PHILIPS
ADVANCE

LED Driver

Xitanium

25W 0.1-1.0A 36V 0-10V INT
(1% dim) with SimpleSet
XI025C100V036DSM1
XI025C100V036DSM5

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

LISTED
E321253
Class P
LED class 2 output
For Dry and Damp Location

UL 2043 Plenum Rated
Conforms to
UL STD 991
for SREC

Safety Related
Electronic Circuit E321253

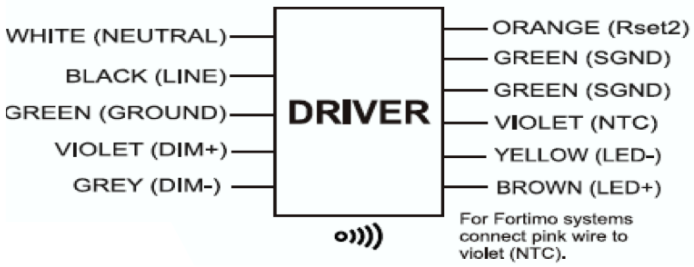
RoHS
COMPLIANT

The Philips Advance Xitanium range of downlight LED drivers is designed to provide OEMs with ultimate flexibility. These models are compatible with standard 0-10V dimming systems to deliver reliably smooth dimming performance down to a minimum of 1%. Enabled with SimpleSet technology, these drivers offer the needed flexibility and performance for the application with precise tuning of drive currents, selectable dimming curves and adjustable minimum dimming levels. The drivers' wide operating windows, compact size and simple current adjustability allow luminaire manufacturers to easily design downlight fixtures with desired lumen levels to suit the application.

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
120	25	18 - 36	0.1 - 1.0	84	Life-80°C UL-90°C	0.25	31	<10%	>0.95	2.5	UL damp & dry
277				86		0.11		<15%			

Wiring Diagram



Dimming	Dimming Range (with specified dimmers)	Minimum Output Current (A)	Other Comments
0-10V Analog Class 1 or Class 2 Wiring	1% ~ 100% (for output current range 0.3-1.0A)	0.003	Dimming source current: 150 µA

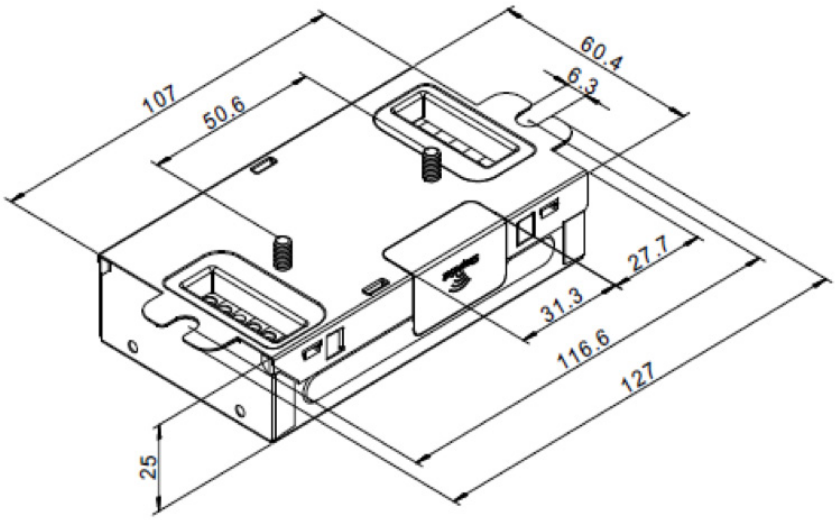
WARNING:
Install in accordance with national and local electrical codes. Use 18AWG solid or tinned stranded copper wire.

GROUNDING:
Driver case must be grounded.

Xitanium 25W 0.1-1.0A 36V 0-10V INT (1% dim) with SimpleSet

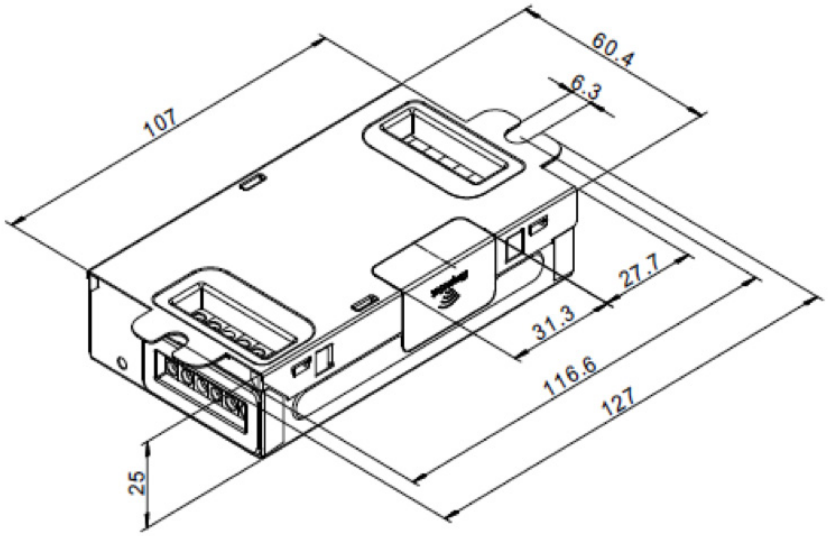
Enclosure

XI025C100V036DSM1 (bottom entry)



	In. (mm)
Case Length	4.21 (107.00)
Case Width	2.38 (60.4)
Case Height	0.98 (25.00)
Mounting Length	4.57 (116.00)
Overall Length	5 (127.00)

XI025C100V036DSM5 (side entry)



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Features

- 50,000+ hour lifetime[1]
- SimpleSet programmable
- Large operating window
- 1% minimum dim level
- Compatible with Philips Fortimo downlight modules

Benefits

- SmartMate style housing enables easy design-in with excellent thermal performance
- Enables simple, fast, flexible application-specific configurations
- Enables fixture designs with comprehensive application coverage for various loads and lumen levels
- A single source system offer optimized for performance

Application

- Indoor downlight applications
- Wall sconces and ceiling surface luminaires
- Offices (corridors, conference rooms, lobby areas)
- Retail, Hospitality

Electrical Specifications

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

Product Data

Order Information	
Full Product Code	XI025C100V036DSM1 [bottom entry] (Mid-Pack, 16pcs/Box), 12NC: 929000765713 XI025C100V036DSM5 [side entry] (Mid-Pack, 16pcs/Box), 12NC: 929000765813
Line Frequency	50/60Hz
Min. Mains Voltage Operational	108 Vac
Max. Mains Voltage Operational	305 Vac
Output Information	
Maximum Open Circuit Voltage	< 60Vdc, Class 2 output
Output Current Ripple (ripple = peak to average / average)	15% max @ max Iout 4% max @ Visible for stroboscopic frequency range 60Hz-3KHz
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 source current from driver. See dim curve for detail.
AOC (Adjustable Output Current)	0.1A-1.0A via SimpleSet (Factory Default at 1.0A)
Additional SimpleSet Configurable Features	Adjustable minimum dimming level, Dimming curve selection (linear or logarithmic), Adjustable output level, Adjustable output min, OEM write protection
Environment & Approbation	
Operating Ambient Temp. Range	-20°C to +50°C
Max Case Temperature (Tcase)	80°C
Agency Approbations	UL8750, UL991, CSA250.13-14, C22.2 No. 0.8-12 , CSA Class P, ETL Class P, UL 2043 Plenum Rating
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Audible Noise	<24dB Class A
Weight	0.44 Lbs / 0.2 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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0-10V Dimming Curve

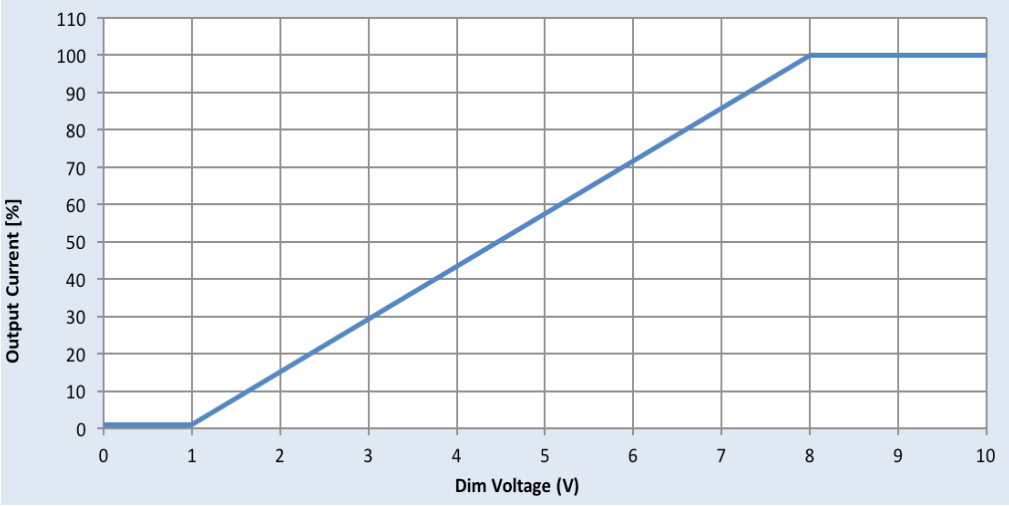
Dimming source current from the driver: 150µA (@ 0<Vdim<8V)

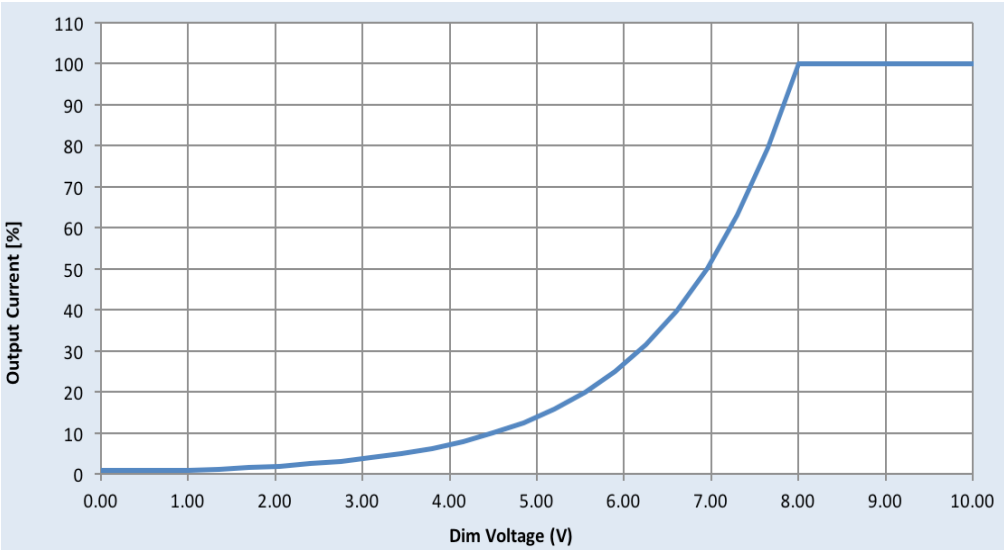
Minimum dim level: 1% of Iout (minimum 300mA)

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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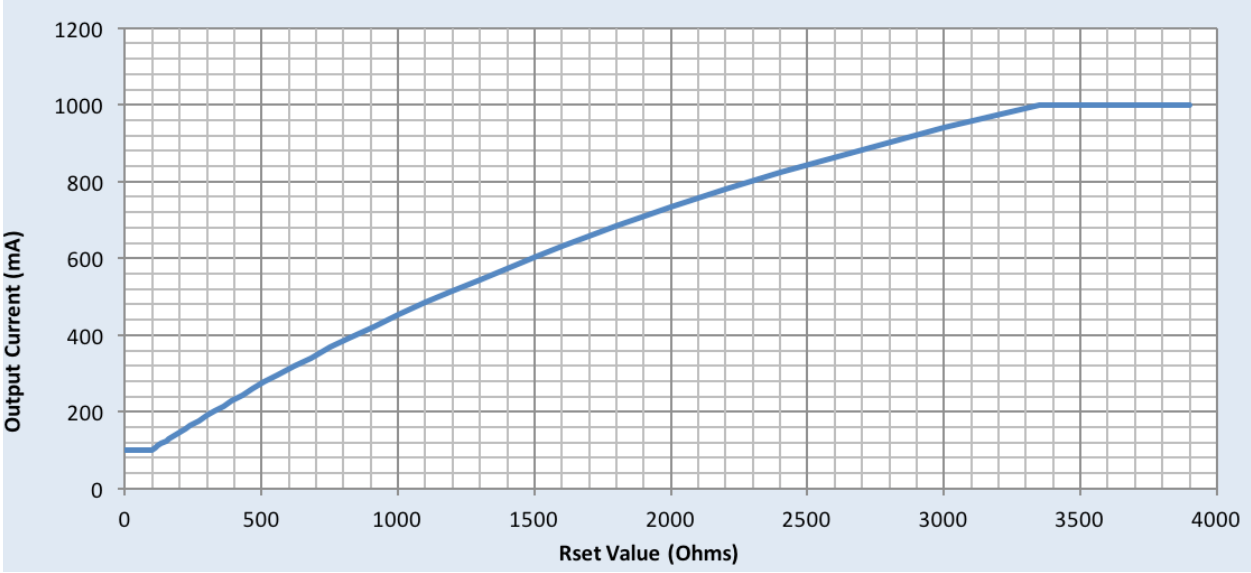
AOC (Adjustable Output Current) Settings (Rset)



Rset (Ohms)	Current (mA)	Rset (Ohms)	Current (mA)
1	100	620	318
100	100	680	340
110	105	750	368
120	111	820	392
130	116	910	422
150	125	1000	452
160	130	1100	485
180	138	1200	515
200	146	1300	545
220	155	1500	602
240	166	1600	632
270	176	1800	684
300	190	2000	733
330	204	2200	780
360	215	2400	823
390	228	2700	883
430	245	3000	941
470	261	3350	1000
510	277	3600	1000
560	297	3900	1000

Notes

1. Current is set via a resistor between Rset2 and SGND leads.
2. Any through-hole or SMD resistor with >0.25W and >20V can be used as Rset.
3. Driver will default to 1000mA when Rset is left open.

Xitanium 25W 0.1-1.0A 36V 0-10V INT (1% dim) with SimpleSet

Electrical Specifications

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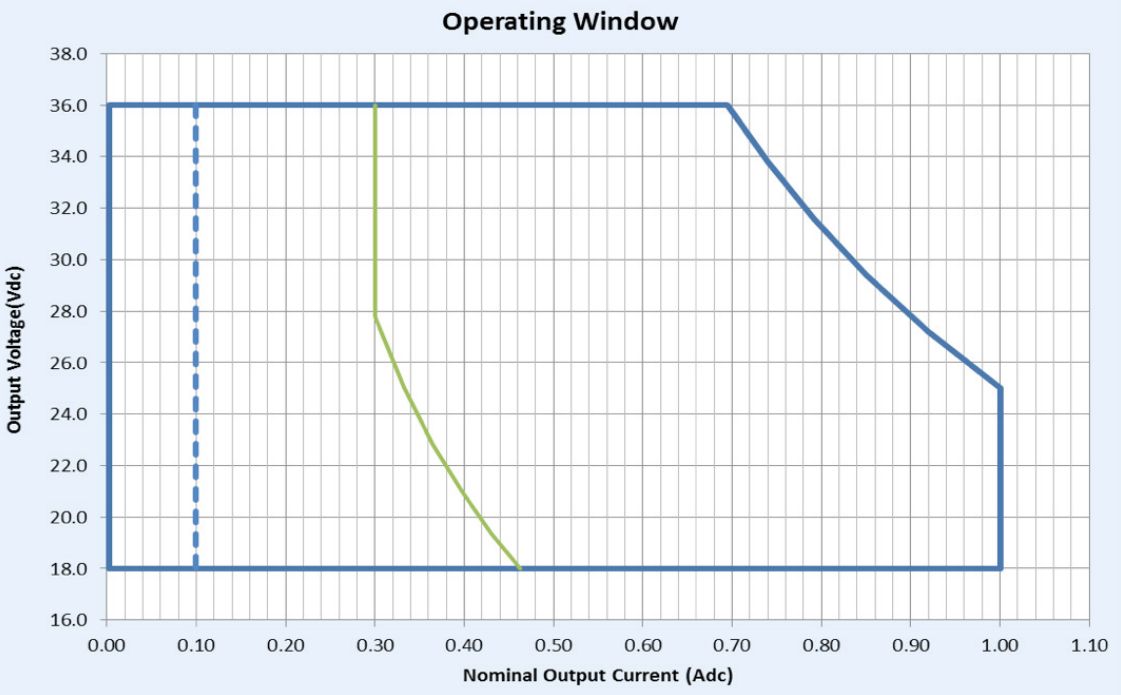
Driver Output Window



Notes

1. Factory default output current is 1.0A.
2. For dimming to a minimum level of 1% the output current setting through AOC should be ≥ 0.3A.

Electrical Specifications

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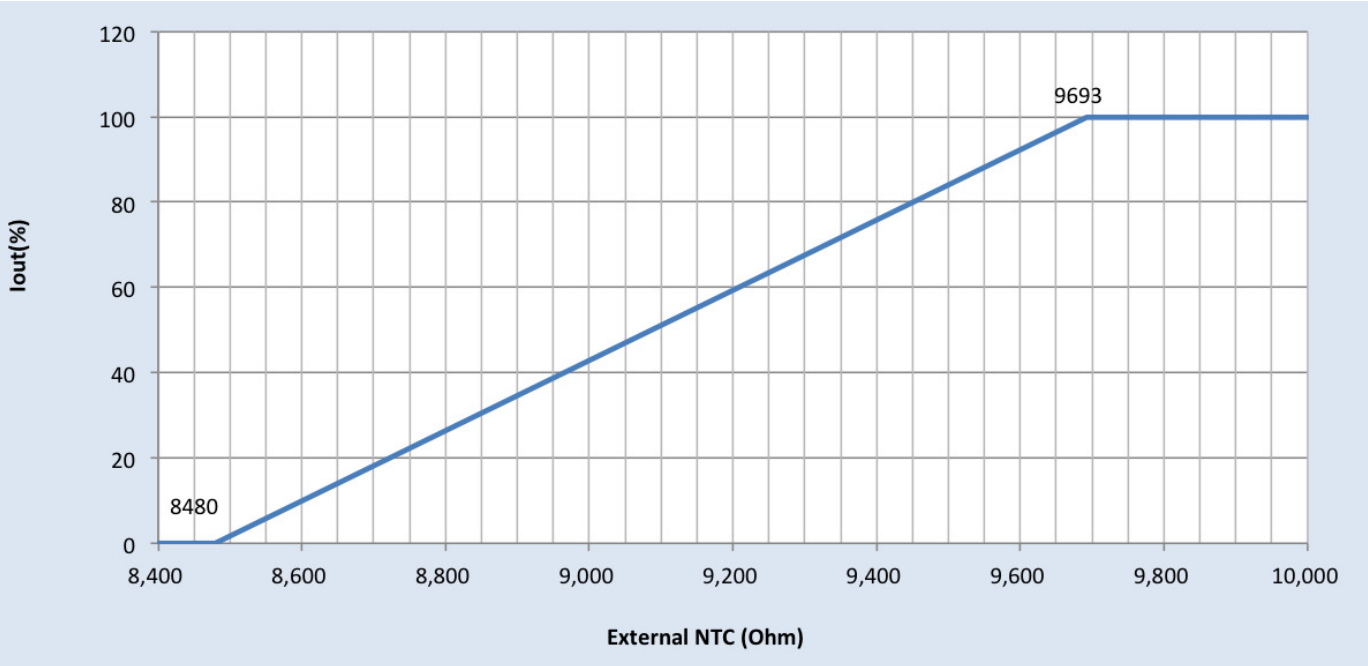
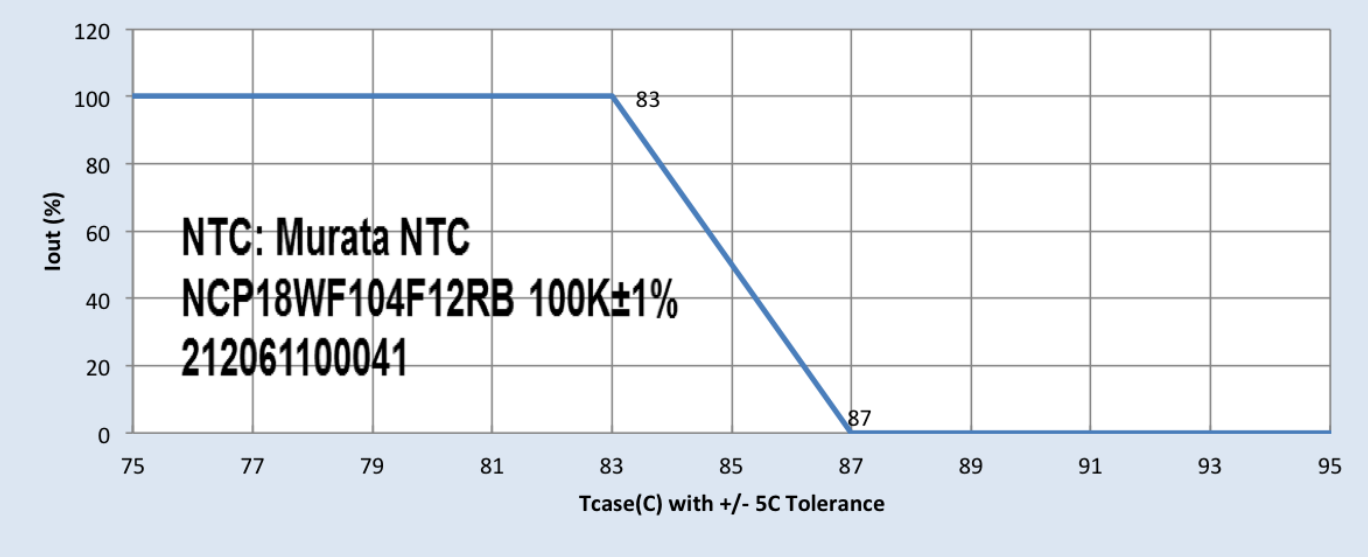
Output Current Vs. External NTC Resistance



Output Current Vs. LED Module Temperature using 100kohm NTC



Xitanium 25W 0.1-1.0A 36V 0-10V INT (1% dim) with SimpleSet

Electrical Specifications

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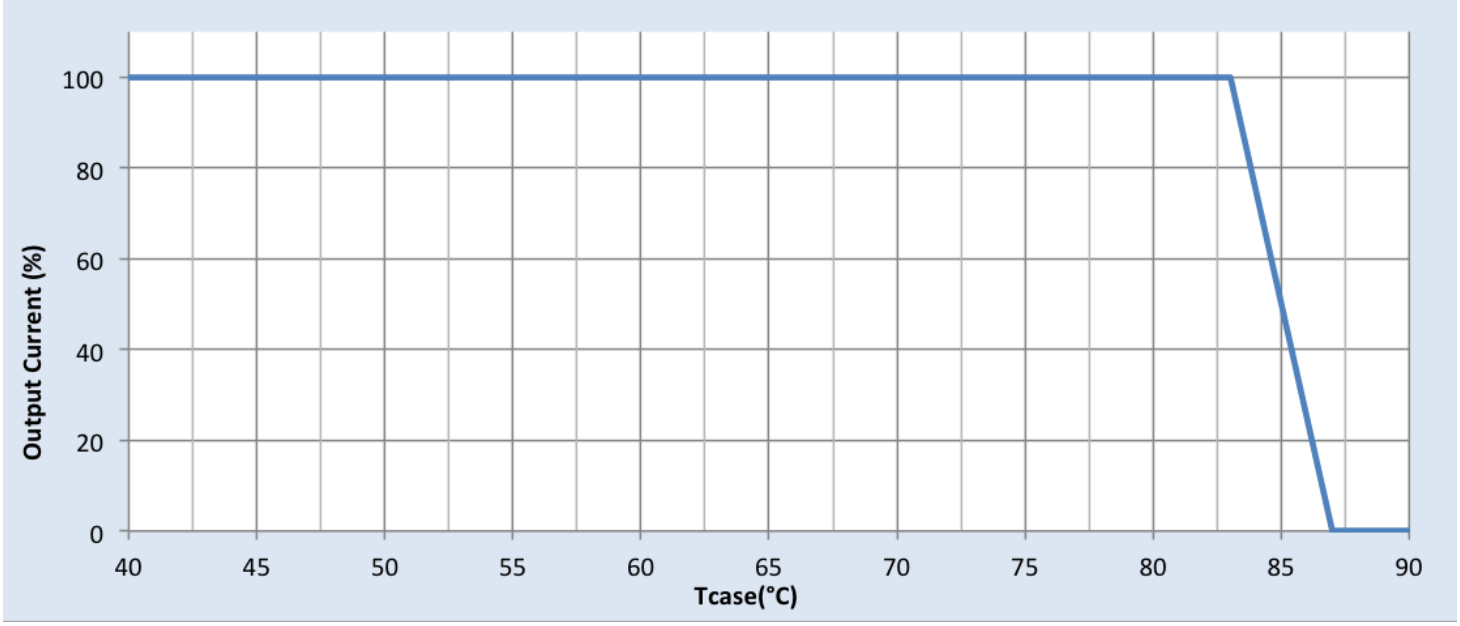
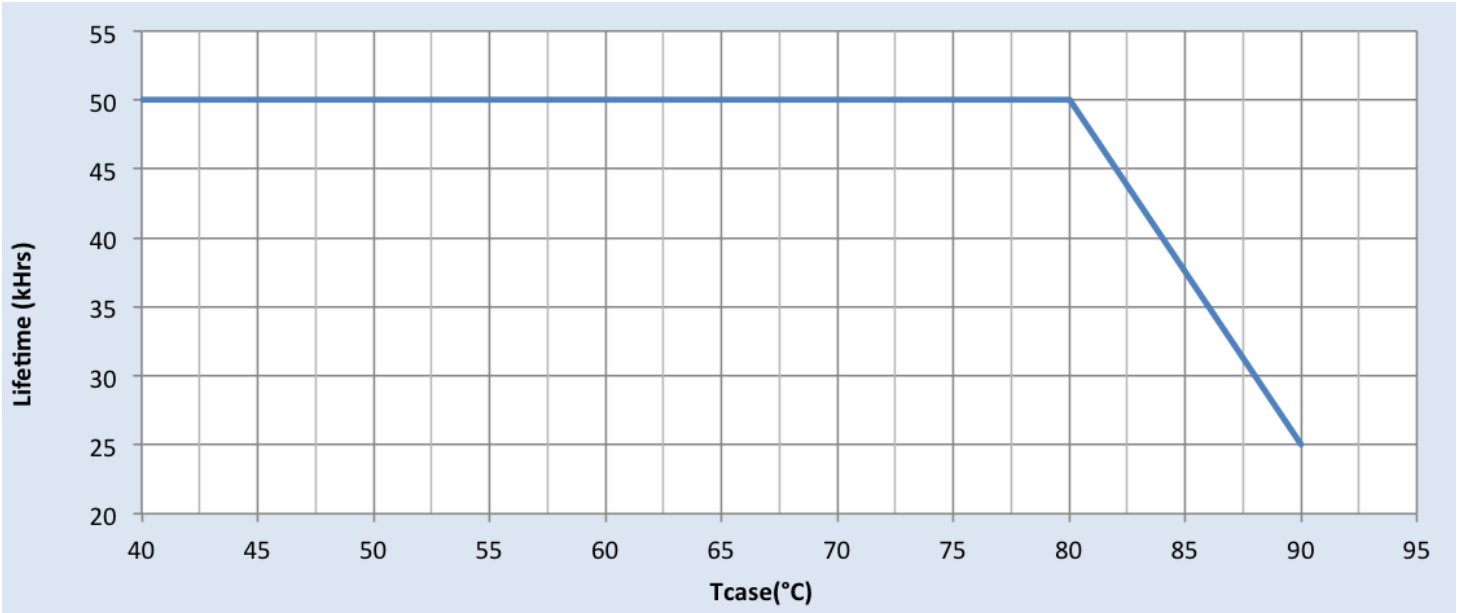
Output Current Vs. Driver Case Temperature



Note

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

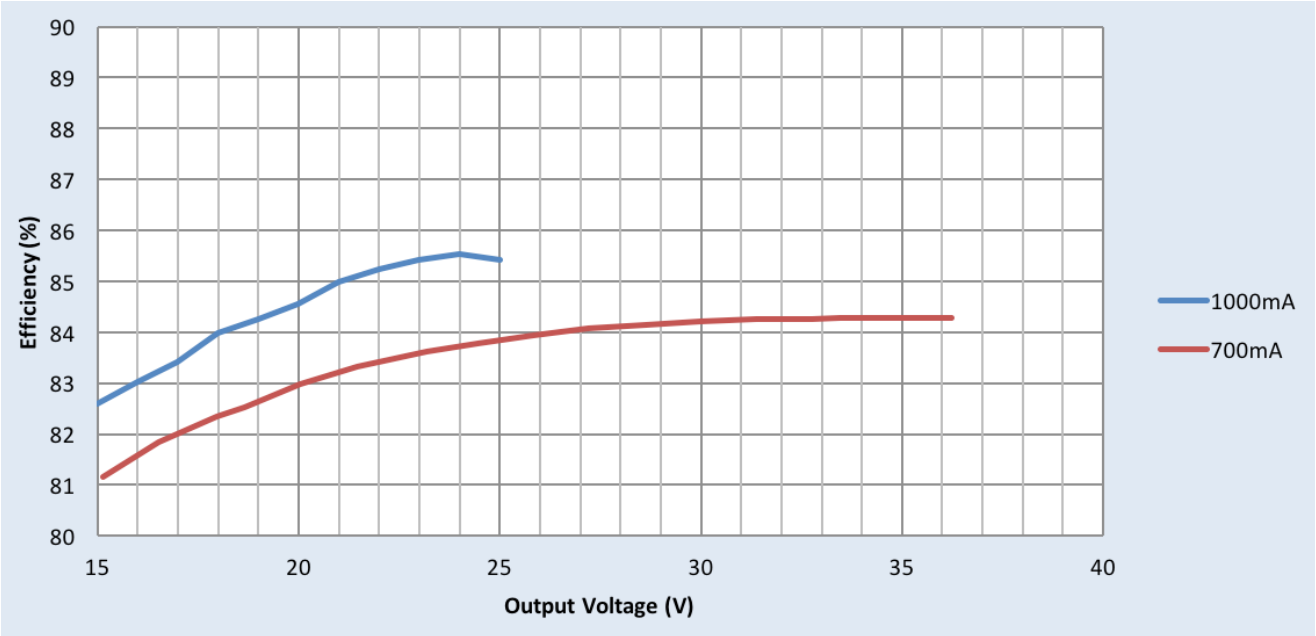
Driver Lifetime vs. Driver Case Temperature



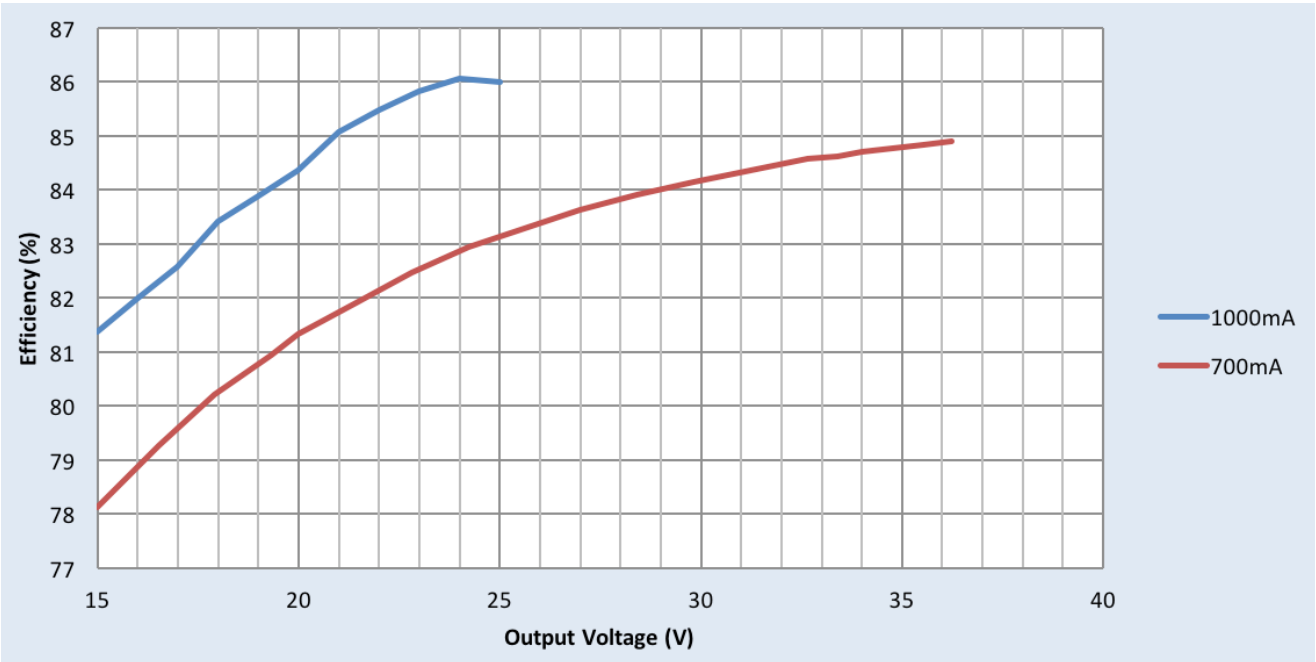
Performance Characteristics

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

Efficiency Vs. Output Voltage at 120Vac



Efficiency Vs. Output Voltage at 277Vac

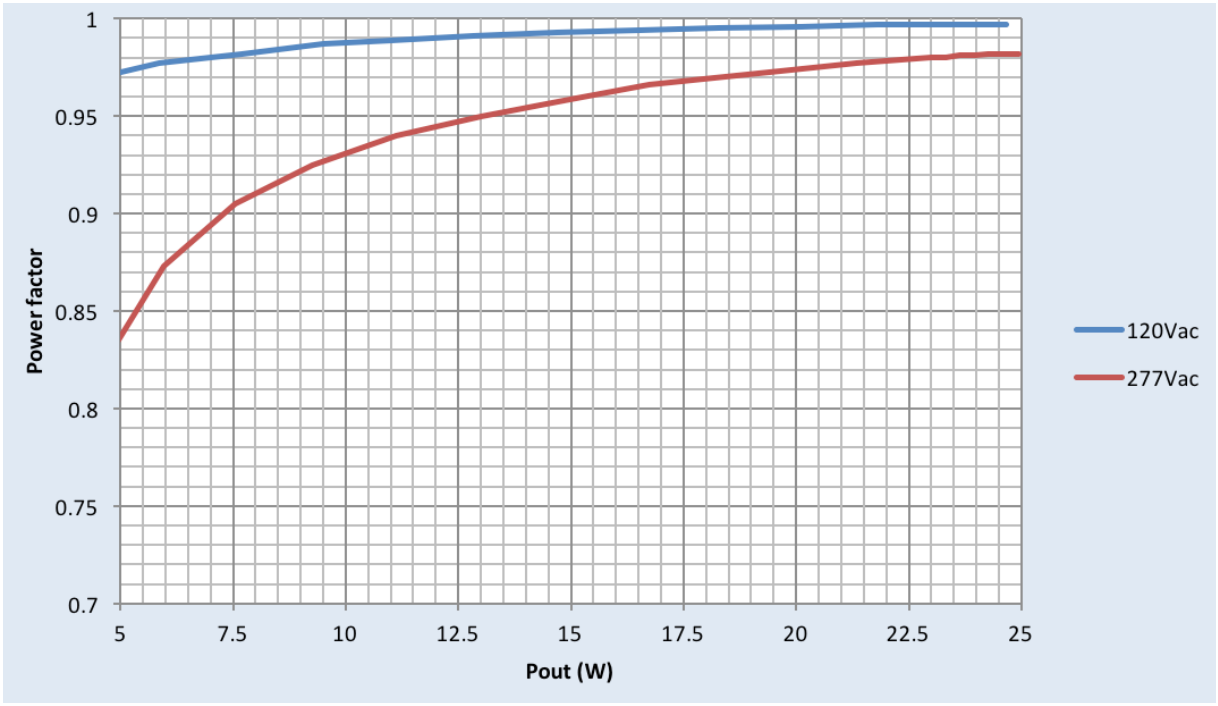


Xitanium 25W 0.1-1.0A 36V 0-10V INT (1% dim) with SimpleSet

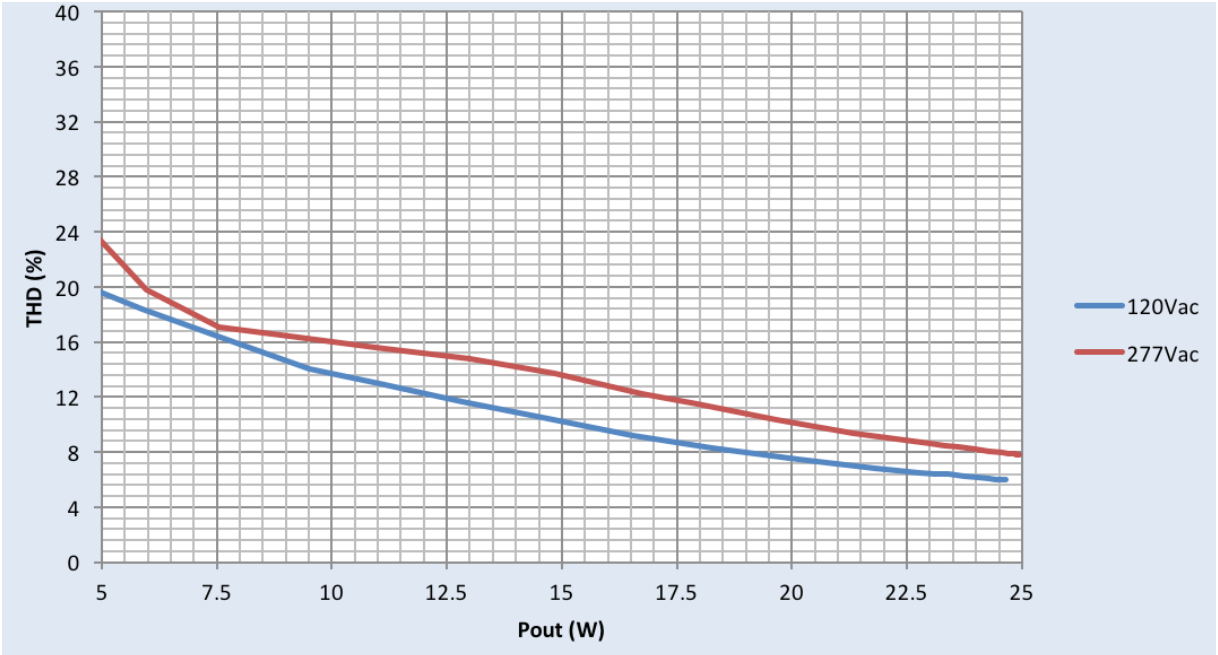
Performance Characteristics

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

Power Factor Vs. Output Power



Total Harmonic Distortion (THD) Vs. Output Power



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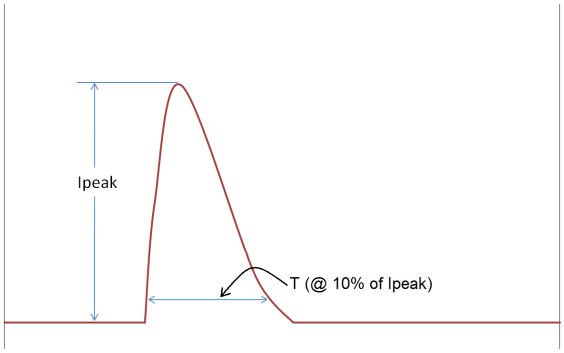
Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
120 Vrms	11A	240µS
277 Vrms	25A	240µS

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)
100kHz Ring Wave (w/t 30Ω)	2.5KV	2.5KV

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 working voltage

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