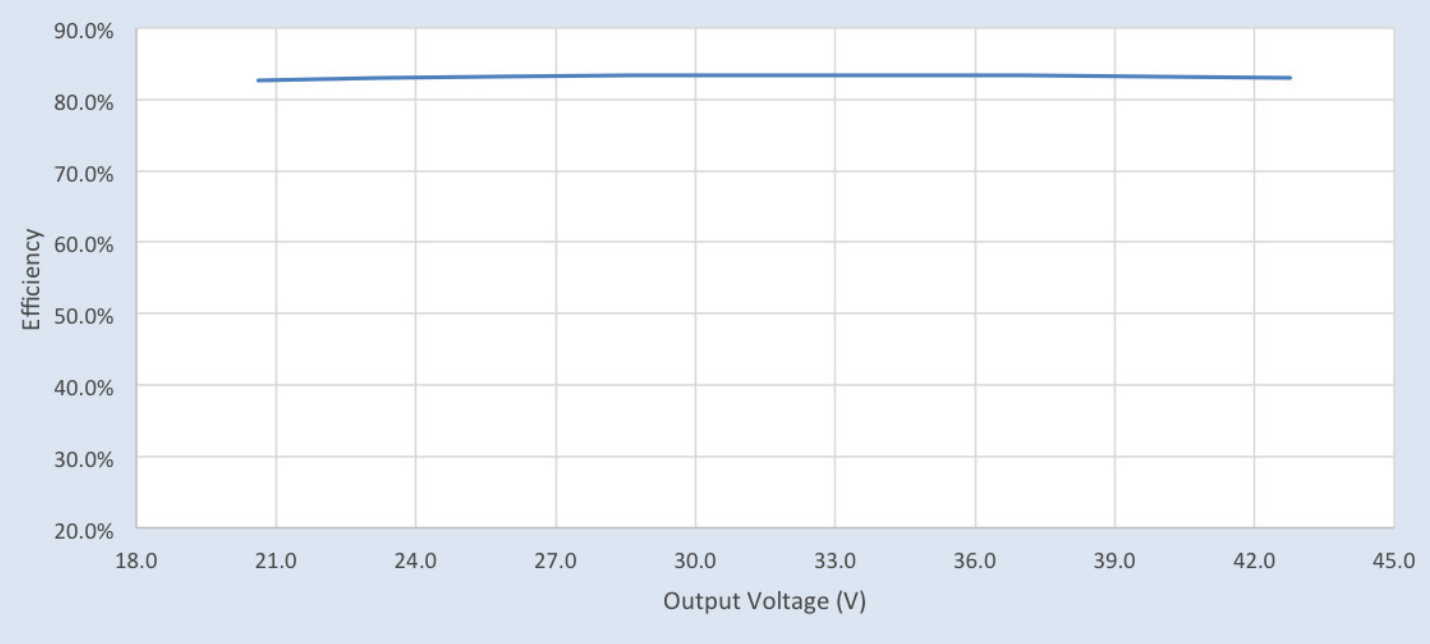
Performance Characteristics

Based on measurements on a typical sample. The accuracy of the measurements is within the tolerance of the measurement instruments. The graphs are meant to be a guideline and not a specification.

Efficiency Vs. Output Voltage at Max Current



Note:

Typical rated efficiency of 82% at 120V.

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Performance Characteristics

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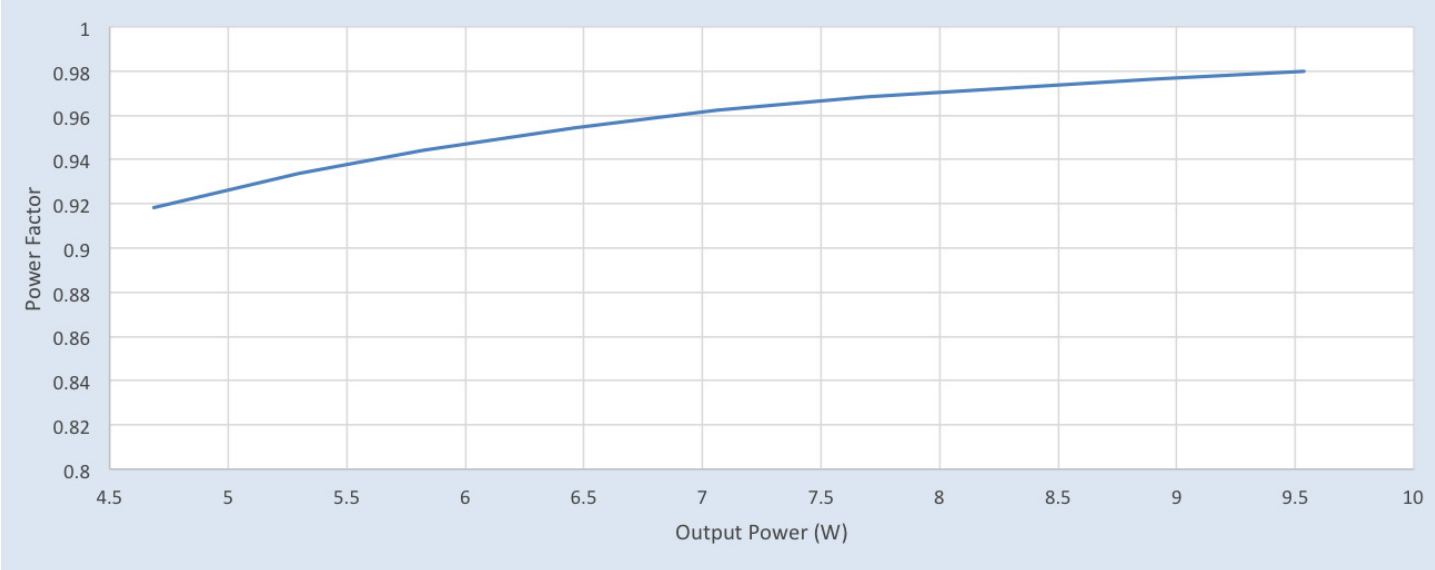
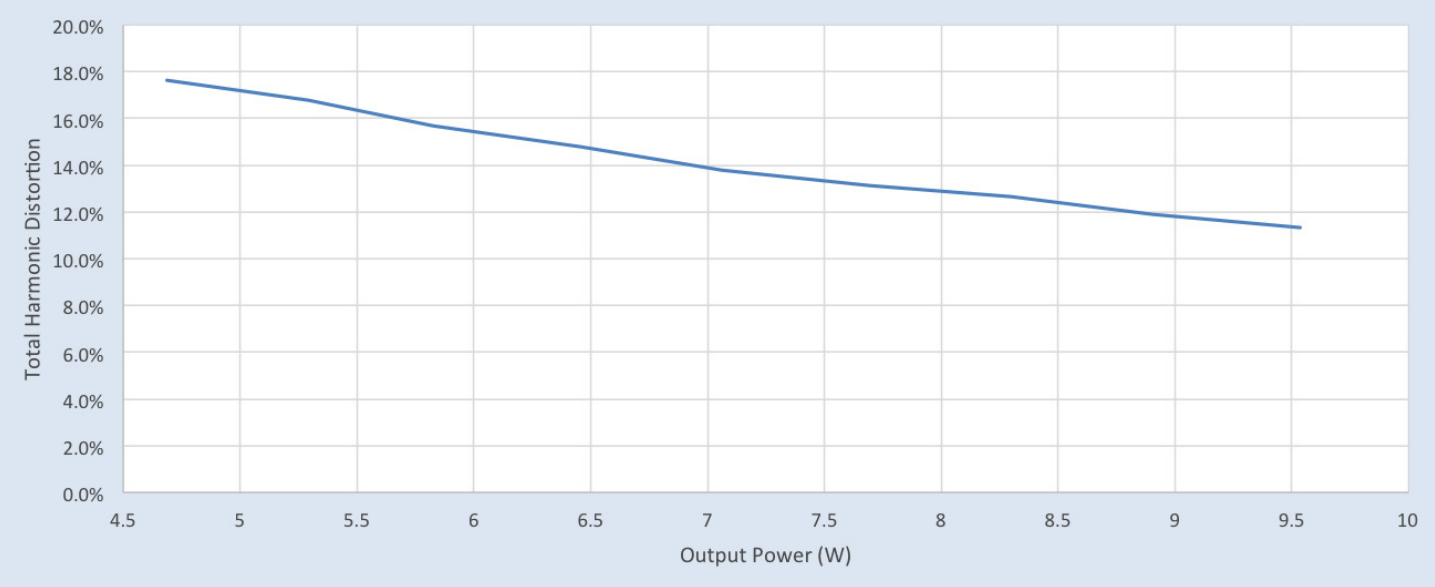
Power Factor Vs. Output Power



Total Harmonic Distortion (THD) Vs. Output Power



Note:

PF and THD are specified at maximum load without the dimmer connected.

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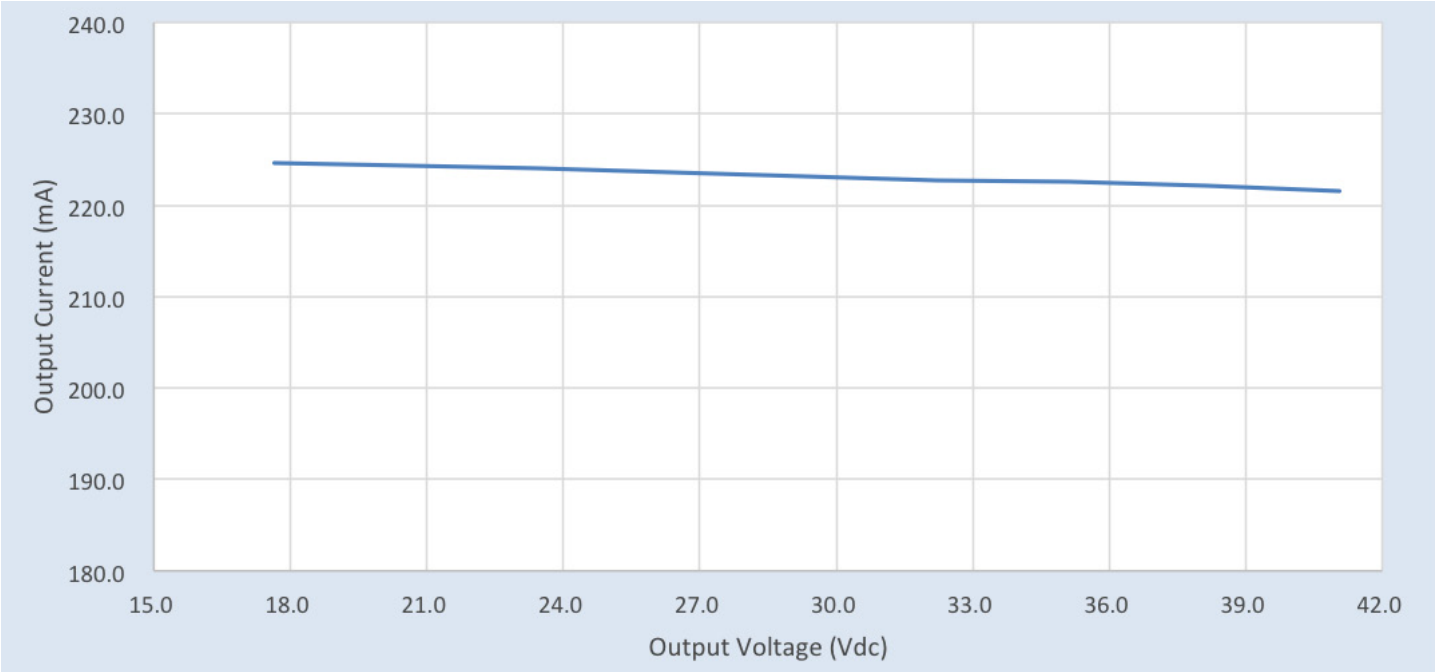
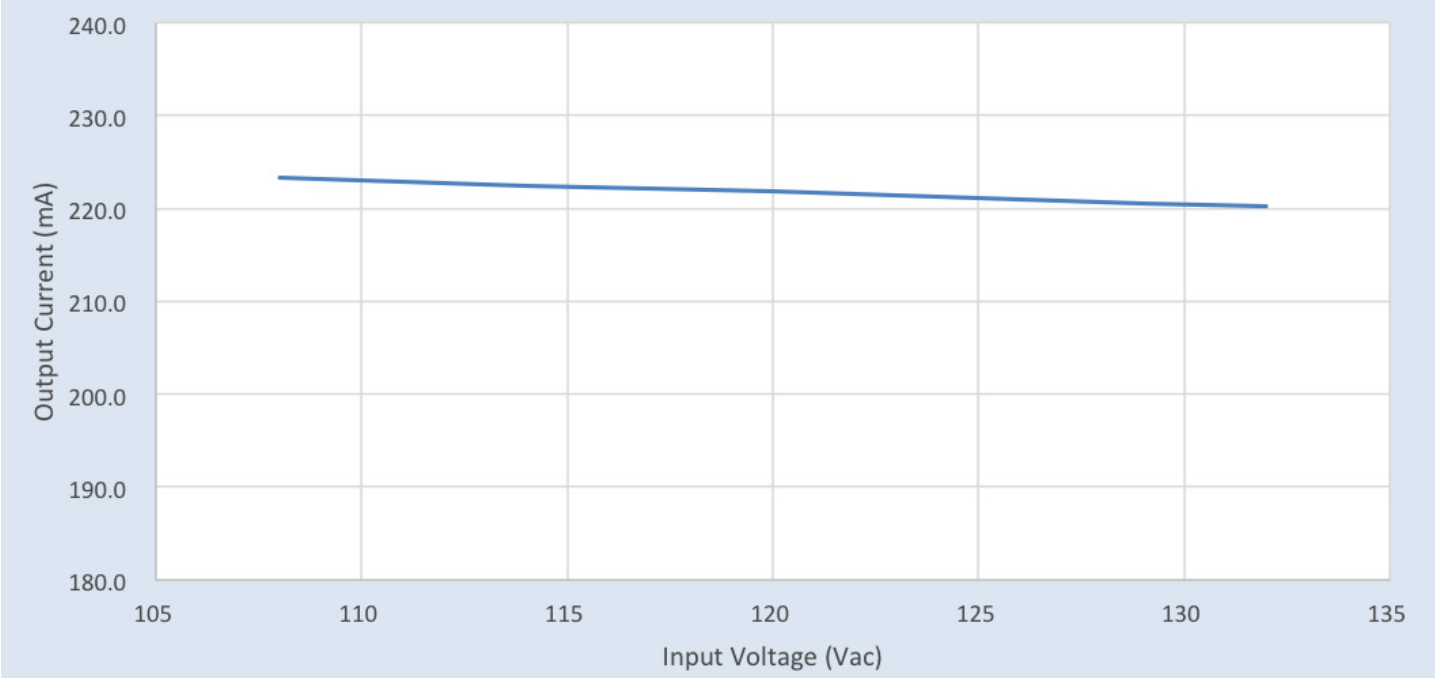
Output Current (I out) variation includes effects of line & load regulation, temperature variation and component tolerances.

Output Current Vs. Output Voltage



Output Current Vs. Input Voltage



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Performance Characteristics

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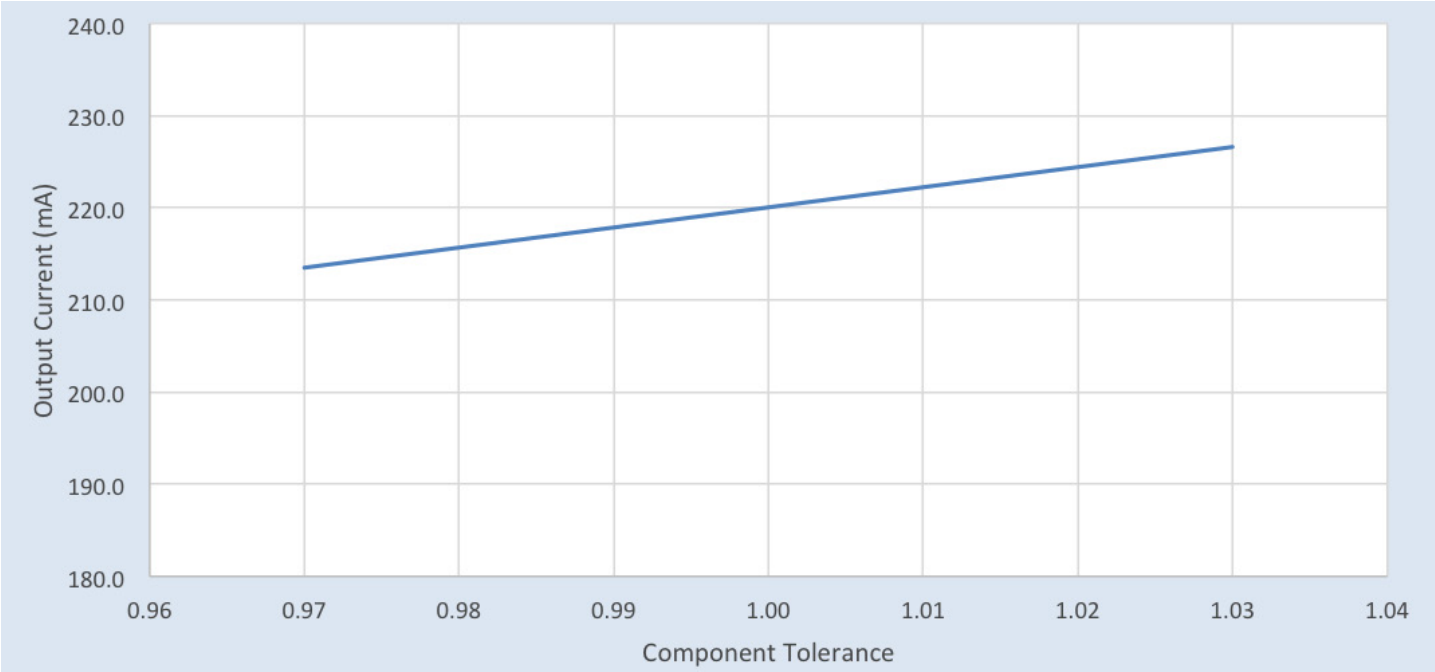
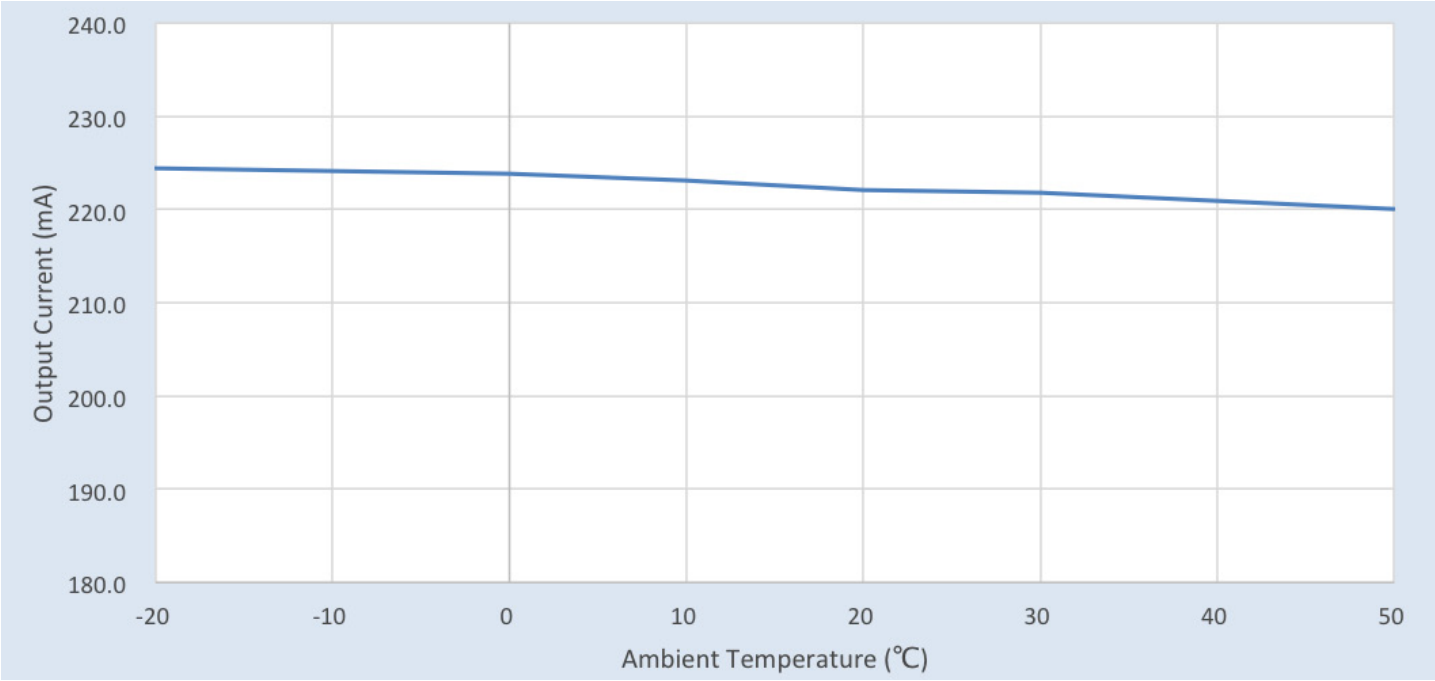
Output Current Vs. Component Tolerance



Output Current Vs. Ambient Tolerance



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Performance Characteristics

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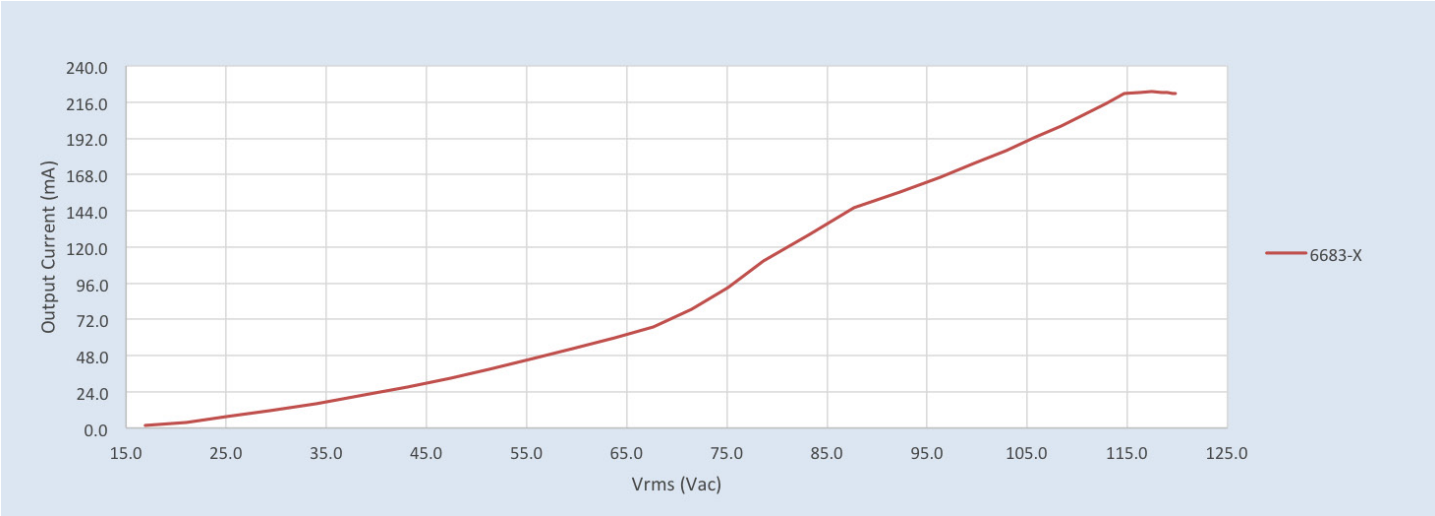
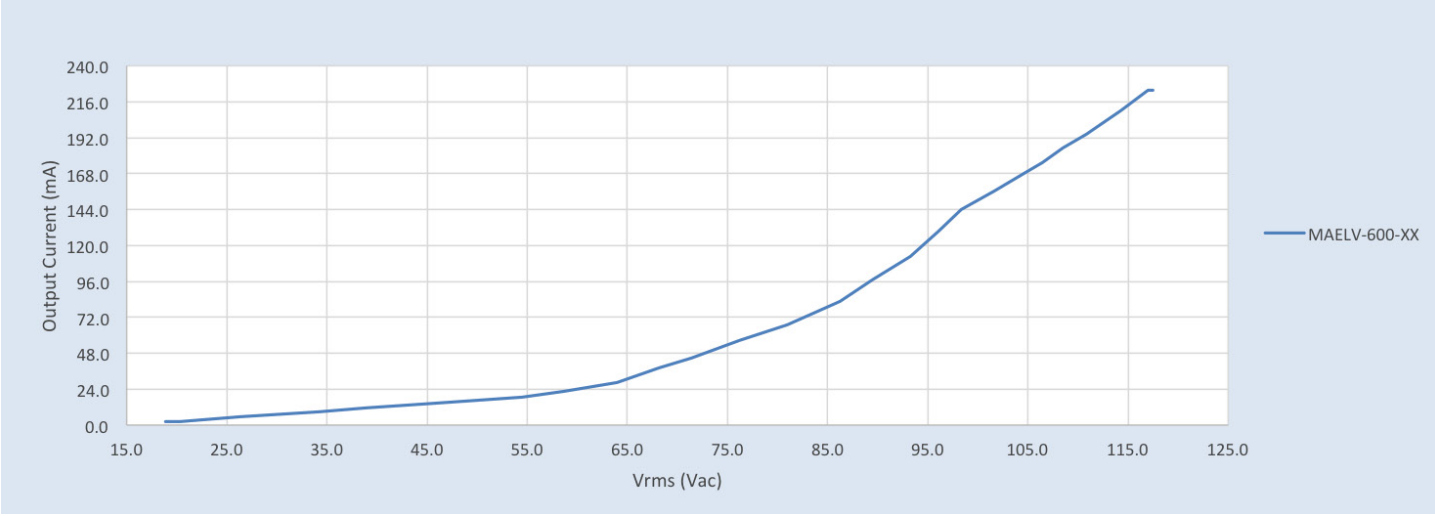
Output Current Vs. Vrms, LE Dimmer



Output Current Vs. Vrms, TE Dimmer



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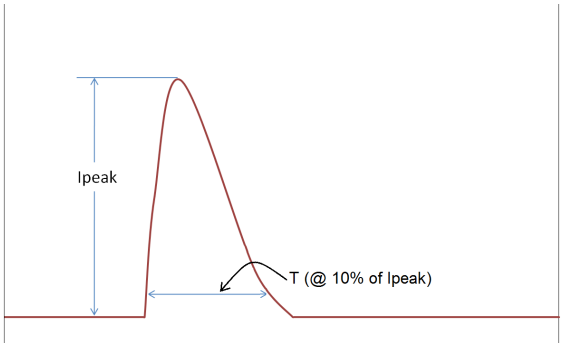
Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
120 Vrms	5.1A	3.2µS

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 3Ω)	2.5kV

Isolation

Isolation	Input	Output	Enclosure
Input	NA	2xU+1kV	2xU+1kV
Output	2xU+1kV	NA	500V
Enclosure	2xU+1kV	500V	NA

U = Max input voltage

UL Conditions of Acceptability

Please contact your Philips representative for a copy of the latest UL Conditions of Acceptability (COA).

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