



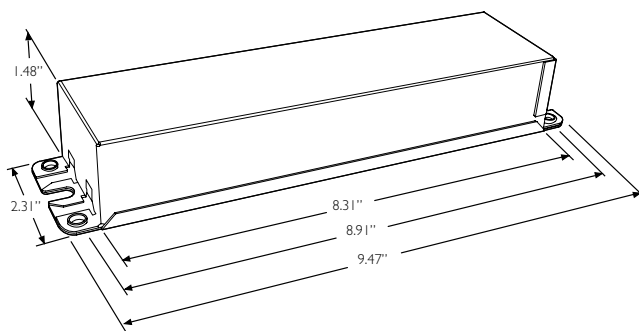
The Advance Xitanium SR LED driver can help reduce complexity and cost of light fixtures used in wireless connected lighting systems in roadway lighting. It features a standard digital interface to enable direct connection to SR-certified components. Functionality that ordinarily would require additional 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

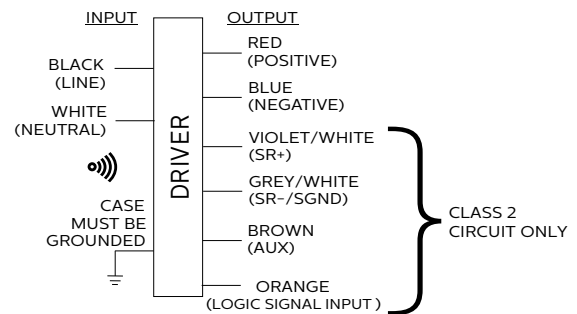
| Input Voltage (Vrms) | Output Power (W) | Output Voltage (V) | Output Current (A) | Efficiency@ Max. Load and 70°C Case | Max. Case Temp. (°C)     | Input Current (Arms) | Max. Input Power (W) <sup>1</sup> | Inrush Current (Apk/10%-µs) | THD @ Max. Load | Power Factor @ Max. Load | Surge Protection Common/Diff (KV) | Weight (Lbs/kgs)   | Envir. Protection Rating | Dimming | Dimming Range | Min. Output Current (A) |
|----------------------|------------------|--------------------|--------------------|-------------------------------------|--------------------------|----------------------|-----------------------------------|-----------------------------|-----------------|--------------------------|-----------------------------------|--------------------|--------------------------|---------|---------------|-------------------------|
| 120                  | 95               | 20-54              | 0.10-2.75          | 88                                  | Life - 85°C<br>UL - 90°C | 0.90                 | 118                               | 54 / 280                    | <10%            | >0.95                    | 6/6                               | 2.1 lbs / 0.95 KGS | UL damp & dry            | DALI    | 5% ~ 100%     | 0.030                   |
| 277                  |                  |                    |                    | 90                                  |                          | 0.39                 |                                   | 133 / 270                   |                 |                          |                                   |                    |                          |         |               |                         |

### Enclosure

|                 | In. (mm)     |
|-----------------|--------------|
| Case Length     | 8.31 (211.1) |
| Case Width      | 2.31 (58.6)  |
| Case Height     | 1.48 (37.6)  |
| Mounting Length | 8.91 (226.3) |
| Overall Length  | 9.47 (240.5) |



### Wiring Diagram



Input and output use lead-wires.

Lead-wires are 18AWG 105C/600V solid copper per UL1452.

Lead length outside enclosure: 270 mm (±30mm) on all wires.

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



# Xitanium SR XI095C275V054VSF1

## 95W 120–277V 2.75A 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 warranty<sup>1</sup>

#### Benefits

- Enables interoperability with multiple sensor/network system vendors
- Reduces cost and complexity of outdoor connected lighting systems<sup>2</sup>
- 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

- Area
- Industrial high-bay
- Parking garages
- Floodlights

### Product Data

#### Ordering Information

|                      |                                                      |
|----------------------|------------------------------------------------------|
| Order Code           | XI095C275V054VSF1                                    |
| Full Product Code    | XI095C275V054VSF1 (Mid-pack, 10pcs/box)              |
| Full Product Name    | XITANIUM 95W 120–277V 2.75A SR with auxiliary supply |
| Net Weight Per Piece | 2.1 lbs / 0.95 kgs                                   |

#### Input Information

|                             |                            |
|-----------------------------|----------------------------|
| Inrush Current              | Per NEMA 410               |
| Line Voltage (AC operation) | 120–277VAC +/- 10%         |
| Line Current                | 0.90A @ 120V, 0.39A @ 277V |
| Line Frequency              | 50/60Hz                    |
| Surge Protection            | Refer to table             |

#### Output Information

|                          |                                                                             |
|--------------------------|-----------------------------------------------------------------------------|
| Output Voltage Range     | 20VDC to 54VDC                                                              |
| Output Current Range     | 0.10A to 2.75A                                                              |
| Output Current Ripple    | <15% at max. Iout (ripple = pk-avg/avg) Low frequency (<120 Hz) content <1% |
| Output Current Tolerance | ±5% at max. output current                                                  |
| Open Circuit Voltage     | 54VDC                                                                       |
| Protections              | Short Circuit and Open Circuit Protection for LED + and LED-                |

#### Features

|                                 |                                                                                     |
|---------------------------------|-------------------------------------------------------------------------------------|
| AOC (adjustable output current) | 0.10A to 2.75A 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)               |
| 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                                                                      |

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

# Xitanium SR XI095C275V054VSF1

95W 120-277V 2.75A SR with Auxiliary Supply

## Electrical Specifications

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

## Product Data (continued)

|                                      |                                                                   |
|--------------------------------------|-------------------------------------------------------------------|
| Power Factor                         | Refer to graph                                                    |
| Efficiency                           | Refer to graph                                                    |
| Power Reporting Accuracy             | ± 2% in performance window and under nominal operating conditions |
| <b>SR Interface</b>                  |                                                                   |
| Digital Protocol                     | Specifications available to SR-Certified Partners                 |
| SR Power Supply                      | Specifications available to SR-Certified Partners                 |
| <b>Auxiliary Power Supply</b>        |                                                                   |
| 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.                                                        |
| <b>Logic Signal Input (LSI)</b>      |                                                                   |
| Dry Contact Input                    | Yes                                                               |
| Logic Low                            | <3V or open                                                       |
| Logic High                           | >7V                                                               |
| Max. Current Draw                    | 2mA                                                               |
| <b>Environment &amp; Approbation</b> |                                                                   |
| Agency Approbations                  | UL8750, UL1310, UL935, CSA-C22.2 No. 250.13-12, CSA C22.2 No. 223 |
| 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                                                     |

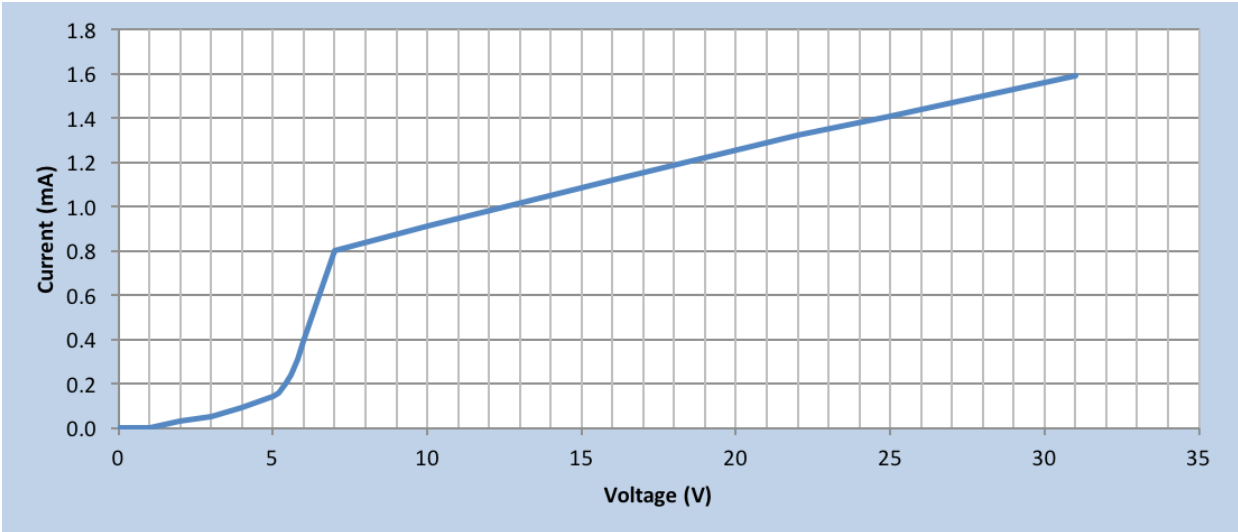
# Xitanium SR    XI095C275V054VSF1

95W 120-277V 2.75A SR with Auxiliary Supply

## Electrical Specifications

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

### Logic Signal Input (LSI) Characteristics (Typical)



# Xitanium SR XI095C275V054VSF1

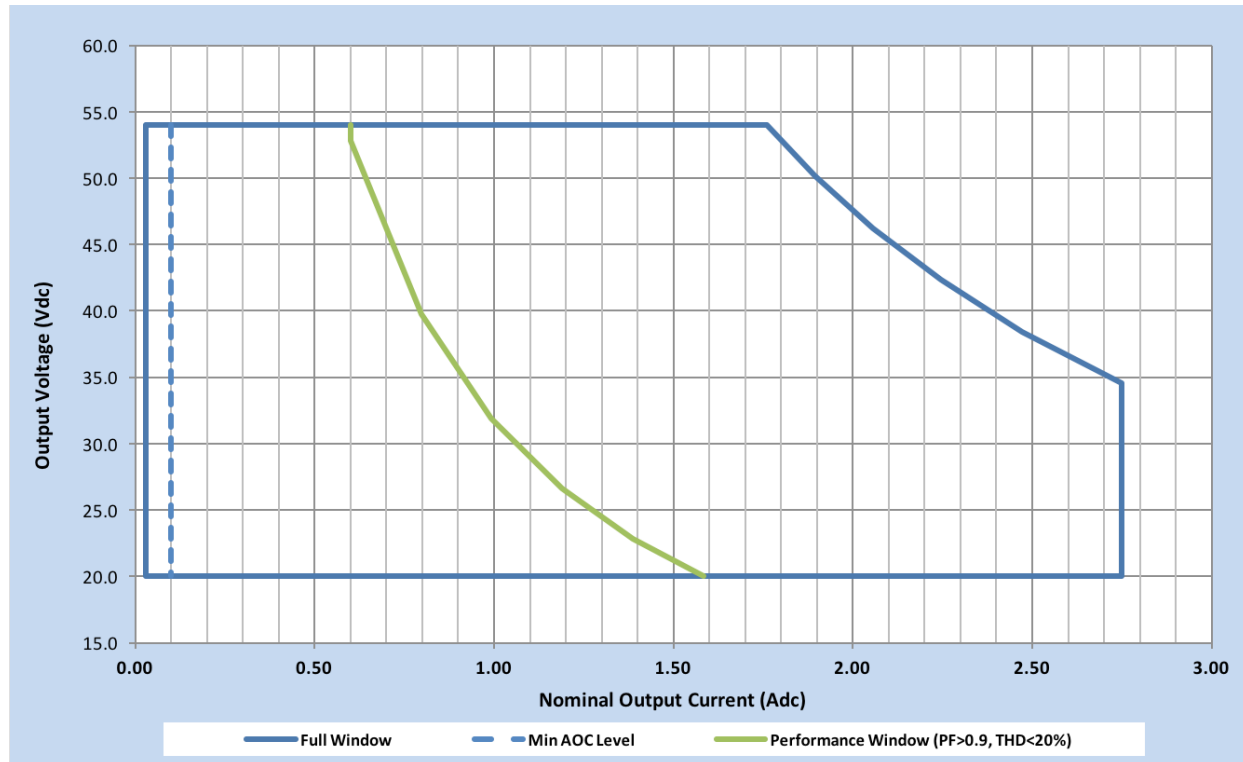
95W 120-277V 2.75A SR with Auxiliary Supply

## 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%.



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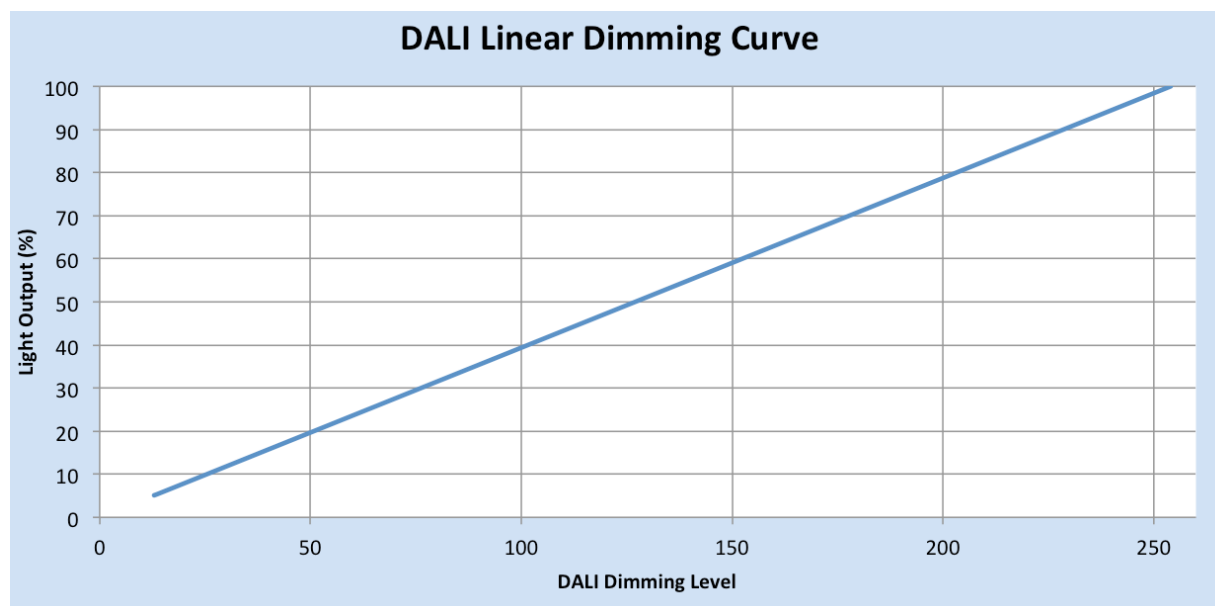
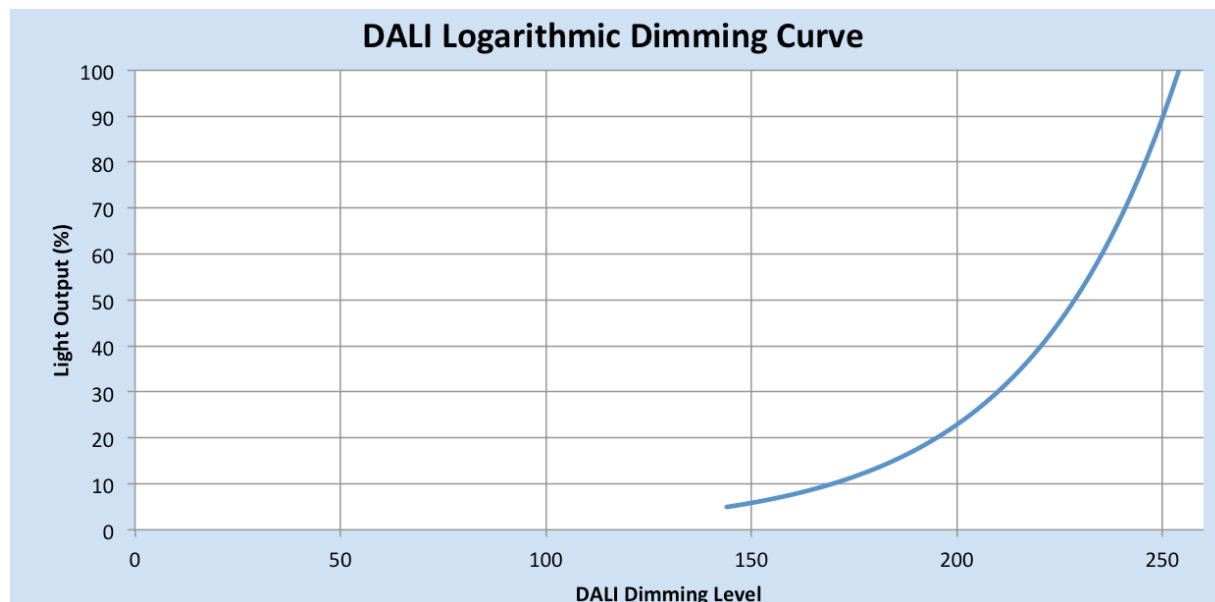
95W 120-277V 2.75A SR with Auxiliary Supply

## Electrical Specifications

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## 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.



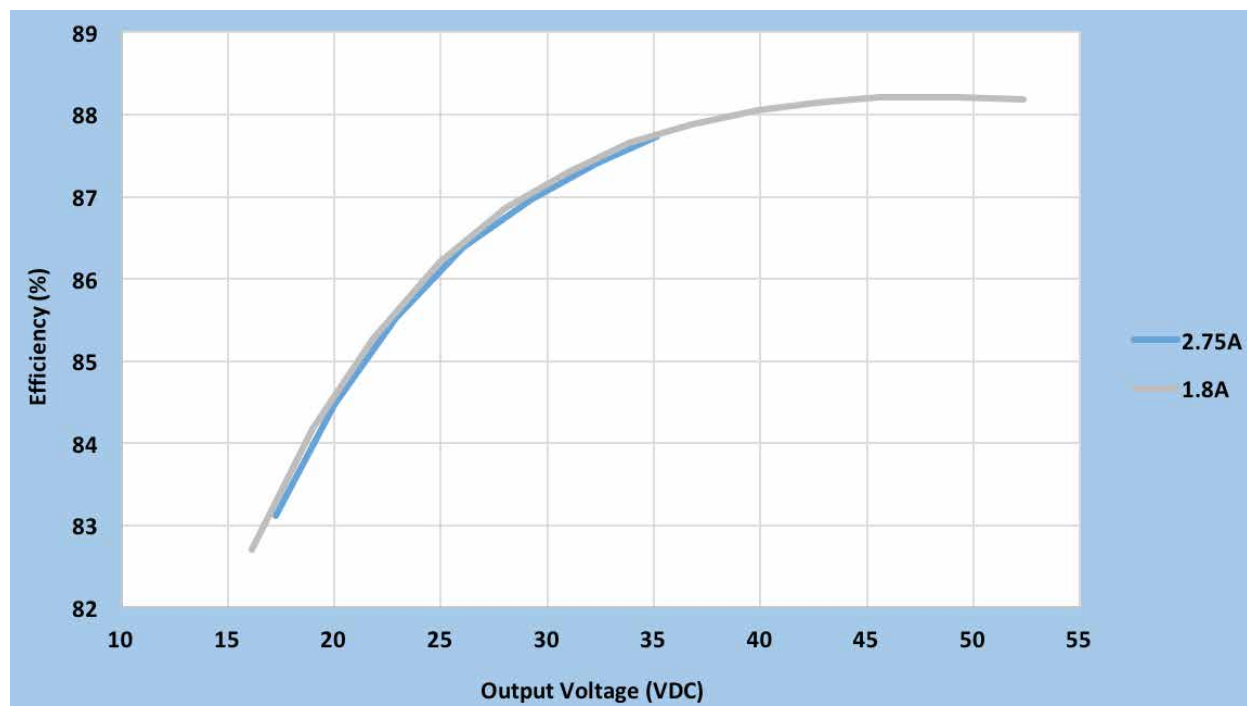
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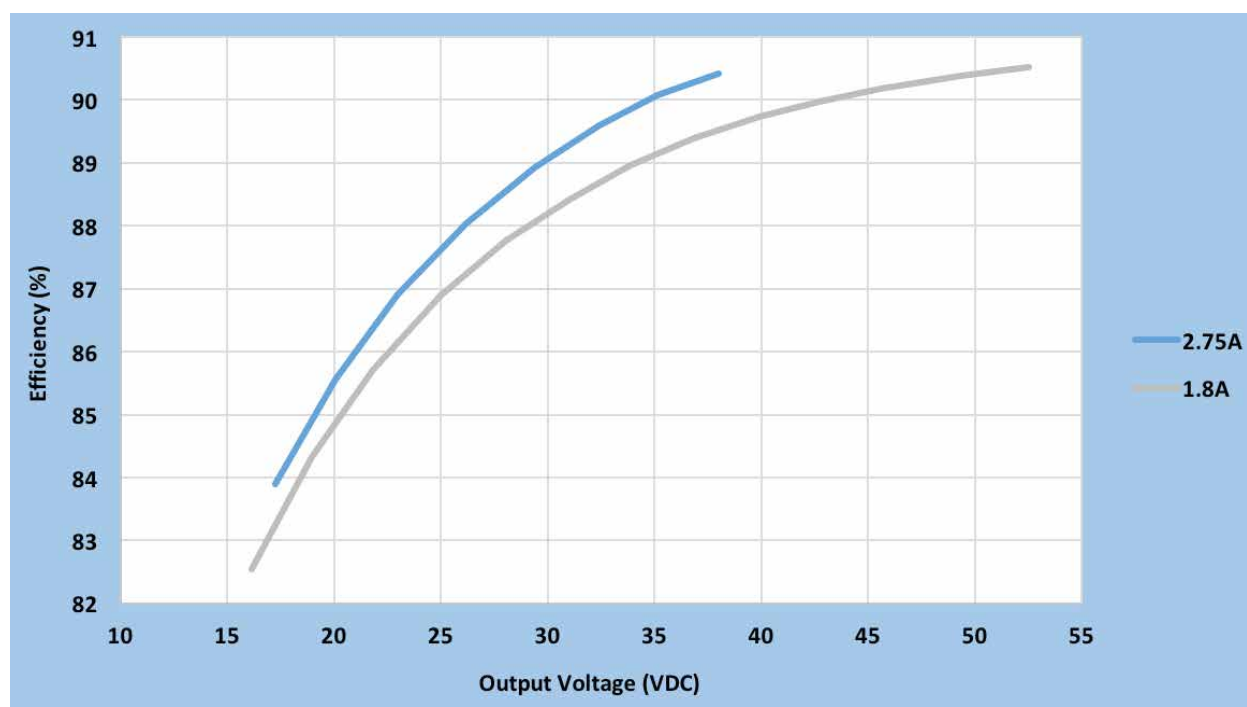
## Performance Characteristics

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. Data below at 70°C Tcase.

### Efficiency Vs. Output Voltage @ 120VAC



### Efficiency Vs. Output Voltage @ 277VAC



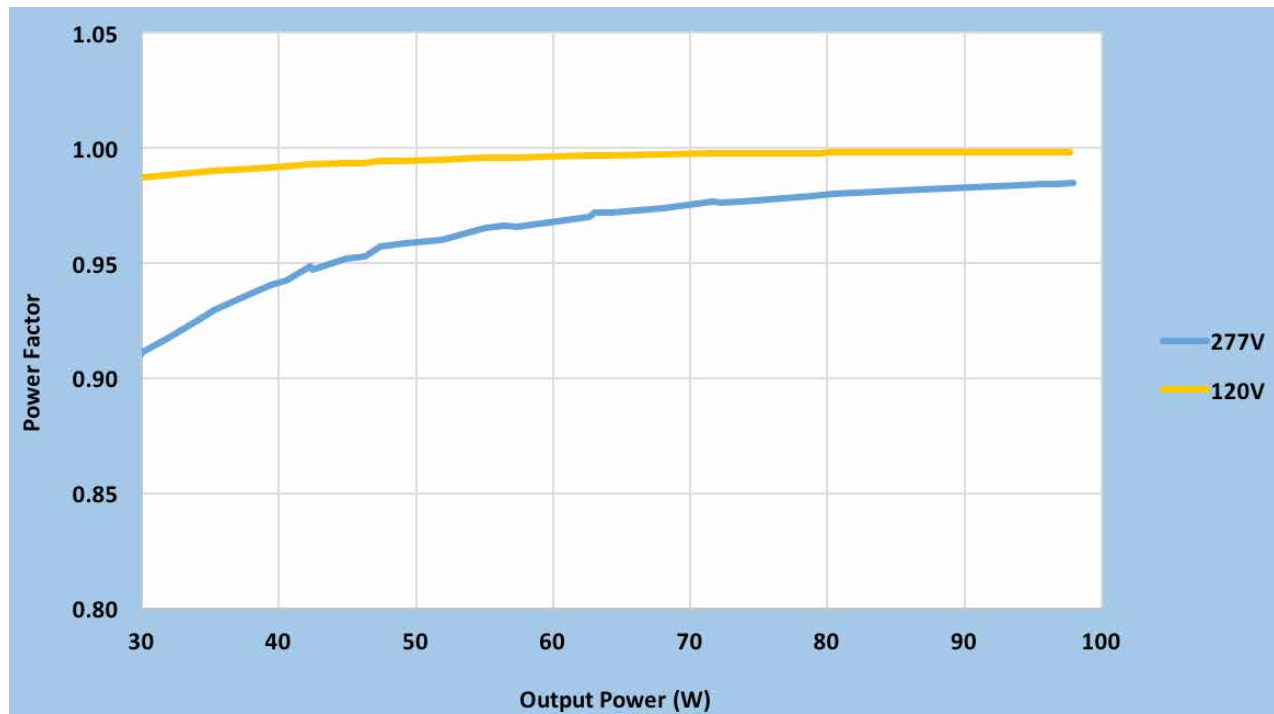
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95W 120-277V 2.75A SR with Auxiliary Supply

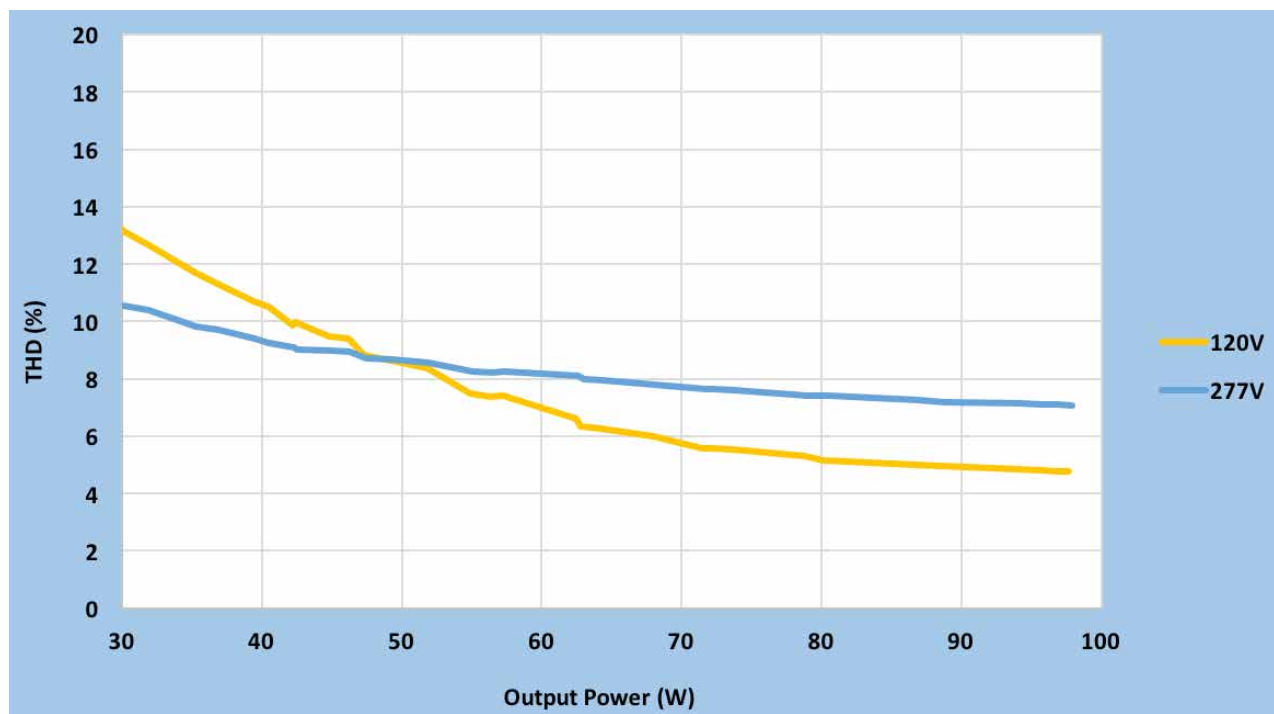
## Performance Characteristics

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 70°C Tcase.

### Power Factor Vs. Output Power



### Total Harmonic Distortion Vs. Output Power



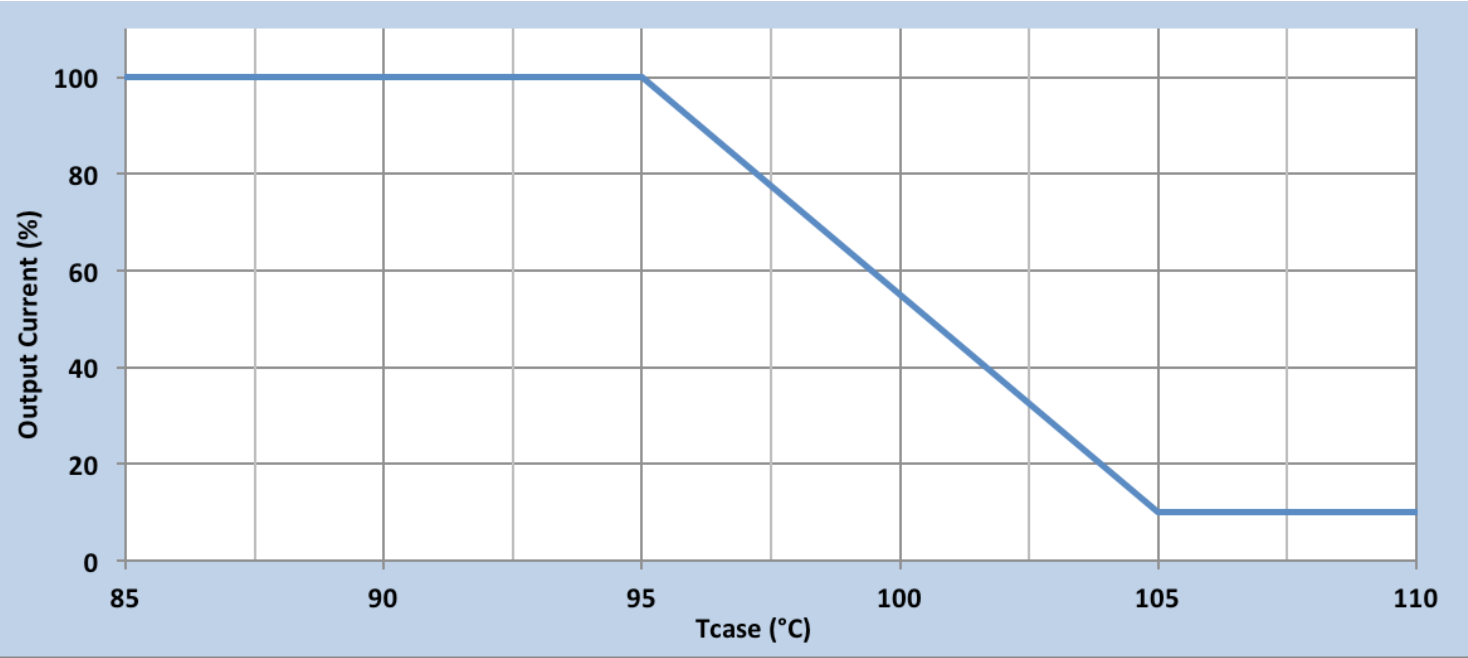
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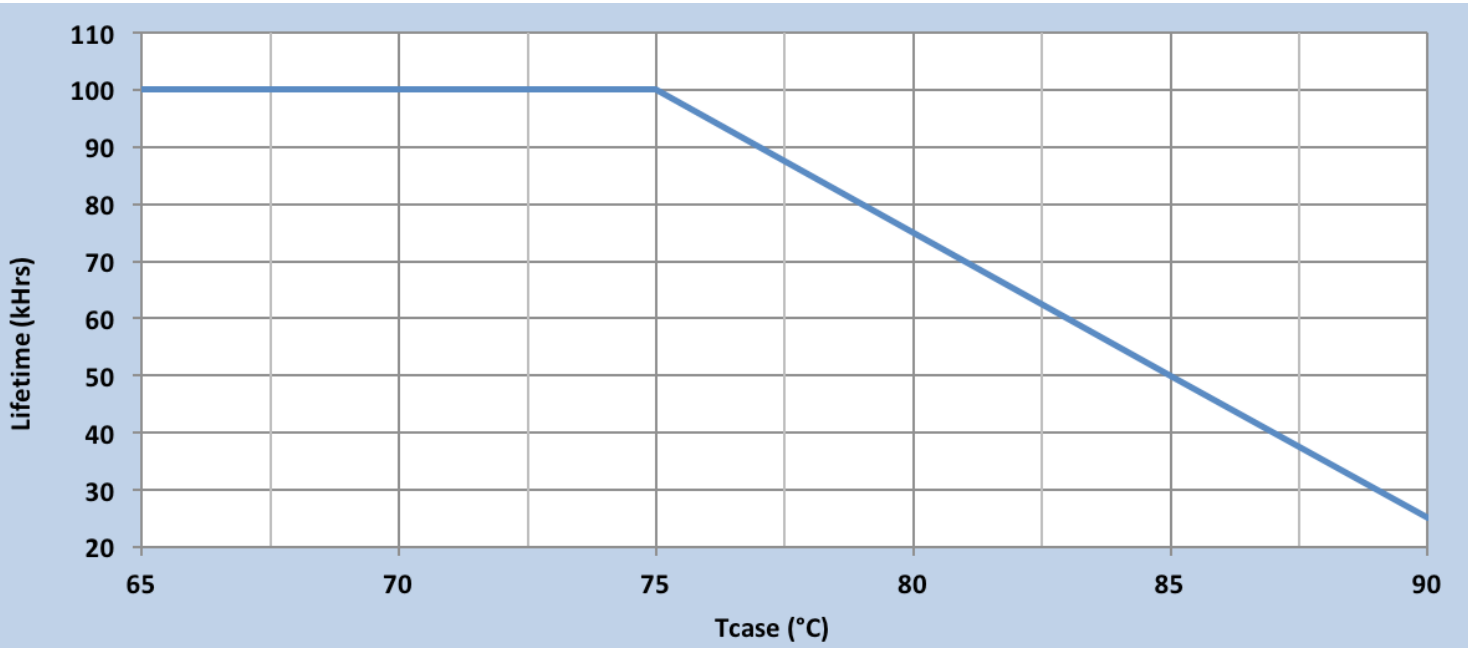
### Electrical Specifications

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### Output Current Vs. Driver Case Temperature



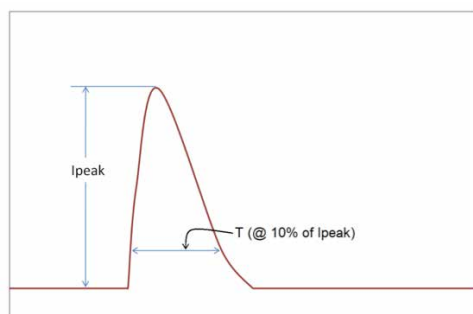
### Driver Lifetime Vs. Driver Case Temperature



# Xitanium SR XI095C275V054VSF1

95W 120-277V 2.75A SR with Auxiliary Supply

## Inrush Current Info



| Vin     | Ipeak | T (@ 10% of Ipeak) |
|---------|-------|--------------------|
| 120 Vac | 54A   | 280 $\mu$ s        |
| 277 Vac | 133A  | 270 $\mu$ 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 $\mu$ s Combination Wave (w/t 2 $\Omega$ ) | 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           | 500Vrms                                              | 500Vrms   |
| SR Leads (SR+, SR-/SGND, AUX, and LSI), Class 2 only | 2xU+1kV     | 500Vrms      | NA                                                   | 500Vrms   |
| Enclosure                                            | 2xU+1kV     | 500Vrms      | 500Vrms                                              | NA        |

U = Max. input voltage

