ADVANCE
by signify

LED Driver

Xitanium

XI180C125V200PSF1

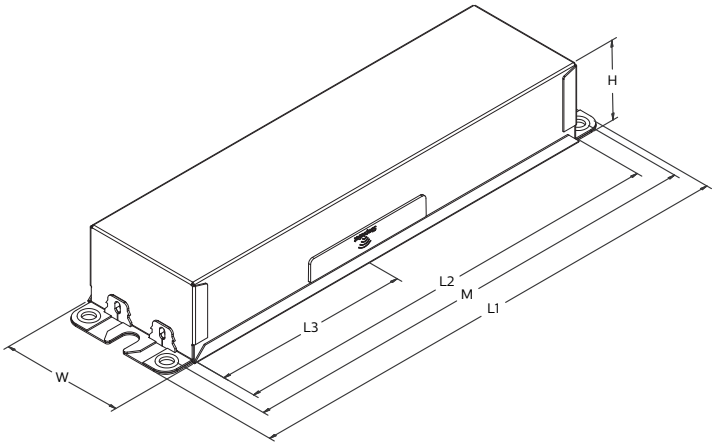
Advance Xitanium LED drivers with SimpleSet technology and auxiliary power supply extend the driver application scope to include simple self-contained control solutions for luminaires. The driver provides an additional auxiliary output for powering simple sensors (occupancy/photocell), and the driver has a built-in standby mode through the 0-10V leads. The additional auxiliary power output eliminates the need for a mains relay or power pack for the sensor and allows the sensor to turn the driver on/off and also operate the dimming function.

Specifications

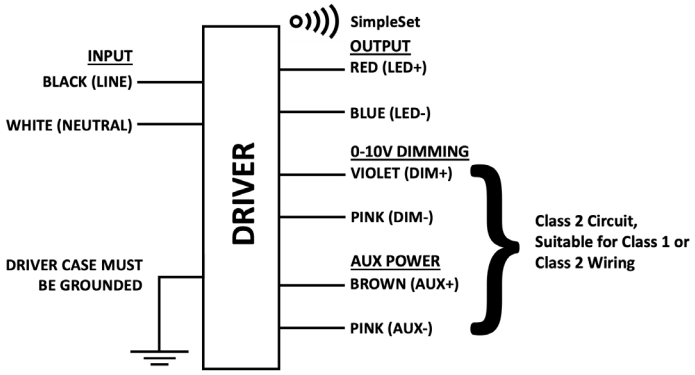
Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max. Load and 75°C Case	Max. Case Temp. (°C)	Input Current (A)	Max. Input Power (W)	THD @ Max. Load (%)	Power Factor @ Max. Load	Surge Protection (Combi-Wave, KV)	Envir. Protection Rating	Driver Type
120	180	70-210	0.1 - 1.25	91	Life - 85°C UL - 90°C	1.68	200	<10%	>0.95	6	UL damp & dry and Type HL	Constant Current
277				93		0.73		<15%				

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%	0.07

Warning

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

RoHS

c UL us LISTED E321253

Xitanium XI180C125V200PSF1

180W 0.1–1.25A 0–10V Dimming with SimpleSet and Aux. Output

Features

- 50,000+ hour lifetime[1]
- Programmable output current through SimpleSet technology
- Large operating window
- 6kV combi-wave surge rating to comply with ANSI C82.77-5 CAT C low
- Auxiliary power output
- 0–10V dimming with ON/OFF functionality

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
- Provides power supply for additional control/sensing devices in the fixture
- The driver can be turned ON/OFF using a passive low-voltage control device or relay

Application

- Area
- Roadway
- Parking garages
- Floodlights
- High-bay and mid-bay

Electrical Specifications

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

Product Data

Order Information	
Full Product Code	929001744513M (Mid-Pack, 10pcs/Box)
Line Frequency	50/60Hz
Min. Mains Voltage Operational	108 Vac
Max. Mains Voltage Operational	305 Vac
Output Information	
Maximum Open Circuit Voltage	285Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max Iout (Low frequency ripple (≤120Hz) content <5%)
Output Current Tolerance (in performance window)	<5%
Protections	Short Circuit, Open Circuit Protection for LED + and LED – and Temperature Foldback
Features	
Auxiliary Power Supply Output	
Nominal Aux. Output Voltage	16 – 24Vdc
Maximum Aux. Output Voltage Ripple (peak/average)	2%
Rated Aux. Output Power	2.5W
Peak Power (<10s)	4W
Max. Output Current	140mA. See Aux. Output for details.
Turn-on Time (from power on to >16V)	<100ms
Turn-off Time (from power off to <1V)	<1s
Max. Voltage Overshoot during Turn ON	30Vdc
Max. Voltage Undershoot during Turn ON	8Vdc

1. 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.

Xitanium XI180C125V200PSF1

180W 0.1–1.25A 0–10V Dimming with SimpleSet and Aux. Output

Electrical Specifications

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

Product Data (continued)

Max. Hold-up Time after Mains Power OFF (20mA load)	t.b.d
Protections	Short Circuit & Open Circuit Protection for Aux. + and Aux. – and Over-temperature Foldback
	0–10V Dimming Interface
Dimming Source Current	150µA (+/–3%)
0–10V Active Range	1V to 8V. See dim curve for details.
0–10V Turn OFF Threshold	<0.5V(+/–0.1V)
0–10V Turn ON Threshold	>0.8V(+/–0.1V)
Input Standby Power in OFF State (across 120–277V mains range)	< 0.5W[2]
Protections	Short Circuit & Open Circuit Protection for Dim + and Dim – and protected against accidental mains applied on dimming input
	Programmable Features
AOC (adjustable output current)	0.1A–1.25A via SimpleSet (Factory Default at 1.05A)
Additional Configurable Features	Adjustable Min Dim level Adjustable Lumen Output Adjustable Lumen Output Min OEM Write Protection Driver Thermal Limit (DTL)
Environment & Approbation	
Operating Ambient Temp. Range	-40°C to +55°C
Max. Case Temperature (Tcase)	90°C
Agency Approbations	UL 8750, cUL, Class P (UL, cUL)
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Audible Noise	<24dB Class A
Weight	2.1 Lbs / 0.95 kgs

2. Input standby power is < 0.5W when no load on aux. output. With about 320mW load on aux. output, the input standby power is < 1W.

Electrical Specifications

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

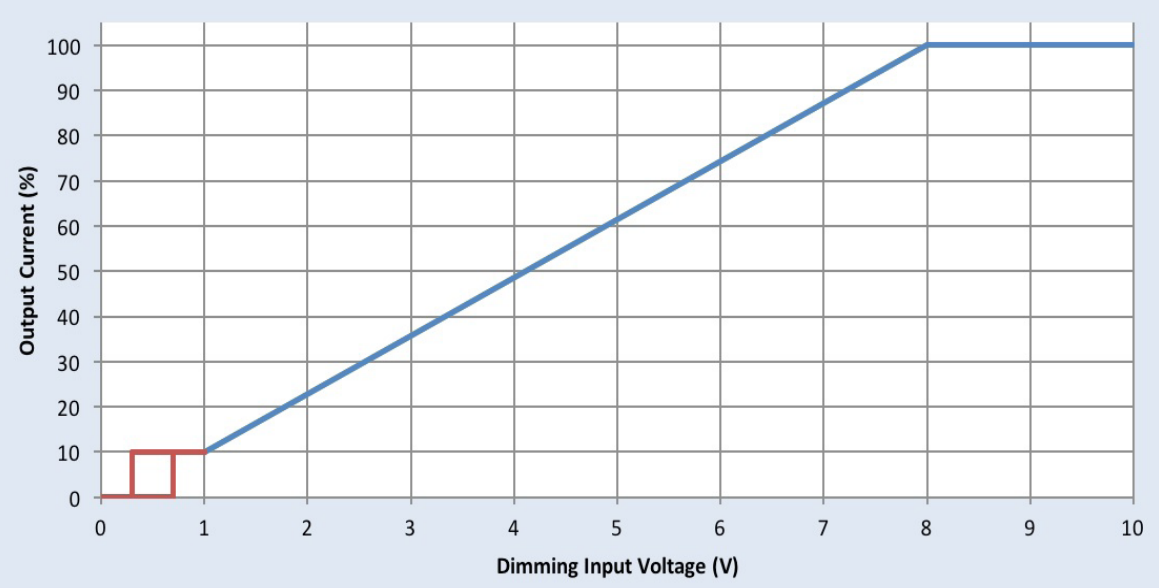
0-10V Dimming

Dimming source current from the driver: 150µA (+/-3%)

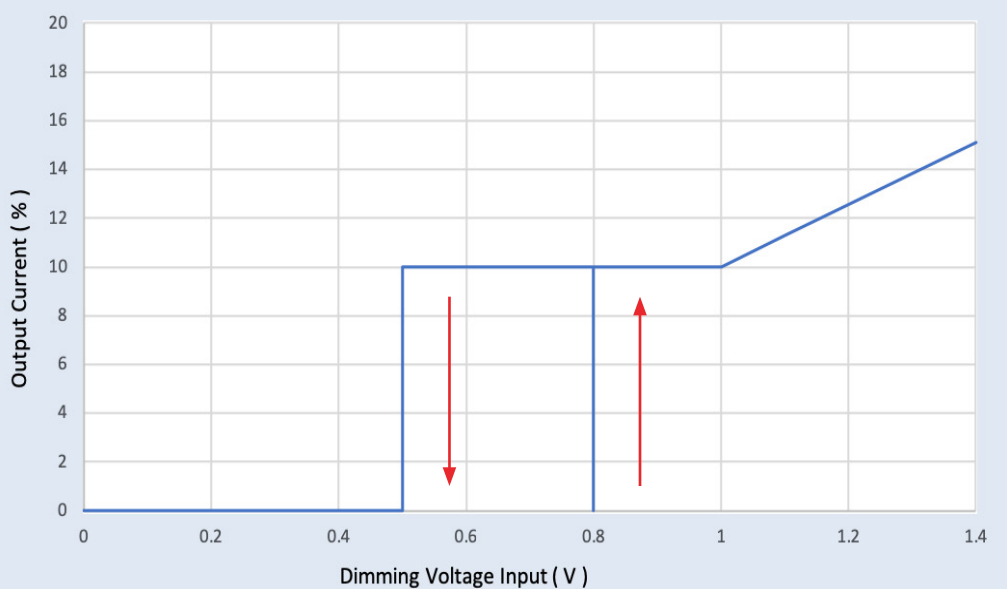
Minimum dim level: 10% of Iout setting as default

Maximum output voltage on the dimming wires: 12V

0-10V Dimming Curve



Detail on Hysteresis for ON-OFF



Electrical Specifications

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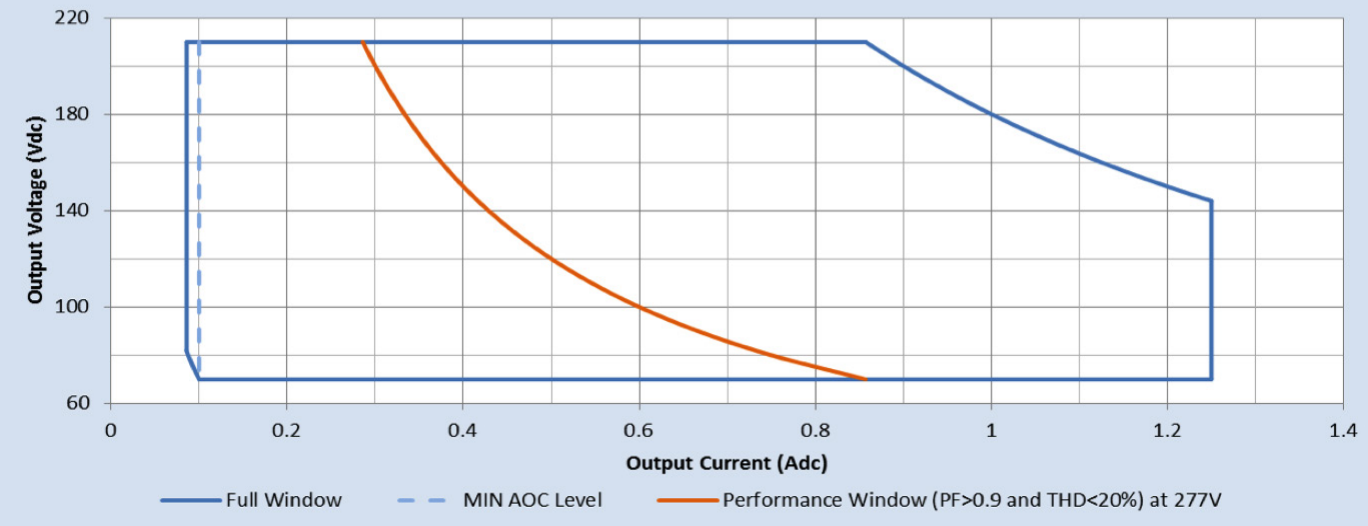
Driver Output Window



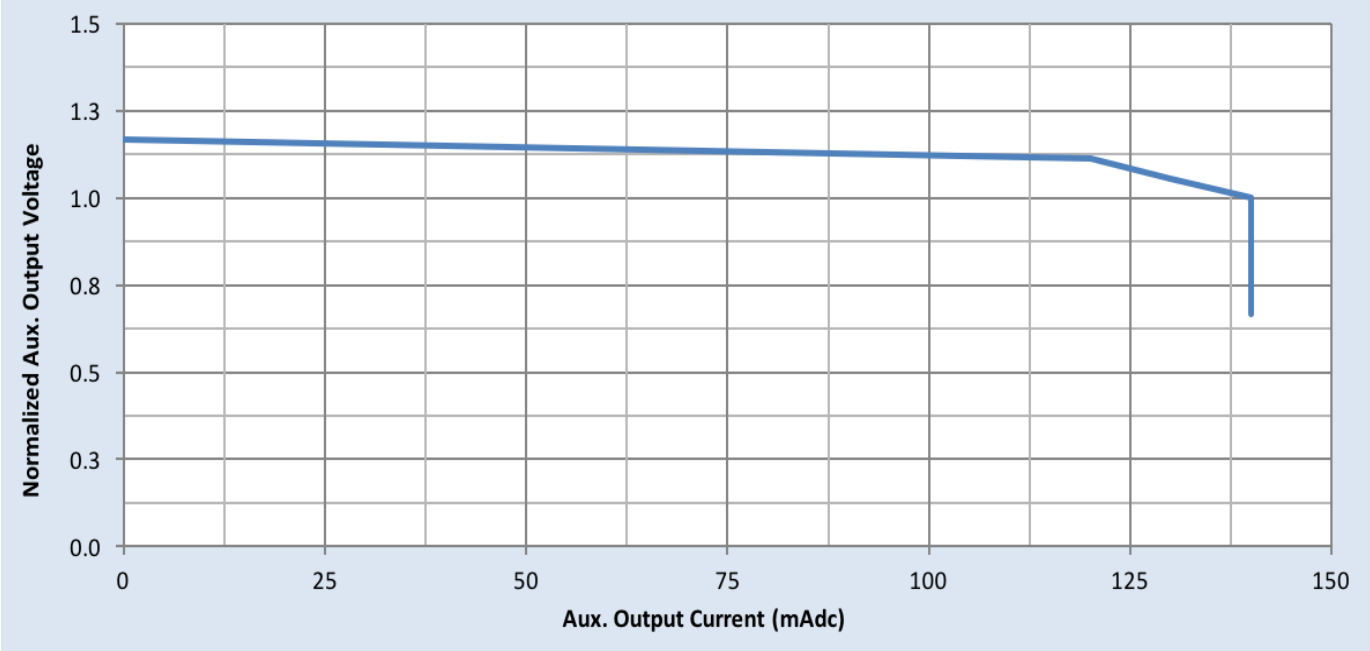
Notes

1. Factory default output current is 1.05A.
2. To get a 100% to 10% dimming range, the output current setting through AOC should be ≥ 700mA.
3. Factory default minimum dimming level is 10%. This can be adjusted between 10% and 100% using Advance MultiOne.

Electrical Specifications

All the specifications are typical and at 25°C Tcase unless specified otherwise.
Chart represents a normalized load regulation of the auxiliary power supply. Nominal ratings are listed on page 2.

Auxiliary Power



Electrical Specifications

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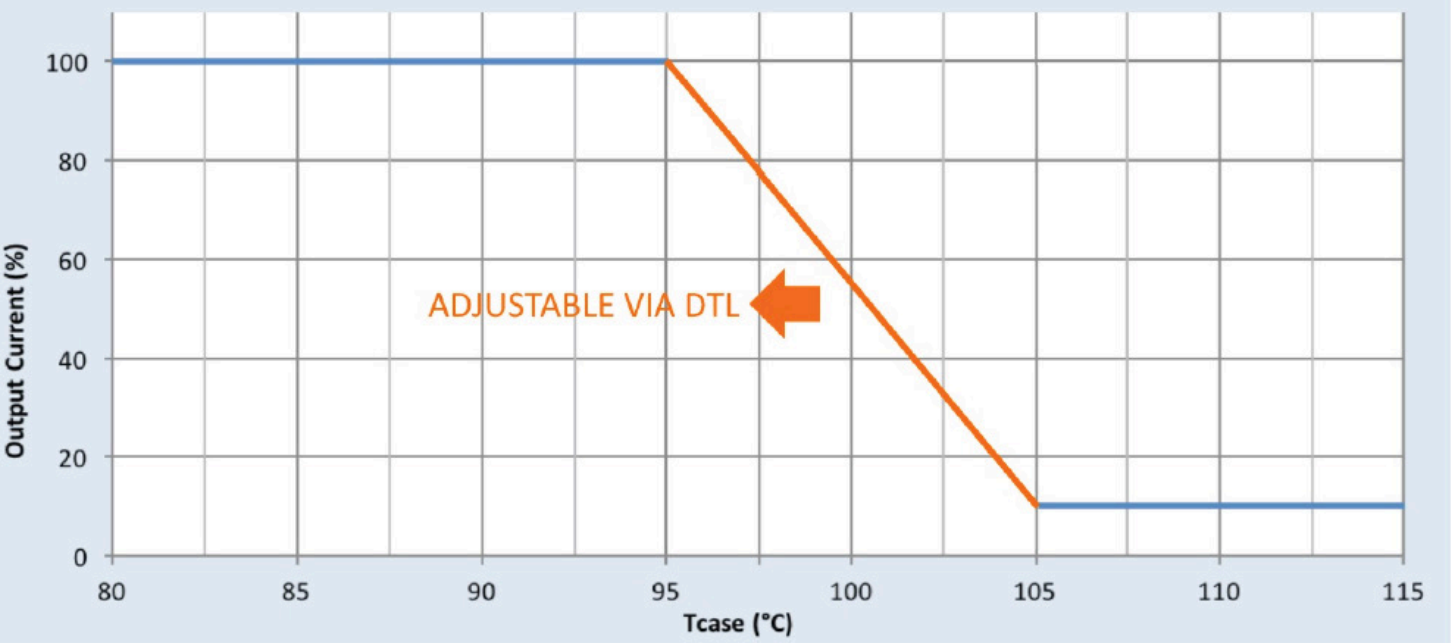
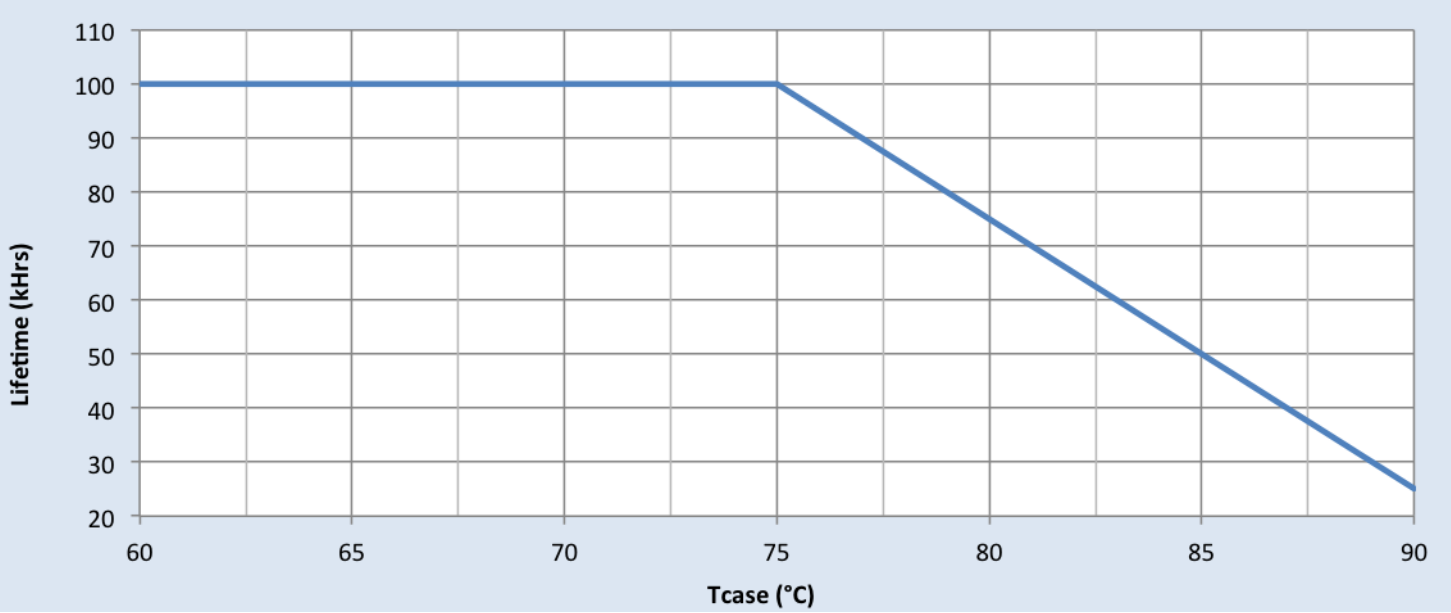
Output Current Vs. Driver Case Temperature



Note

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

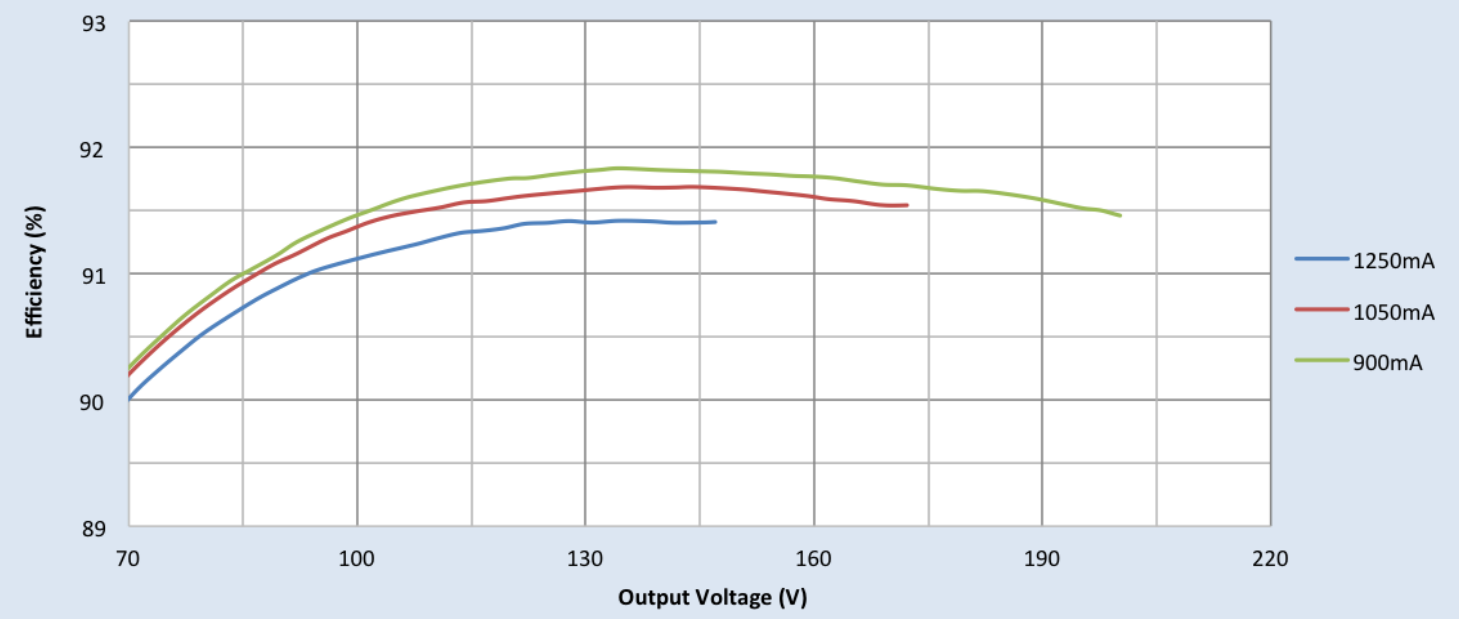
Driver Lifetime Vs. Driver Case Temperature



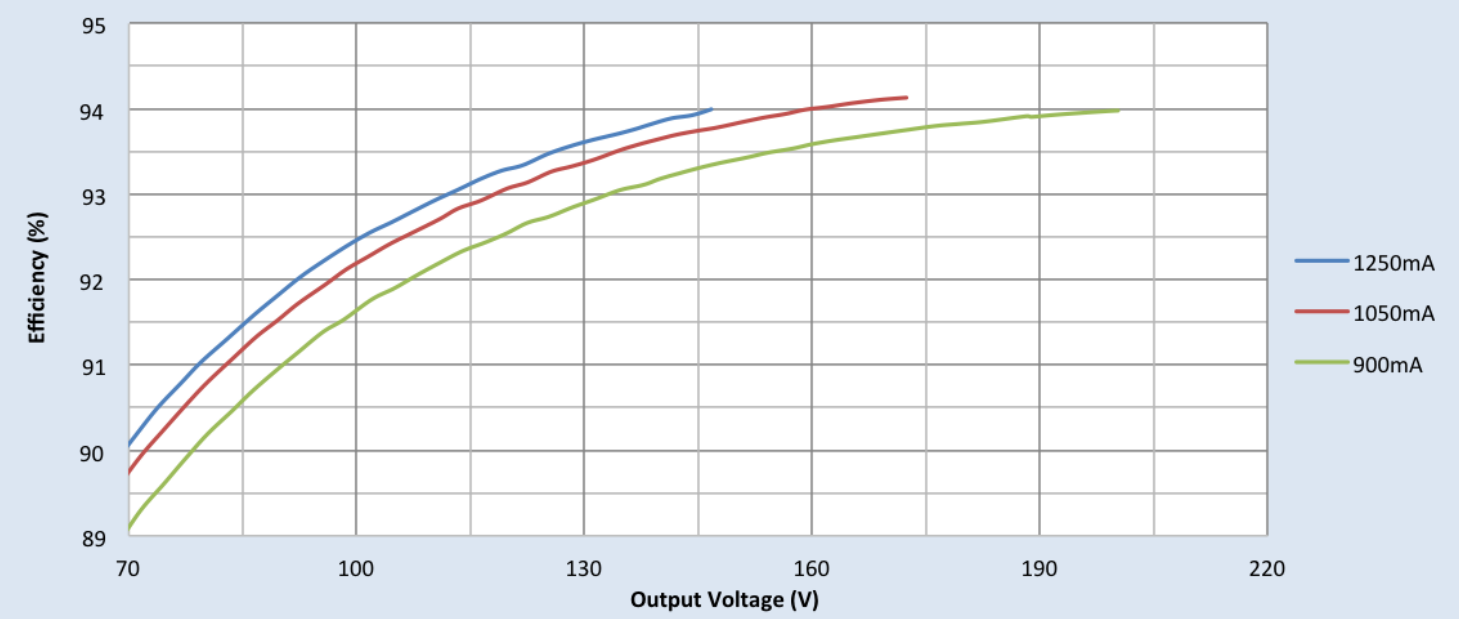
Performance Characteristics

Based on measurements on a typical sample at 75°C case. The accuracy of the measurements is within the tolerance of the measurement instruments. Measurements were made with no load on the auxiliary output port.

Efficiency Vs. Output Voltage at 120Vac



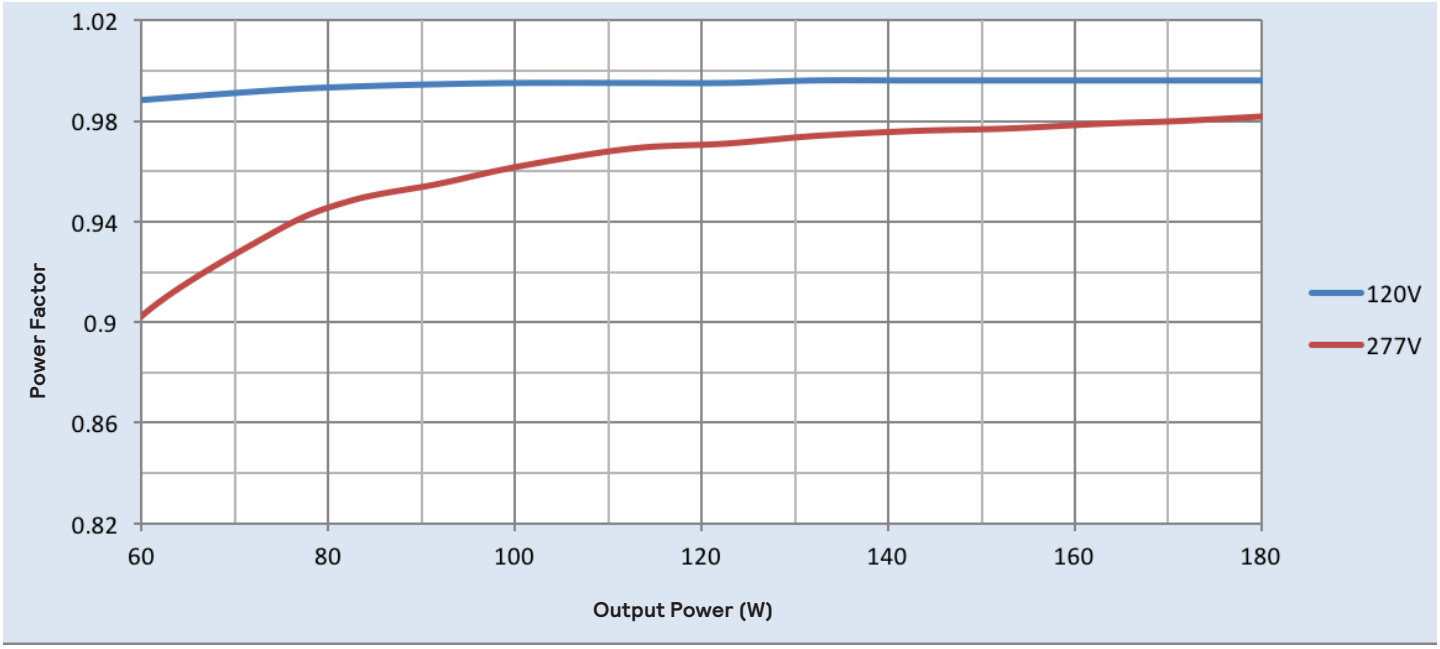
Efficiency Vs. Output Voltage at 277Vac



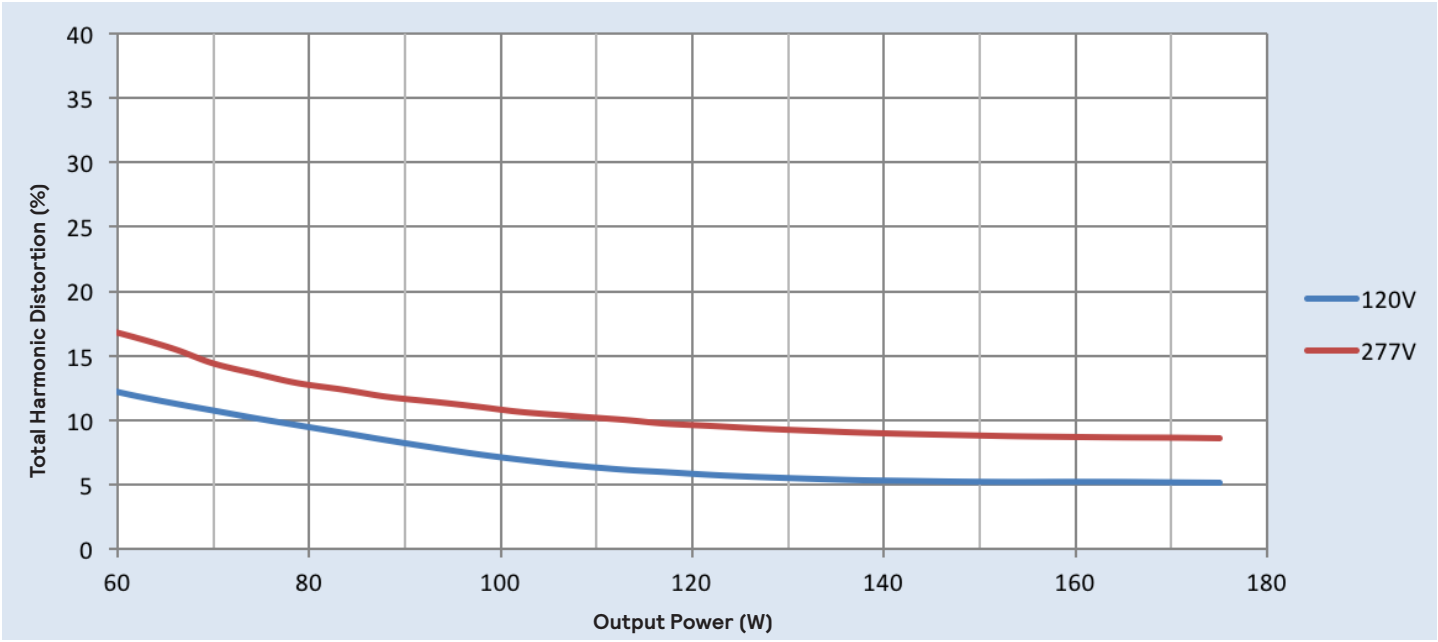
Performance Characteristics

Based on measurements on a typical sample at 75°C case. The accuracy of the measurements is within the tolerance of the measurement instruments. Measurements were made with no load on auxiliary output port.

Power Factor Vs. Output Power



Total Harmonic Distortion (THD) Vs. Output Power



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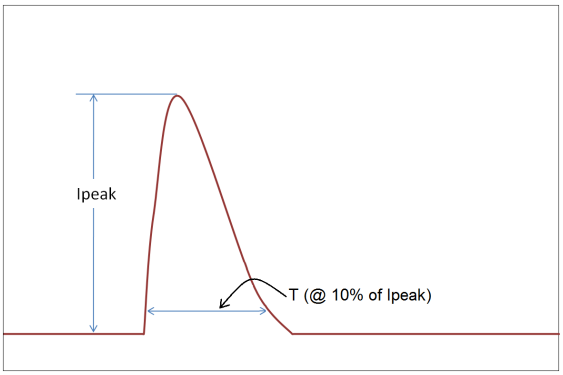
180W 0.1–1.25A 0–10V Dimming with SimpleSet and Aux. Output

Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
120 Vrms	66 A	247 µS
277 Vrms	158 A	242 µS

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	Aux. Output	Enclosure
Input	NA	2xU+1kV	2.5kV	2.5kV	2xU+1kV
Output	2xU+1kV	NA	2.5kV	2.5kV	2xU+1kV
0–10V	2.5kV	2.5kV	NA	NA	2.5kV
Aux. Output	2.5kV	2.5kV	NA	NA	2.5kV
Enclosure	2xU+1kV	2xU+1kV	2.5kV	2.5kV	NA

U = Max. working voltage

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