ADVANCE by signify

LED Driver

Xitanium

929000712703

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 rugged applications. They operate to specification under wide temperature and electrical ranges to help ensure reliability.

Specifications

Input Voltage (Vrms)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load and 70°C Case (%)	Max. Case Temp. (°C)	Input Current (Arms)	Max. Input Power (W)	THD @ Max. Load	Power Factor @ Max. Load	Surge Protection Common/ Diff (KV)	Envir. Protection Rating	Driver Type
120	300	80 ~ 280	0.10 – 1.5	91%	80°C	2.73	330	<20%	>0.95	4/4	UL Dry & Damp, Type HL	Constant Current
230				93%		1.42						
277				93%		1.21						

Enclosure

	In. (mm)
Case Length	8.33 (211.5)
Case Width	4.46 (113.3)
Case Height	1.44 (36.6)
Mounting Length	8.84 (224.6)
Mounting Width	4.54 (115.3)
Overall Length	9.47 (240.5)

Wiring Diagram

Input and output use lead-wires.
Lead-wires are 18AWG 105C/600V solid copper.

Lead Length

Standard Lead Length is 275 mm (±30mm) on all wires outside the can.

Dimming Method	Dimming Range		Other Comments
1-10V Isolated	10% ~ 100%		Dimming source current: 150 µA (±3%)
DALI	1 ~ 254	10% ~ 100%	Linear or Logarithmic Variation
Amp Dimming	30% ~ 100%		Linear
AOC range	0.35A to 1.5A		

Warning

- Install in accordance with national and local electrical codes.
- The field-wiring leads or push-in terminals shall be fully enclosed.

RoHS COMPLIANT

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300W 120-277V 0.10-1.50A Programmable

Features

- 50,000+ hour lifetime[1]
- High power design
- Programmable

Benefits

- Enables long life luminaire designs
- Allows for fewer drivers in high power luminaires
- Allows customization of the driver operation through multiple dimming protocols and performance interfaces

Application

- Area
- Roadway
- Floodlights

Electrical Specifications

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

Product Data

Order Information	
Order Code	929000712703M (Mid-Pack, 4pcs/Box)
Input Information	
Min. Mains Voltage Operational	108V
Max. Mains Voltage Operational	305V
Line Frequency	50/60 Hz
Earth leakage current	<=0.7ma peak (IEC 61347 -1:2007 (Second edition)+A1:2010+A2:2012) <=0.75ma rms (per UL 8750)
Output Information	
Maximum Open Circuit Voltage	380Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max Iout Low frequency (≤120 Hz) content <5%
Output Current Tolerance (In the performance window)	<5%
Protections	Short Circuit, Open Circuit Protection for LED + and LED – and Temperature Foldback
Features	
Dimming	0-10V, DALI, AmpDim and Integrated Dynadimmer
AOC (Adjustable Output Current)	Programmed via DALI
CLO (Constant Light Output)	Programmed via DALI
MTP (Module Temperature Protection)	Current cutback to 10% (Refer to specifications below)
Environment & Approbation	
Operating Ambient Temp. Range	-40°C to +55°C
Max Case Temperature (Tcase)	80°C
Agency Approbations	UL8750, IEC 61347 -1:2007 (Second edition)+A1:2010+A2:2012, cUL
Electromagnetic Compliance	FCC 47 CFR Part 15 Class A, CISPR 15
Audible Noise	<24dB Class A
Weight	3.6 Lbs/1.6 kgs

1. Advance Xitanium LED Drivers are designed and manufactured to engineering standards correlating to an average life expectancy of 50,000 hours of operation at maximum rated case temperature.

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0-10V Dimming Curve:

Dimming source current from the driver: 150µA (±3%) (@ 0<Vdim<8V)

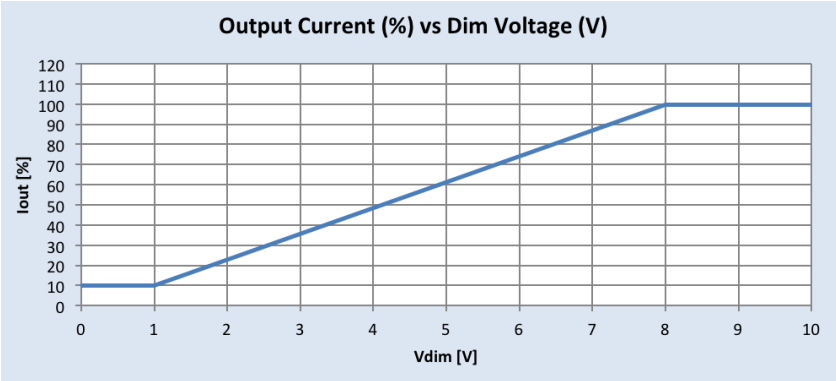
LED Current Tolerance at any value of Vdim: ± 5% of Imax

Minimum Dim Level: 10% or 100mA if output current is set to less than 1000mA by AOC

The dimming lead leakage current is 0.01mA. The maximum number of drivers that can be connected in parallel to one dimming control circuit is based on this dimming lead leakage current and the calculation is described in the corresponding Design-in Guide.

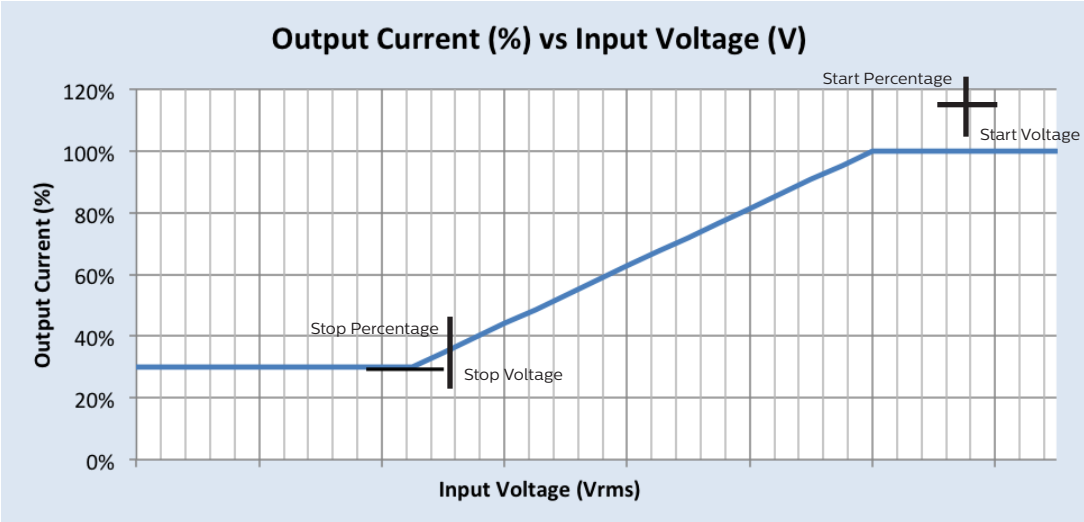
Approved Dimmer List

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



AmpDim Dimming Curve

Parameter	Min	Max	Increments
Start Voltage	170Vrms	250Vrms	1Vrms(configurable by software)
Stop Voltage	150Vrms	230Vrms	1Vrms(configurable by software)
Start Percentage	30%	100%	1%(configurable by software)
Stop Percentage	30%	100%	1%(configurable by software)



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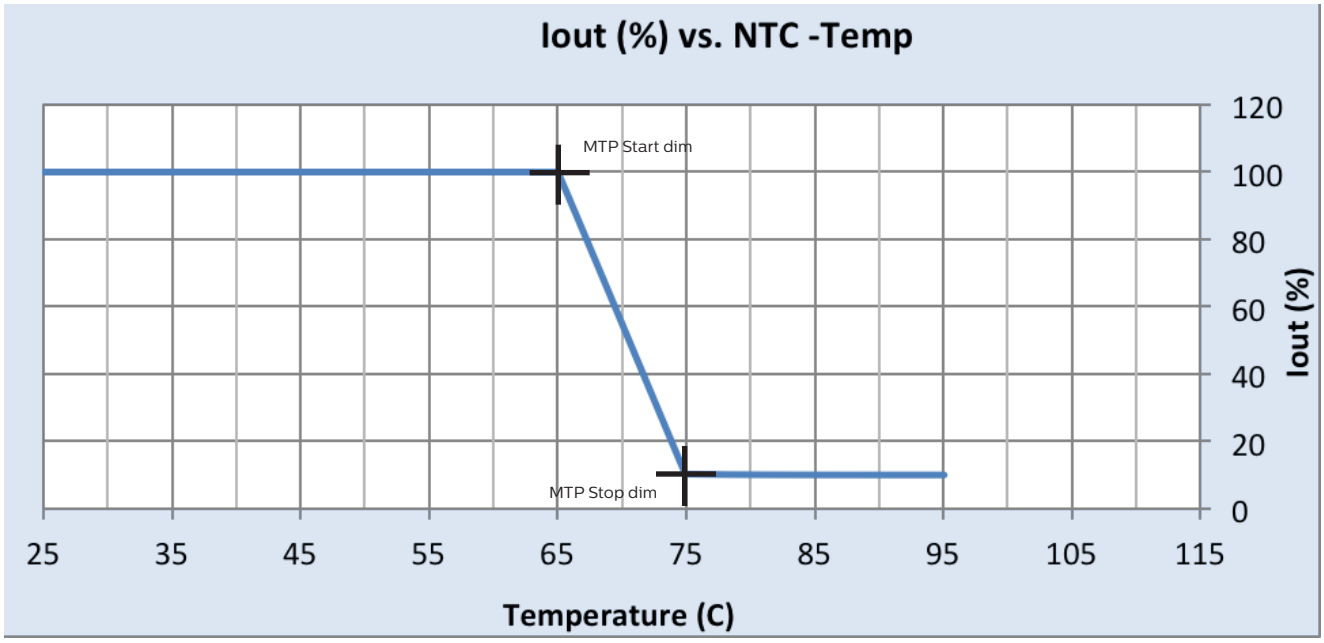
Module Thermal Protection

Factory default: MTP enabled
Advance LED Light Engine option enabled

MTP Option	Default Programmed Values	Dimming Range
Advance LED Light Engine	MTP start dim: 2263 ohms MTP stop dim: 1757 ohms	100% to 10%
Custom: EnterSelected NTC Value and B-Constant(25-85°C)		100% to 10%
NTC1 Preset: 10k NTC Murata: NCP18XH103J03RB		100% to 10%
NTC2 Preset: 15k NTC+390ohms Murata: NCP15XW153E03RC		100% to 10%



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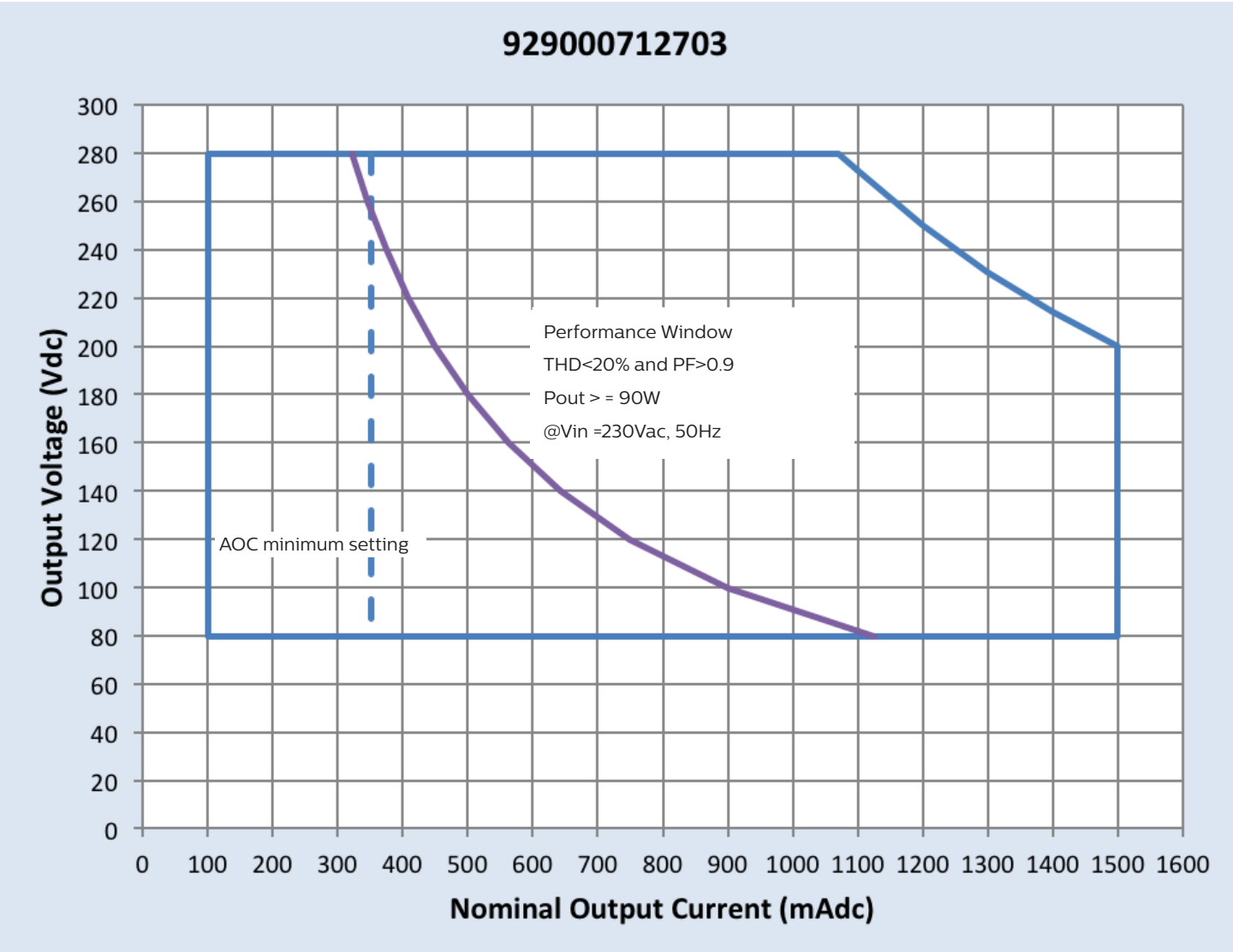
Operating Window



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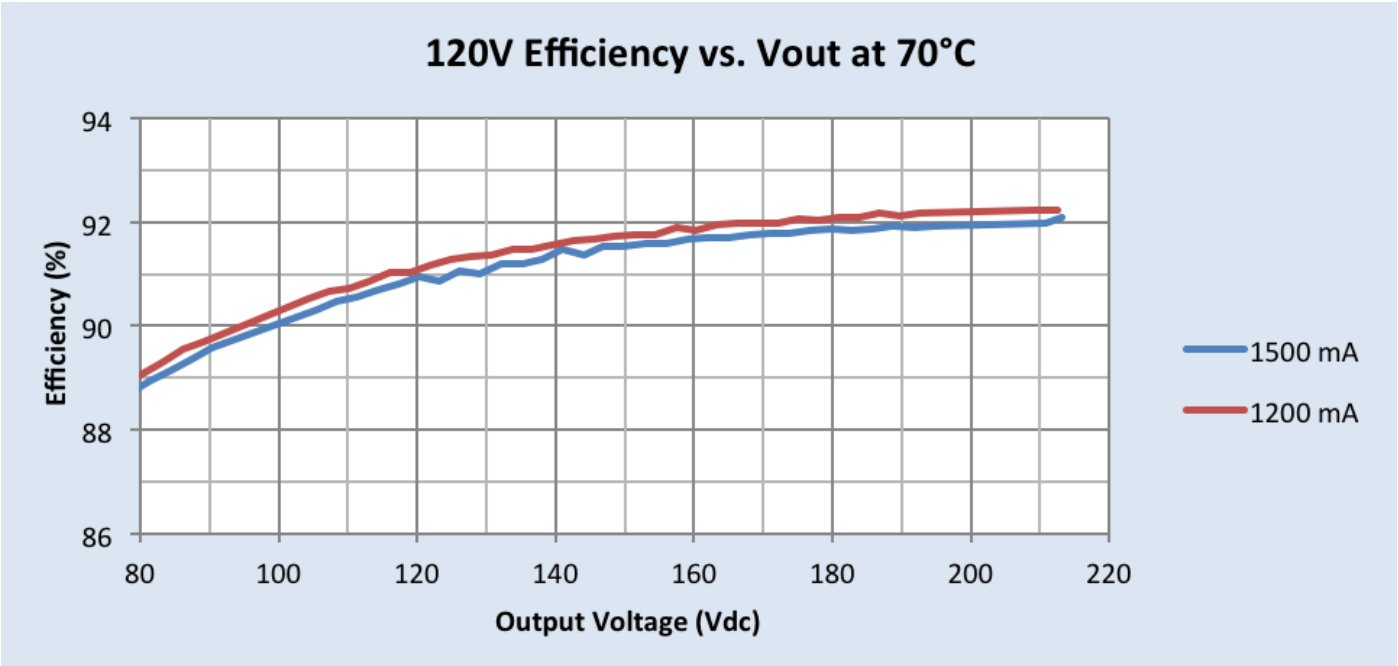
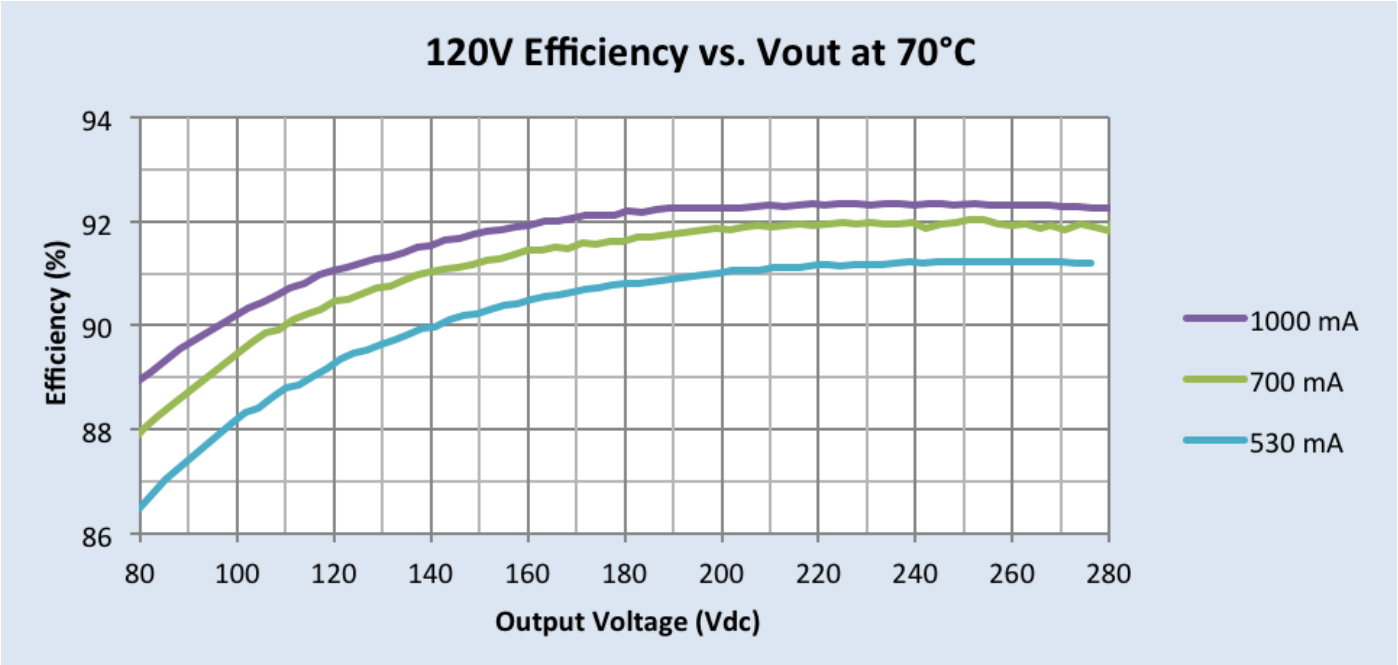
Efficiency





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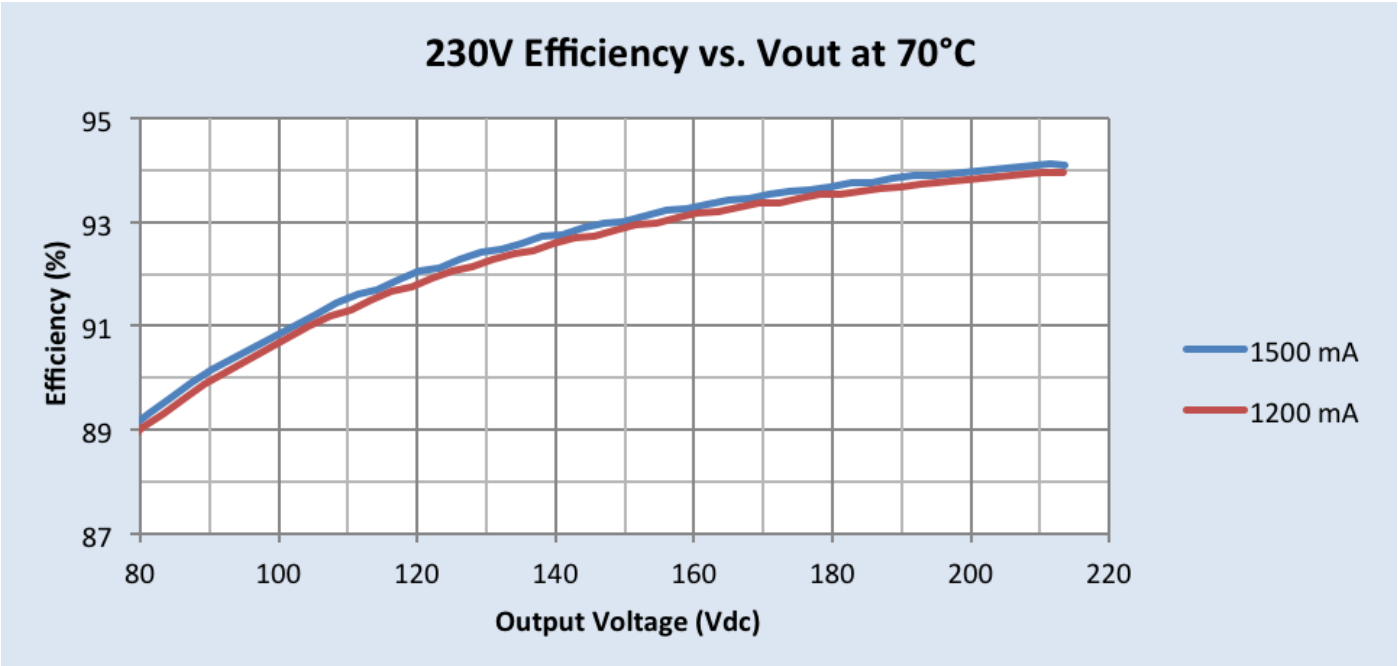

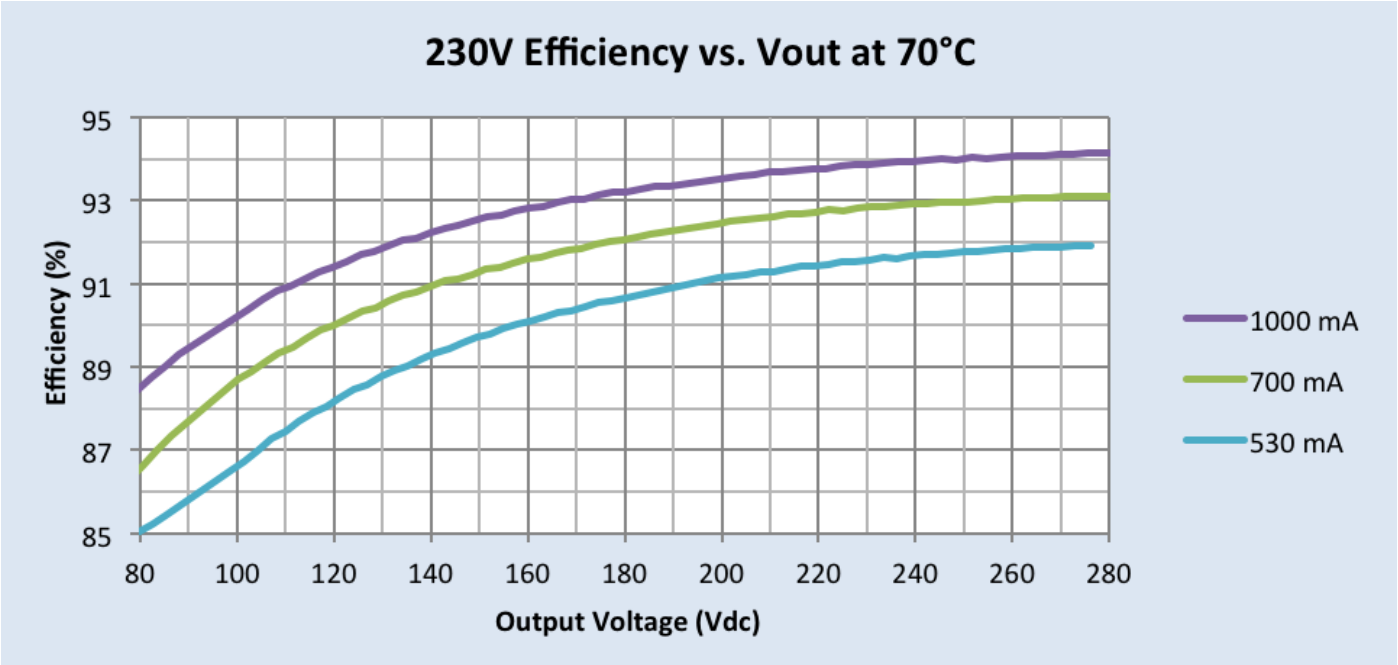

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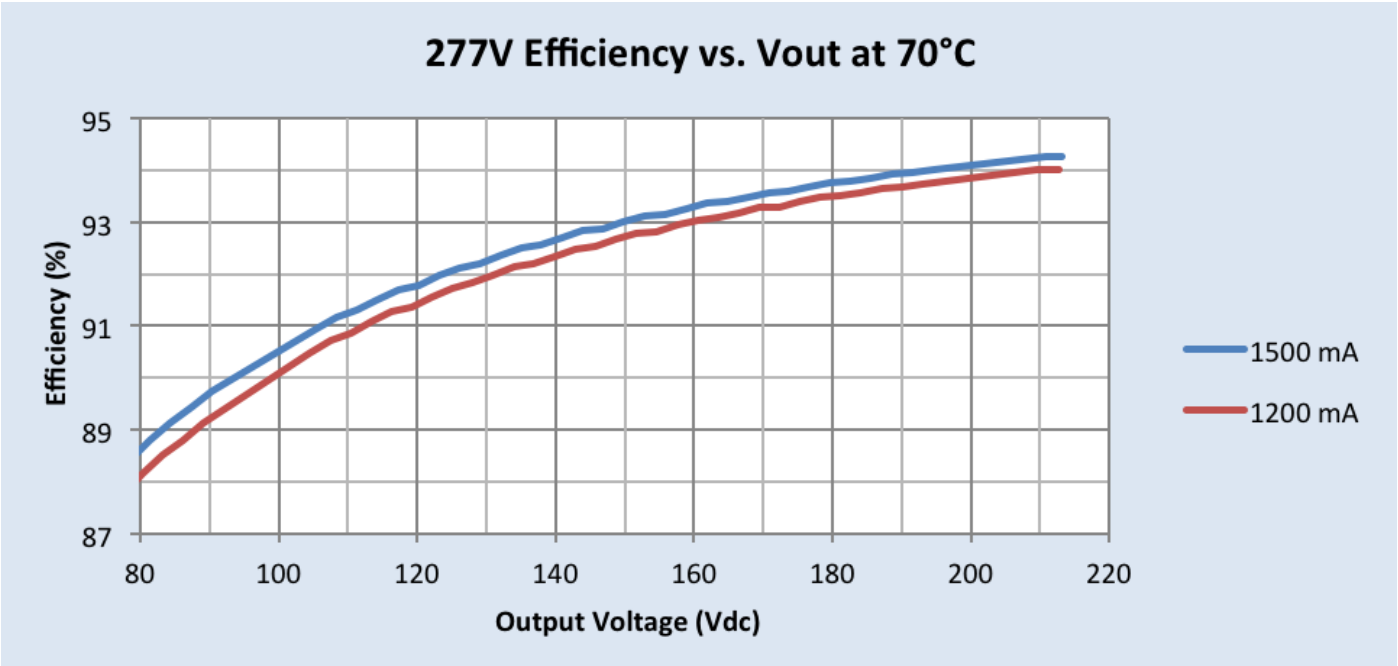

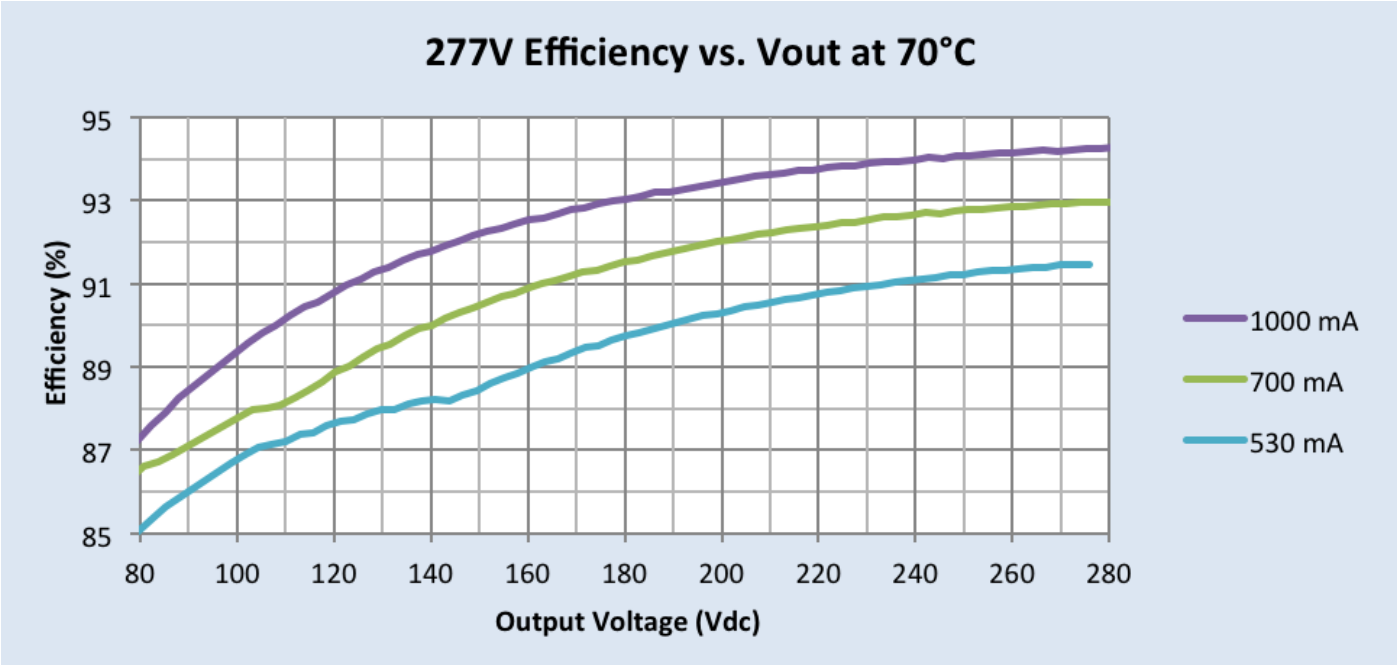

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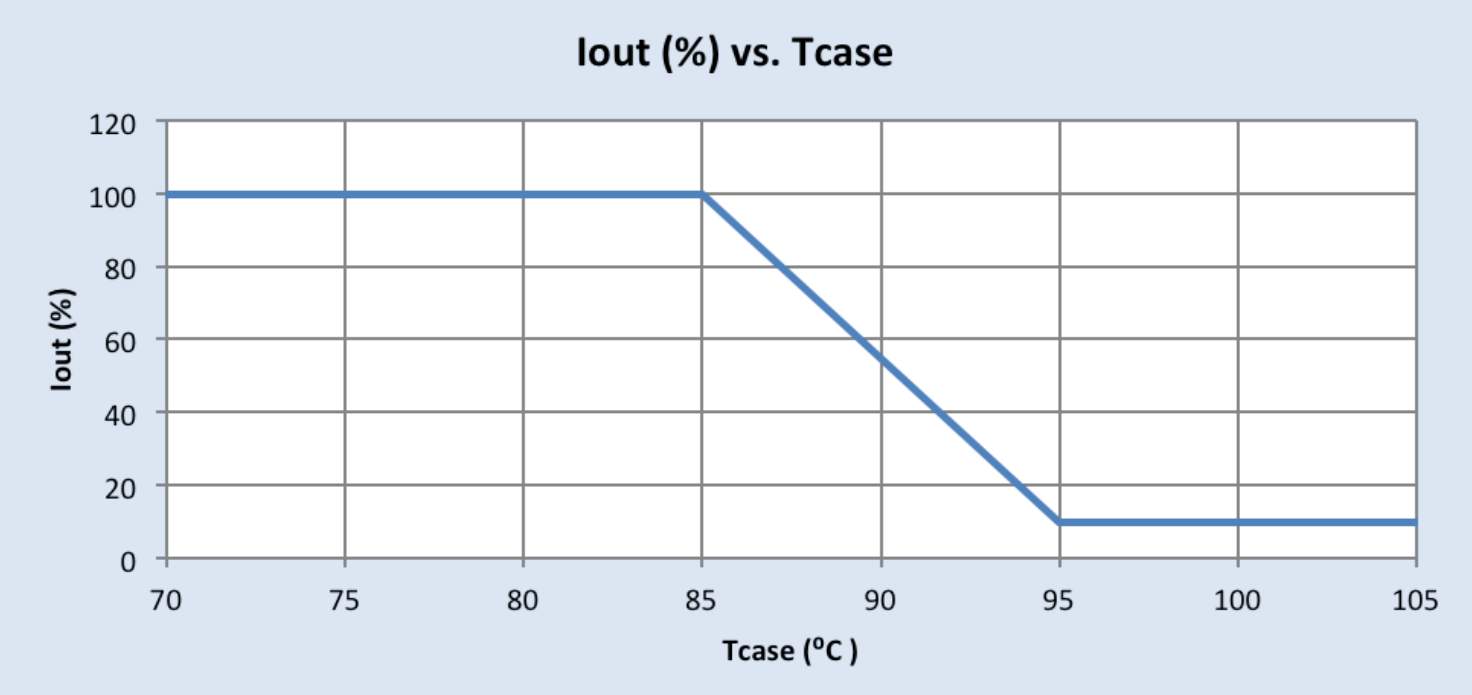
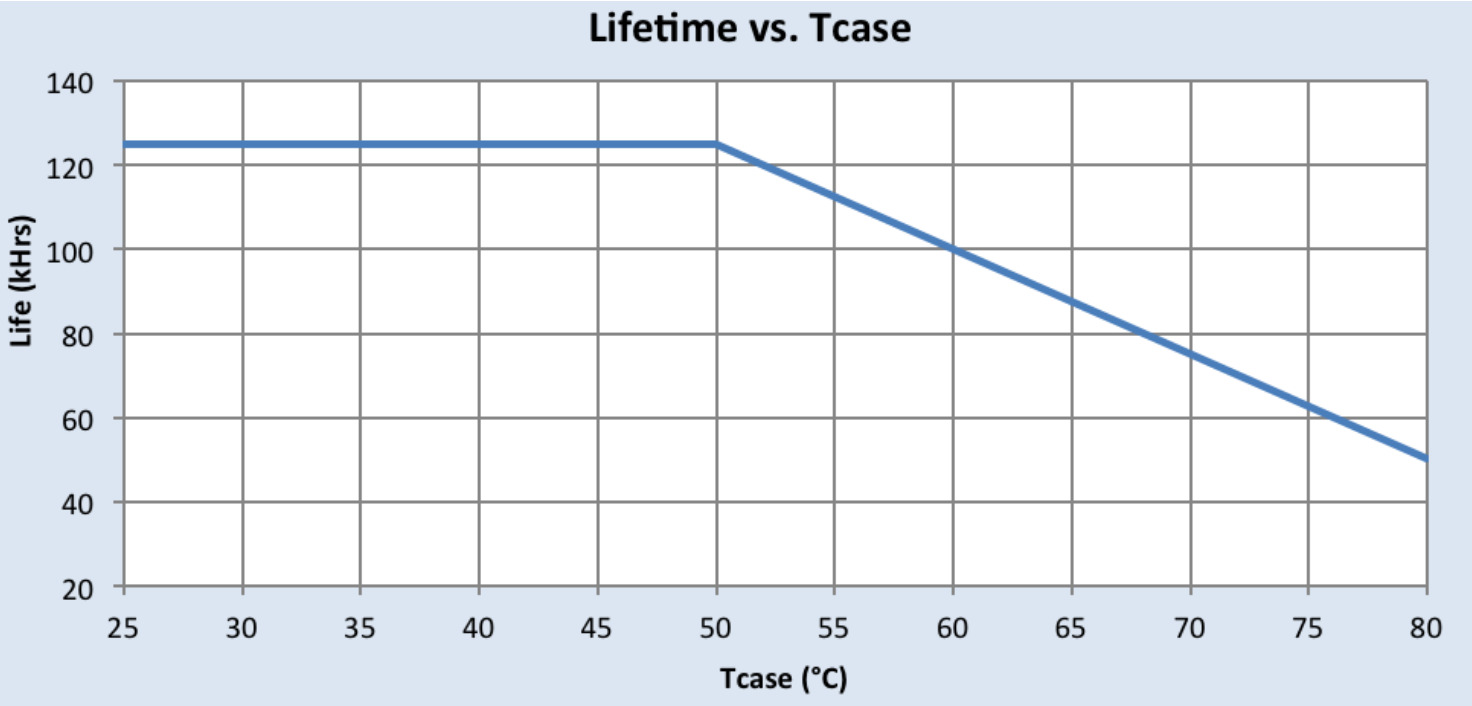
Output Current vs. Driver Case Temperature



Driver Lifetime Vs. Driver Case Temperature



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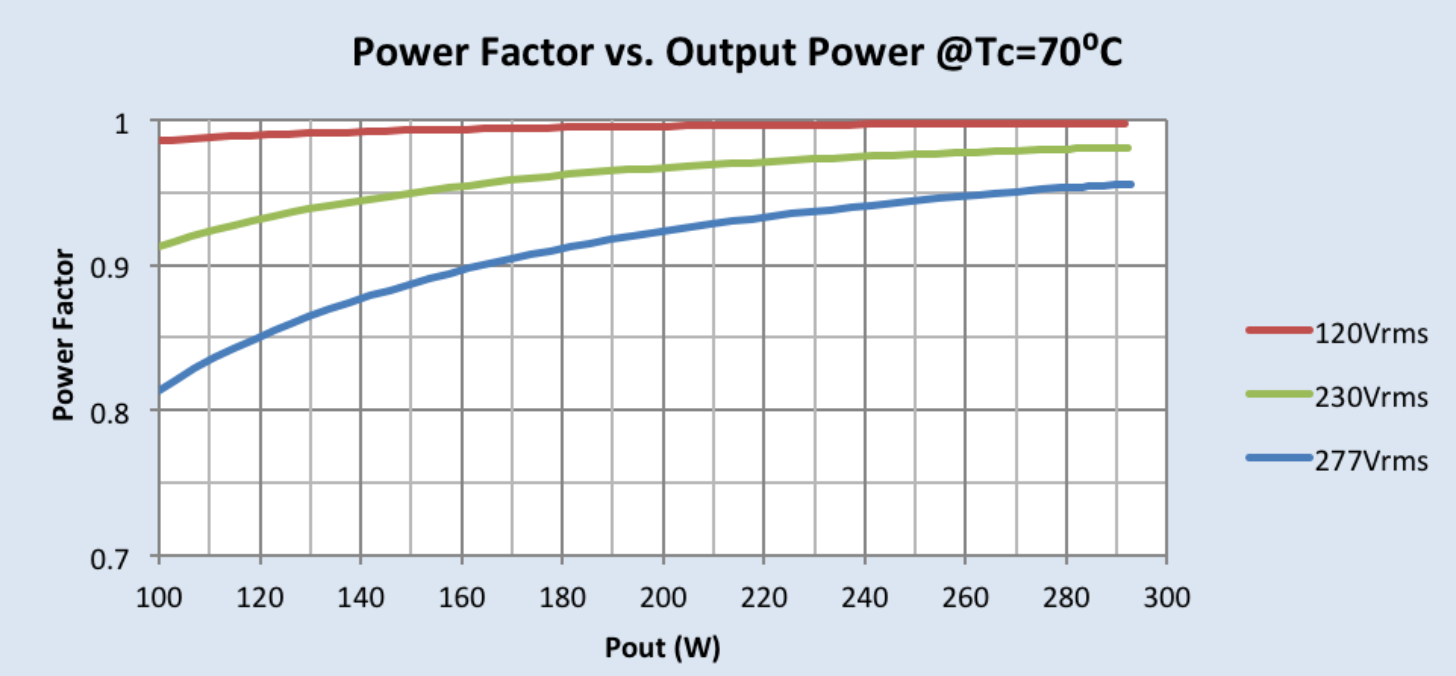
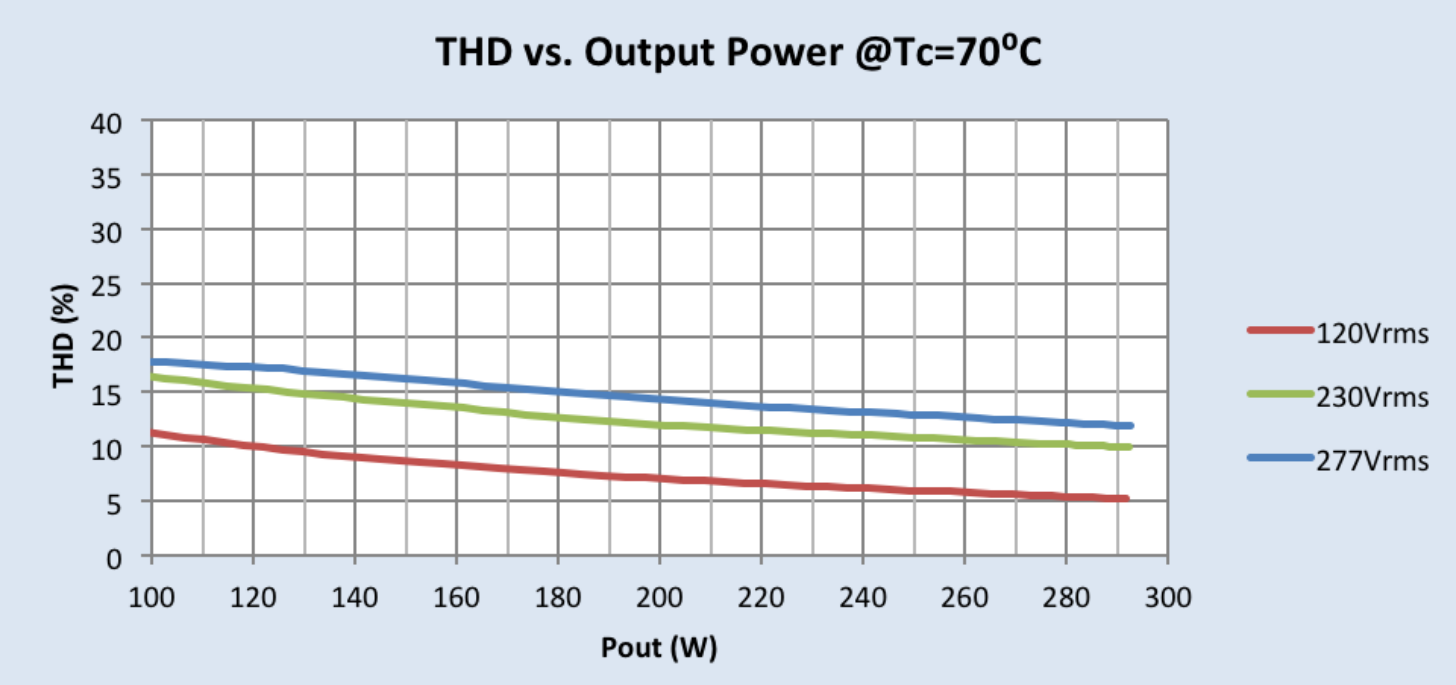
Performance Characteristics

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.





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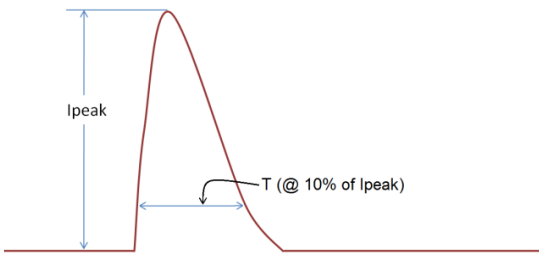
Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
120 Vrms	77A	440µs
230 Vrms	138A	520µs
277 Vrms	166A	530µs

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 2_2)	4kV	4kV

Programming Tool

MultiOne
For latest version please check www.philips.com/multione

CE Isolation

Basic Isolation: 2U+1000V
Double Isolation: 4U+2750V

Isolation	Input Wires	Output Wires	DALI Wires	0-10V Wires	Chassis
Input Wires	NA	Basic	Basic	Basic	Double
Output Wires	Basic	NA	Basic	Basic	Basic
DALI Wires	Basic	Basic	NA	NA	Double
0-10V Wires	Basic	Basic	NA	NA	Double
Chassis	Double	Basic	Double	Double	NA

UL Isolation

Isolation	Input Wires	Output Wires	DALI Wires (Class 1&2)	0-10V Wires (Class 1&2)	Chassis
Input Wires	NA	2xU+1kV	2.5kVac	2.5kVac	2xU+1kV
Output Wires	2xU+1kV	NA	2.5kVac	2.5kVac	2xU+1kV
DALI Wires (Class 1&2)	2.5kVac	2.5kVac	NA	NA	2.5kVac
0-10V Wires (Class 1&2)	2.5kVac	2.5kVac	NA	NA	2.5kVac
Chassis	2xU+1kV	2xU+1kV	2.5kVac	2.5kVac	NA

U = Max input voltage

UL Conditions of Acceptability

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

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