



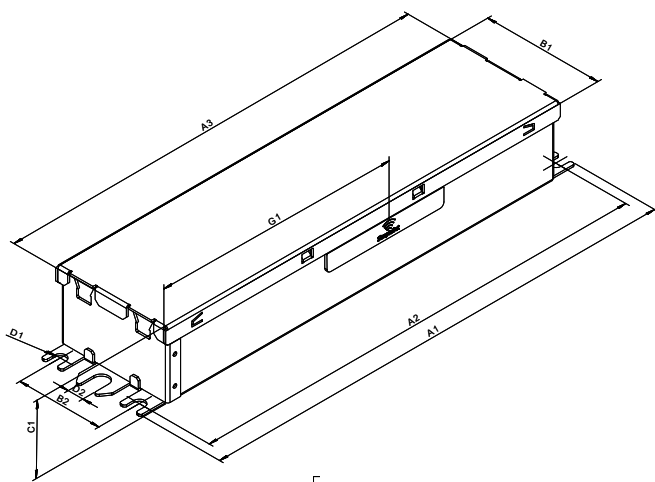
The Advance Xitanium SR LED driver can help reduce complexity and cost of light fixtures used in connected lighting systems in outdoor lighting applications. It features a standard digital interface to enable direct connection to SR-certified components. Functionality that ordinarily would require additional auxiliary components is integrated into the driver. The result is a simple, cost-effective light fixture that can enable every fixture to become a wireless node.

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) ¹ | Inrush Current (Apk/10%--µs) | THD @ Max. Load | Power Factor @ Max. Load | Surge Protection Common/Diff (KV) | Weight (Lbs/ kgs) | Envir. Protection Rating | Dimming | Dimming Range | Min. Output Current (A) | Driver Type |
|----------------------|------------------|--------------------|--------------------|-------------------------------------|--------------------------|----------------------|-----------------------------------|------------------------------|-----------------|--------------------------|-----------------------------------|-----------------------|--------------------------|---------|---------------|-------------------------|------------------|
| 120 | 180 | 100-285 | 0.10-0.9 | 91 | Life - 85°C UL - 90°C | 1.8A | 216 | 66/254 | <15% | >0.95 | 6/6 | 2.1 lbs / 0.95 KGS | UL damp & dry | DALI | 10% - 100% | 0.05 | Constant Current |
| 277 | | | | 93 | | 0.76A | | 154/256 | | | | | | | | | |

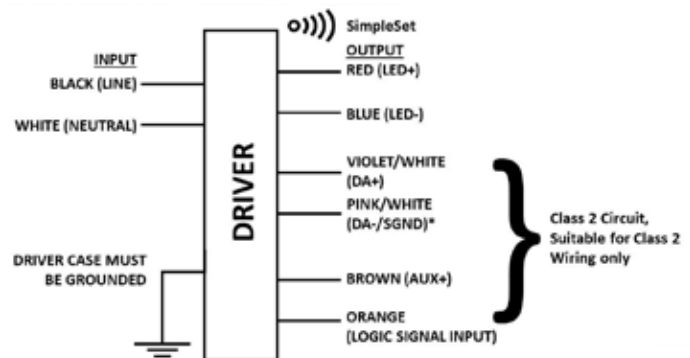
Enclosure

| | In. (mm) | Tolerance |
|----------------------------------|-------------|-----------|
| Overall Length (A1) | 9.30(236.2) | ± 0.5 |
| Mounting length (A2) | 8.91(226.2) | ± 0.5 |
| Case Length (A3) | 8.43(214) | ± 0.5 |
| Case Width (B1) | 2.35(59.8) | ± 0.5 |
| Mounting width(B2) | 1.69(42.9) | ± 0.5 |
| Case Height (C1) | 1.46(37.2) | ± 1.0 |
| Mounting Hole Diameter (D1) | 0.23(5.9) | ± 0.5 |
| Mounting Hole Diameter (D2) | 0.31(7.9) | ± 0.5 |
| Center of SimpleSet Antenna (G1) | 4.78(121.4) | ± 3.0 |



Wiring Diagram

| | Wire Length (mm) |
|------------------------------------|------------------|
| Black (Line) | 270 (± 30) |
| White (Neutral) | 270 (± 30) |
| Red (Positive, LED output) | 270 (± 30) |
| Blue (Negative, LED output) | 270 (± 30) |
| Violet (Positive, 0-10V) | 270 (± 30) |
| Pink/White* (Negative, 0-10V) | 270 (± 30) |
| Brown(Positive, Aux power output) | 270 (± 30) |
| Pink* (Negative, Aux power output) | 270 (± 30) |



Warning

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

1. Based on 1W load from SR power supply and 6.2W load from auxiliary power supply.



Xitanium SR XI180C090V285VSF1

180W 120–277V 0.9A SR with Auxiliary Supply

Electrical Specifications

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

Features

- Compatible with SR-certified devices
- Standard SR digital interface including integral power supply
- Auxiliary power supply for higher power device requirements
- Accurate energy metering
- Logic signal input
- Drive current setting via SimpleSet
- 5-year limited warranty¹

Benefits

- Enables interoperability with multiple sensor/network system vendors
- Reduces cost and complexity of outdoor connected lighting systems²
- Eliminates need for high-voltage relays to increase system reliability
- 2% metering accuracy meets proposed ANSI standard C136.52
- Can be used with standard motion sensors for local control to complement network control

Application

- Site & area
- Parking garages
- Floodlights
- Roadway

Product Data

| Ordering Information | |
|---|--|
| Order Code | XI180C090V285VSF1 |
| Full Product Code | XI180C090V285VSF1M (Mid-pack, 10pcs/box), (12NC:929001725113) |
| Full Product Name | XITANIUM 180W 120–277V 0.9A SR with auxiliary supply |
| Global Trade Identification Number (GTIN) | 781087155424 |
| Input Information | |
| Inrush Current | Per NEMA 410 |
| Line Voltage (AC operation) | 120–277VAC +/- 10% |
| Line Current | 1.75 @ 120V, 0.75A @ 277V |
| Line Frequency | 50/60Hz |
| Surge Protection | Refer to table |
| Output Information | |
| Output Voltage Range | 100VDC to 285VDC |
| Output Current Range | 0.10A to 0.9A |
| Output Current Ripple | <15% at max. lout (ripple = pk-avg/avg) Low frequency (<120 Hz) content <1% |
| Output Current Tolerance | ±5% at max. output current |
| Open Circuit Voltage | 370VDC |
| Control Lead Leakage Current (SR) | 0.011mA, recommended max number of control circuits in parallel, refer to Design-in" UNDER "Protections" |
| Protections | Short Circuit and Open Circuit Protection for LED + and LED- |
| Control Lead Leakage Current | The dimming lead leakage current is 0.011mA. 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. |
| Control Lead Leakage Current (SR, LSI) | 0.01mA, recommended max number of control circuits in parallel refer to Design-In Guide. |
| Features | |
| AOC (adjustable output current) | 0.10A to 0.9A via SimpleSet programming (refer to graphs and notes) |
| Life | 50,000 hr nom. @ TC 85°C; 100,000 hr nom. @ TC 75°C (refer to graphs) |

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. Minimum 90% survivals based on MTF modeling.

2. Functionality that ordinarily would require additional auxiliary components is integrated into the driver.

Xitanium SR XI180C090V285VSF1

180W 120–277V 0.9A SR with Auxiliary Supply

Electrical Specifications

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

Product Data (continued)

| | |
|---|---|
| Suitable for Outdoor Use? | Yes |
| Interfaces | SimpleSet, SR, Logic Signal Input (LSI), Auxiliary Power Supply |
| Min. Ambient Temp | -40°C |
| Max. Case Temperature (Tcase) | Life - 85°C; UL - 90°C |
| Input Over-voltage | Can survive input over-voltage stress of 320VAC for 48 hours and 350VAC for 2 hours |
| Earth Leakage Current | 0.75 mA [max.] |
| THD Total | Refer to graph |
| Power Factor | Refer to graph |
| Efficiency | Refer to graph |
| Power Reporting Accuracy | ± 2% in performance window and under nominal operating conditions |
| SR Interface | |
| Digital Protocol | Specifications available to SR-Certified Partners |
| SR Power Supply | Specifications available to SR-Certified Partners |
| Auxiliary Power Supply | |
| Power | 3W continuous, 10.5W peak for 1.2ms |
| Voltage | 24V+/-10% |
| Ripple | 300mV peak-peak for resistive load |
| Protection | Overload and short circuit protected |
| Last Gasp Energy | 200mJ typ. |
| Logic Signal Input (LSI) | |
| Dry Contact Input | Yes |
| Logic Low | <3V or open |
| Logic High | >7V |
| Max. Current Draw | 2mA |
| Environment & Approbation | |
| Agency Approbations | UL 8750, NOM, cUL, Class P (UL, cUL) |
| Audible Noise | <24dB Class A |
| Isolation Between Output and Input | Refer to table |
| Isolation of Controls | Refer to table |
| EMC (electromagnetic compliance) | Meets FCC 47 Part 15 Class A |
| Envir. Protection Rating | UL Dry & Damp |
| Net Weight Per Piece | 2.1 lbs/0.95 kgs |

Xitanium SR XI180C090V285VSF1

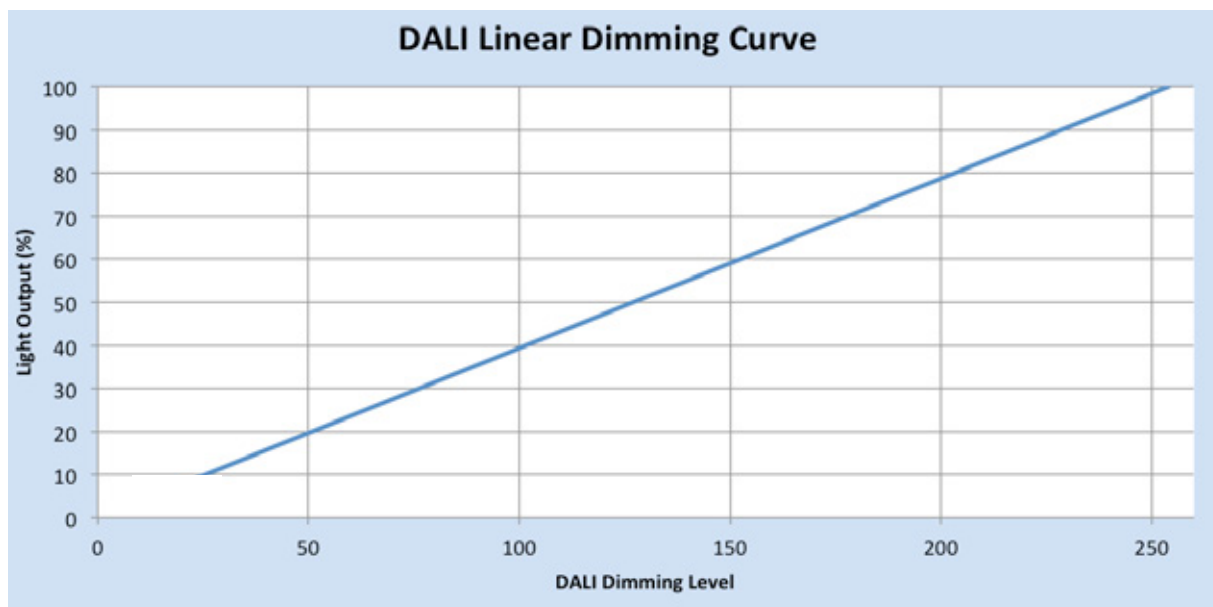
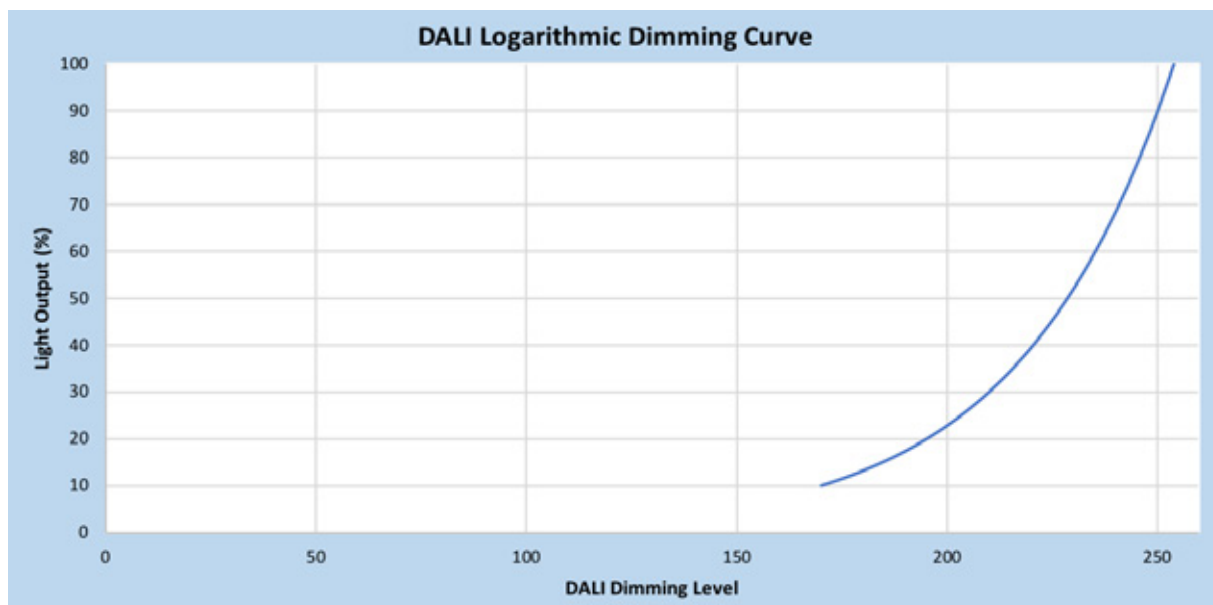
180W 120-277V 0.9A SR with Auxiliary Supply

Electrical Specifications

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

Dimming Characteristics

SR drivers use a logarithmic dimming curve as default. Dimming is accomplished through the 2-wire DALI connection to the sensor. DALI standard IEC62386_102 Edition 2 defines the logarithmic dimming curve. DALI standard IEC62386_101 Edition 2 defines the linear dimming curve as well as the command for switching between logarithmic and linear curves.



Xitanium SR XI180C090V285VSF1

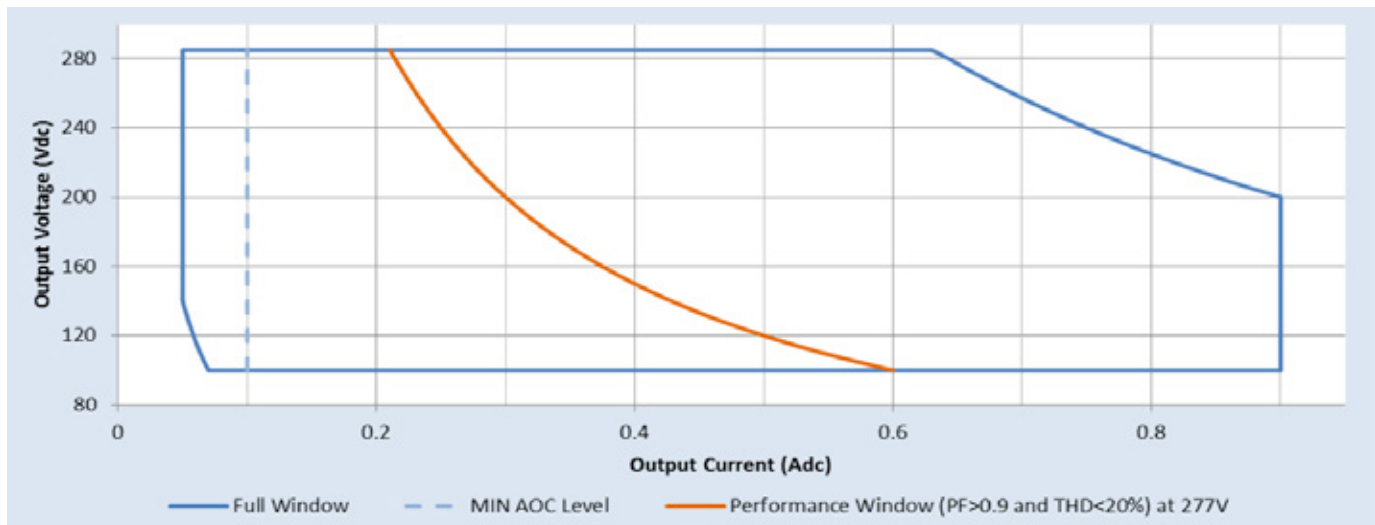
180W 120–277V 0.9A SR with Auxiliary Supply

Electrical Specifications

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Operating Window

The driver current cutback feature provides for an increased output voltage with a reduced output current during abnormal LED operation, such as cold weather starting. Output tolerance +/-5%.



Notes

1. Factory default output current is 0.7A.
2. To get a 100% to 10% dimming range, the output current setting through AOC should be $\geq 500\text{mA}$.

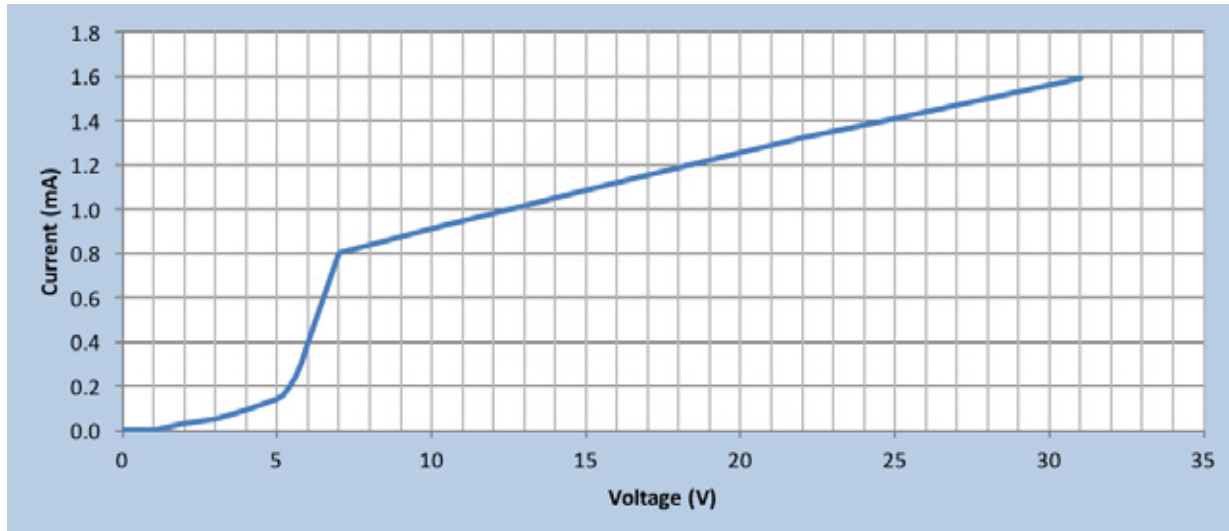
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180W 120-277V 0.9A SR with Auxiliary Supply

Electrical Specifications

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Logic Signal Input (LSI) Characteristics (Typical)



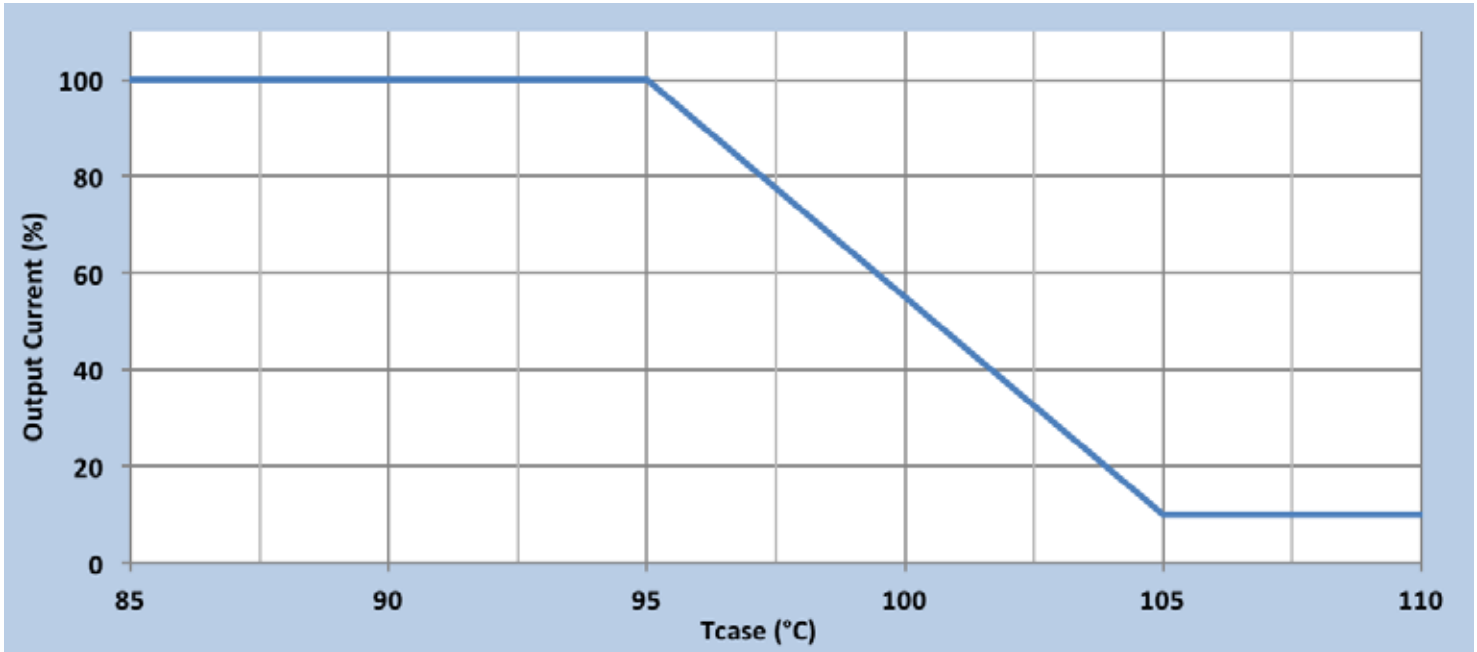
Xitanium SR XI180C090V285VSF1

180W 120-277V 0.9A SR with Auxiliary Supply

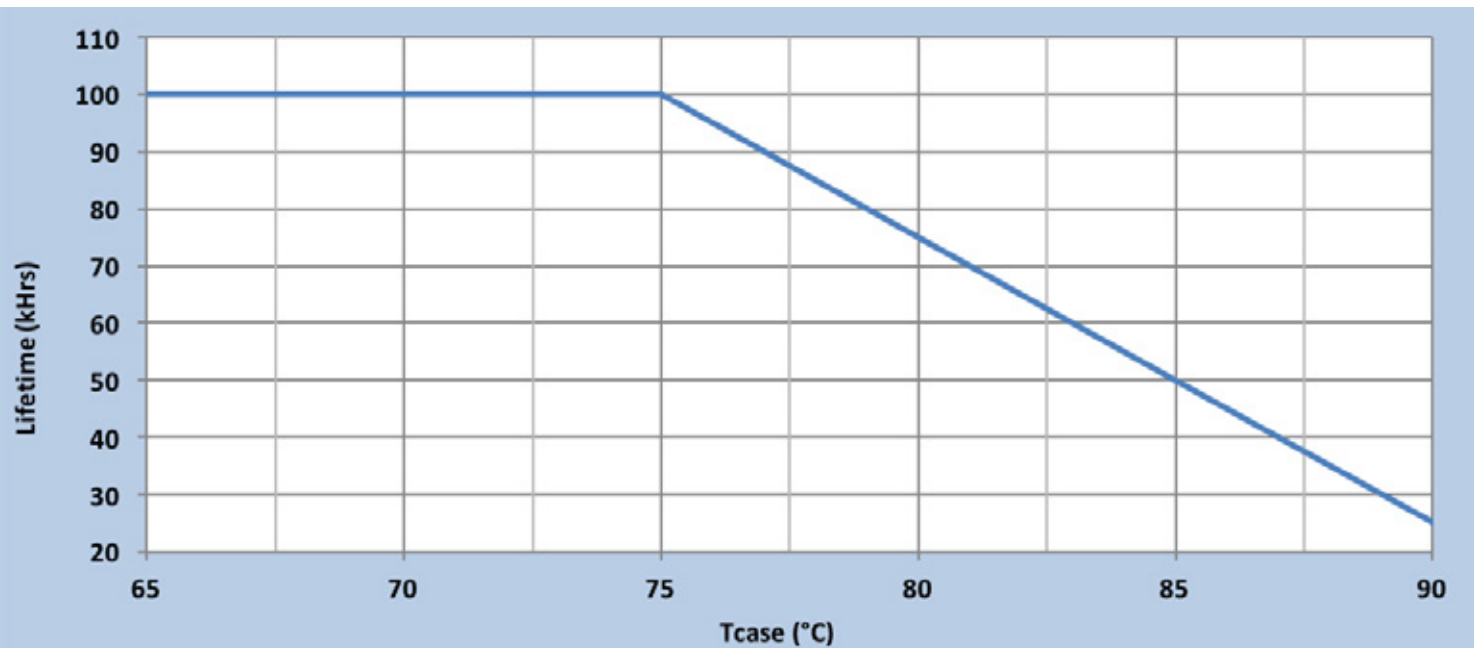
Electrical Specifications

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Output Current Vs. Driver Case Temperature



Driver Lifetime Vs. Driver Case Temperature



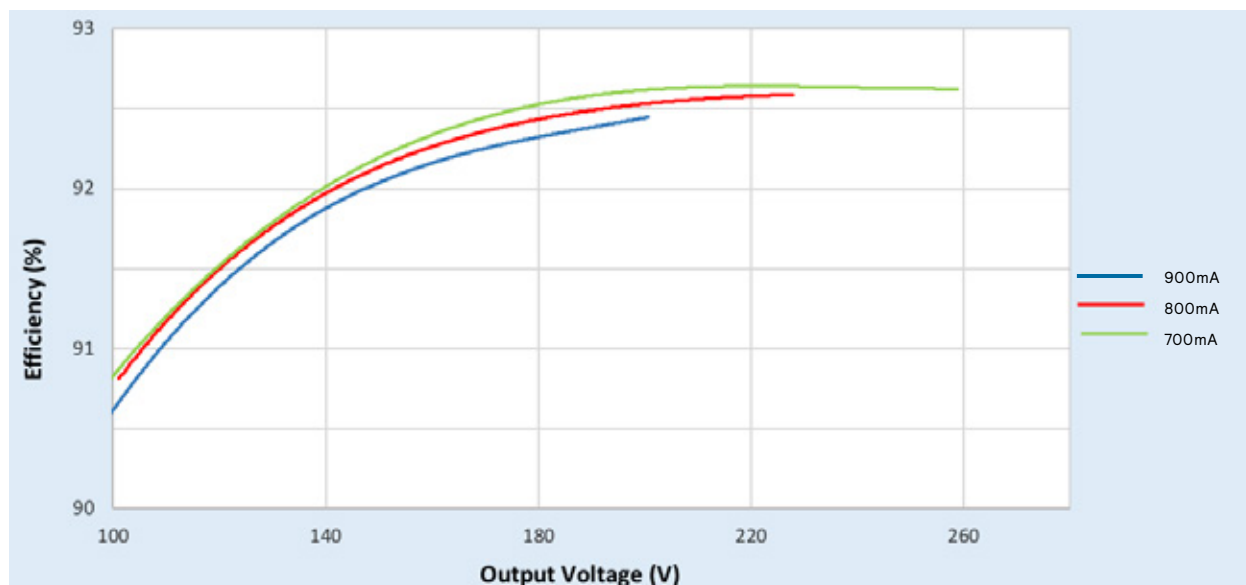
Xitanium SR XI180C090V285VSF1

180W 120-277V 0.9A SR with Auxiliary Supply

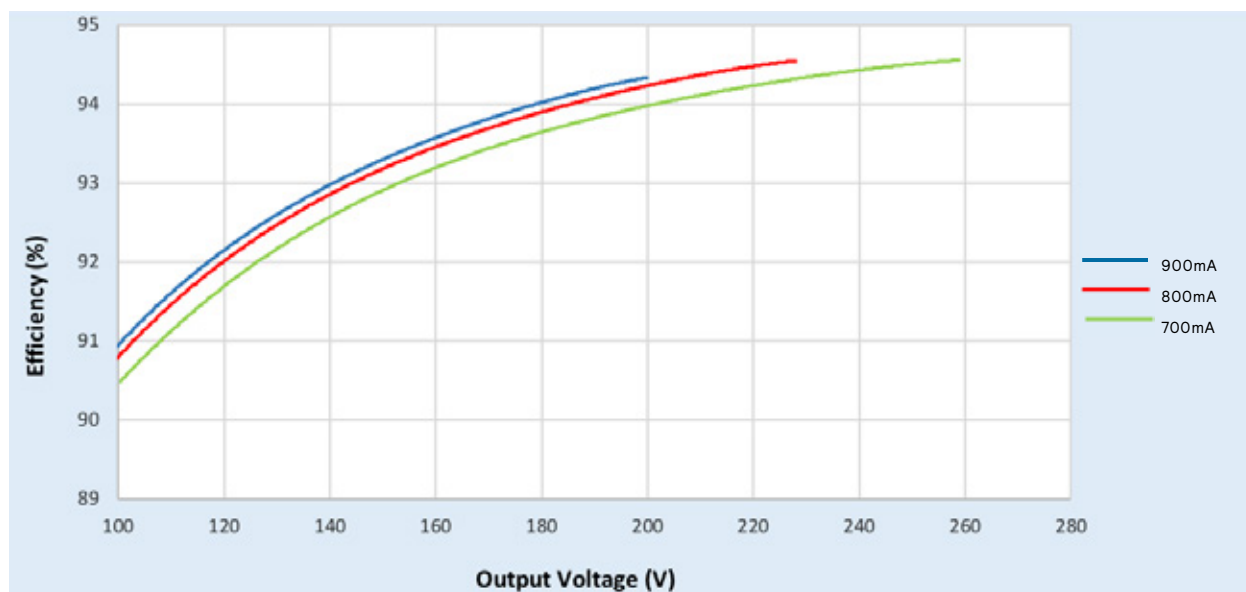
Performance Characteristics

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. Data below at 75°C Tcase.

Efficiency Vs. Output Voltage @ 120VAC



Efficiency Vs. Output Voltage @ 277VAC



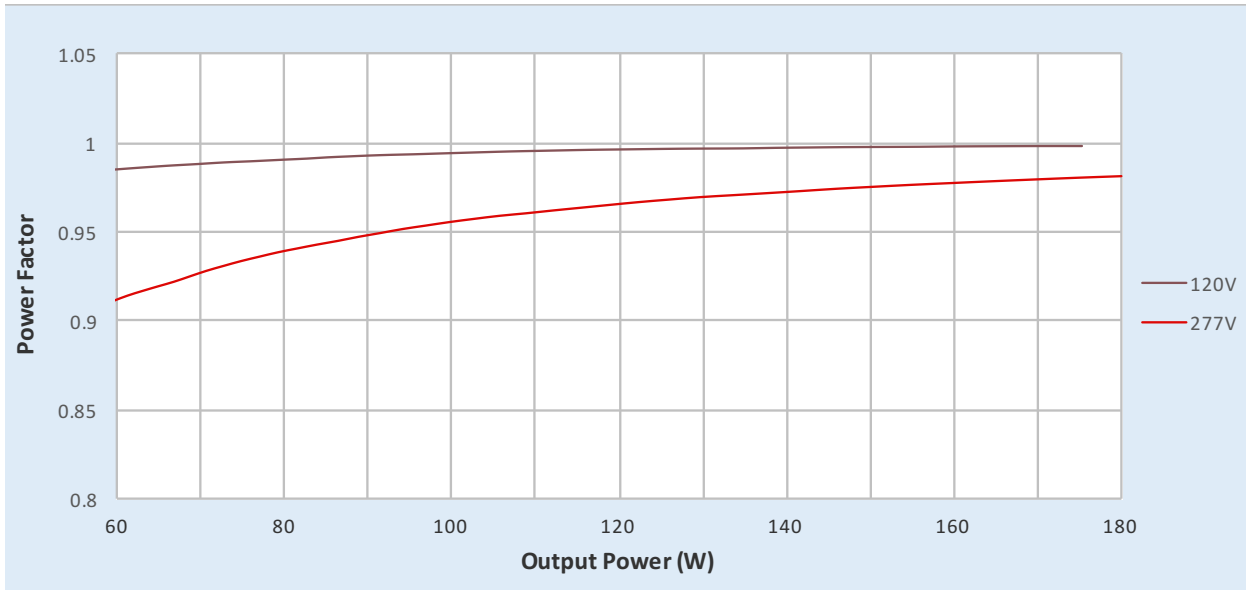
Xitanium SR XI180C090V285VSF1

180W 120-277V 0.9A SR with Auxiliary Supply

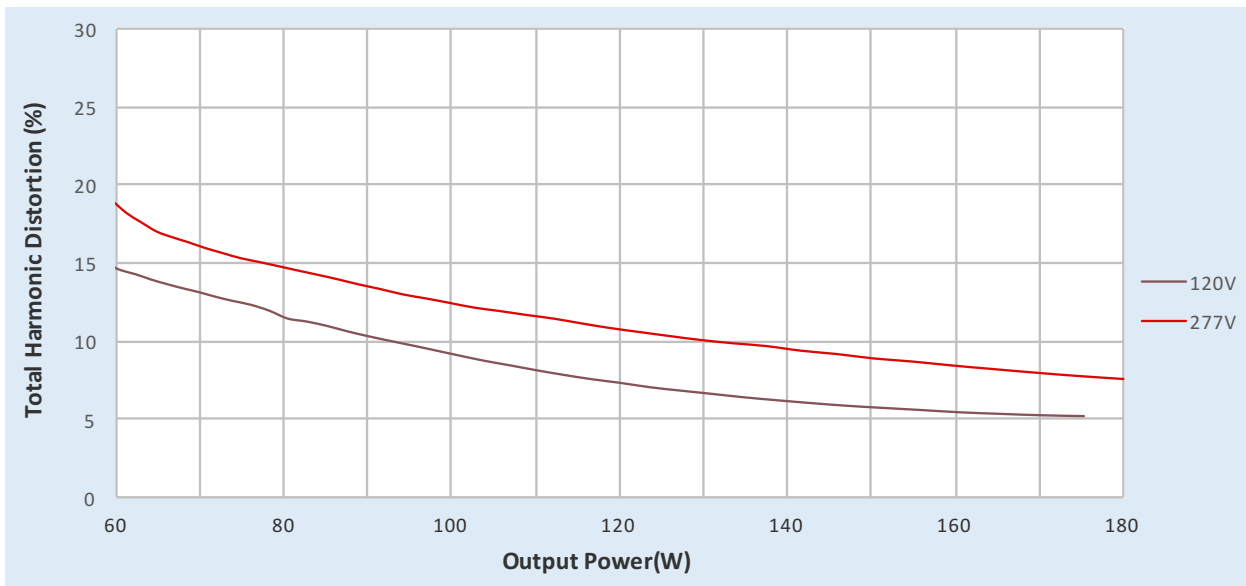
Performance Characteristics

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. Data below at 75°C Tcase.

Power Factor Vs. Output Power



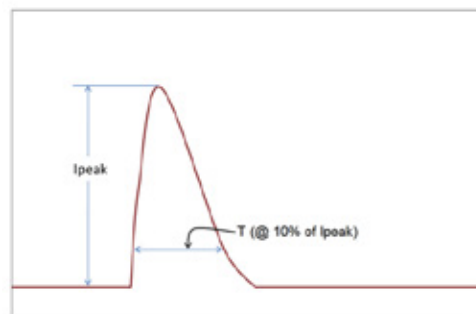
Total Harmonic Distortion Vs. Output Power



Xitanium SR XI180C090V285VSF1

180W 120-277V 0.9A SR with Auxiliary Supply

Inrush Current Info



| V_{in} | I_{peak} | T (@ 10% of I_{peak}) |
|----------|------------|--------------------------|
| 120 Vac | 66A | 254 μ s |
| 277 Vac | 154A | 256 μ s |

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) |
|---|-------------------------|-------------------------------|
| 1.2/50 μ s Combination Wave (w/t 2 ₂) | 6kV | 6kV |

Isolation

| Isolation | Input Leads | Output Leads | SR Leads (SR+, SR-/SGND, AUX, and LSI), Class 2 Only | Enclosure |
|--|-------------|--------------|--|-----------|
| Input Leads | NA | 2xU+1kV | 2xU+1kV | 2xU+1kV |
| Output Leads | 2xU+1kV | NA | 2xU+1kV | 2xU+1kV |
| SR Leads (SR+, SR-/SGND, AUX, and LSI), Class 2 Only | 2xU+1kV | 2xU+1kV | NA | 2xU+1kV |
| Enclosure | 2xU+1kV | 2xU+1kV | 2xU+1kV | NA |

U = Max. input voltage



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