The Philips Advance Xitanium SR LED driver can help reduce complexity and cost of light fixtures used in wireless connected lighting systems. 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

<table>
<thead>
<tr>
<th>Input Voltage (Vrms)</th>
<th>Output Power (W)</th>
<th>Output Voltage (V)</th>
<th>Output Current (A)</th>
<th>Efficiency@Max. Load and 70°C Case</th>
<th>Max. Case Temp. (°C)</th>
<th>Input Current (Arms)</th>
<th>Max. Input Power (W)</th>
<th>Inrush Current (Apk/10%-μs)</th>
<th>THD@Max. Load</th>
<th>Power Factor@Max. Load</th>
<th>Surge Protection Common/Diff (KV)</th>
<th>Weight (Lbs/ks)</th>
<th>Envir. Protection Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>150</td>
<td>78–235</td>
<td>0.07–0.70</td>
<td>91</td>
<td>80</td>
<td>1.5</td>
<td>180</td>
<td>54 / 280</td>
<td>&lt;10%</td>
<td>&gt;0.95</td>
<td>6/6</td>
<td>21/0.95</td>
<td>UL damp &amp; dry</td>
</tr>
<tr>
<td>277</td>
<td></td>
<td></td>
<td></td>
<td>93</td>
<td></td>
<td>0.65</td>
<td></td>
<td>133 / 270</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Enclosure

- Case Length: 8.38 (211.1)
- Case Width: 2.35 (59.1)
- Case Height: 1.49 (37.6)
- Mounting Length: 9.0 (226.2)
- Mounting Width: 1.7 (42.9)
- Overall Length: 9.54 (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.

<table>
<thead>
<tr>
<th>Dimming</th>
<th>Dimming Range</th>
<th>Minimum Output Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DALI</td>
<td>10% ~ 100%</td>
<td>0.070</td>
</tr>
</tbody>
</table>

1. Based on 1W load from SR power supply and 6.2W load from auxiliary power supply.
Xitanium SR 150W 120-277V 0.7A

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

Features
- Compatible with SR-Certified devices
- Standard digital interface based on DALI including integral power supply
- Auxiliary power supply for higher-power device requirements
- Accurate power metering
- Logic signal input
- Drive current setting via SimpleSet
- 5-year limited warranty

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

Application
- Area
- Roadway
- Parking garages
- Floodlights

Product Data

Ordering Information

Order Code  XI150C070V235VSF1
Full Product Code  XI150C070V235VSF1M (Mid-pack, 10pcs/box)
Full Product Name  XITANIUM 150W 0.7A 120-277V SR
Net Weight Per Piece  0.95 KG / 2.1 lbs

Input Information

Inrush Current  Per NEMA 410
Line Voltage (AC Operation)  120-277VAC +/- 10%
Line Current  1.50A @ 120V, 0.65A @ 277V
Line Frequency  50/60Hz
Surge Protection  Refer to table

Output Information

Output Voltage Range  78VDC to 235VDC
Output Current Range  0.07A to 0.70A
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  310VDC Max
Protections  Short Circuit and Open Circuit Protection for LED + and LED-

Features

AOC (Adjustable Output Current)  0.07A to 0.70A via SimpleSet programming (refer to graphs and notes)
Life @ TC 80℃  50000 hr [nom] (refer to graphs)
Suitable for Outdoor Use?  Yes
Interfaces  AOC (SimpleSet), SR, Logic Signal Input (LSI), Auxiliary Power Supply
Min. Ambient Temp  -40℃
Max. Case Temperature (Tcase)  80℃
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. Philips 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.

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# Xitanium SR 150W 120-277V 0.7A

## Electrical Specifications

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

## Product Data (continued)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Factor</strong></td>
<td>Refer to graph</td>
</tr>
<tr>
<td><strong>Efficiency</strong></td>
<td>Refer to table</td>
</tr>
<tr>
<td><strong>Power Reporting Accuracy</strong></td>
<td>± 2% in performance window and under nominal operating conditions</td>
</tr>
<tr>
<td><strong>SR Interface</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Digital Protocol</strong></td>
<td>Detailed specifications available to SR-Certified Partners</td>
</tr>
<tr>
<td><strong>SR Power Supply</strong></td>
<td>Detailed specifications available to SR-Certified Partners</td>
</tr>
<tr>
<td><strong>Auxiliary Power Supply</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>3W continuous, 10.5W peak for 1.2ms</td>
</tr>
<tr>
<td><strong>Voltage</strong></td>
<td>24V±/-10%</td>
</tr>
<tr>
<td><strong>Ripple</strong></td>
<td>300mV peak-peak for resistive load</td>
</tr>
<tr>
<td><strong>Protection</strong></td>
<td>Overload and short circuit protected</td>
</tr>
<tr>
<td><strong>Last Gasp Energy</strong></td>
<td>200mJ typ.</td>
</tr>
<tr>
<td><strong>Logic Signal Input (LSI)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Dry Contact Input</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Logic Low</strong></td>
<td>&lt;3V or open</td>
</tr>
<tr>
<td><strong>Logic High</strong></td>
<td>&gt;7V</td>
</tr>
<tr>
<td><strong>Max. Current Draw</strong></td>
<td>2mA</td>
</tr>
<tr>
<td><strong>Environment &amp; Approbation</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Agency Approbations</strong></td>
<td>UL8750, UL1310, UL935, CSA-C22 2 No. 250.13-12, CSA C22 2 No. 223</td>
</tr>
<tr>
<td><strong>Audible Noise</strong></td>
<td>&lt;24dB Class A</td>
</tr>
<tr>
<td><strong>Isolation Between Output and Input</strong></td>
<td>Refer to table</td>
</tr>
<tr>
<td><strong>Isolation of Controls</strong></td>
<td>Refer to table</td>
</tr>
<tr>
<td><strong>EMC (Electromagnetic Compliance)</strong></td>
<td>Meets FCC 47 Part 15 Class A</td>
</tr>
<tr>
<td><strong>Envir. Protection Rating</strong></td>
<td>UL Dry &amp; Damp</td>
</tr>
</tbody>
</table>
Electrical Specifications
All the specifications are typical and at 25°C Tcase unless specified otherwise.

Logic Signal Input (LSI) Characteristics (Typical)
Xitanium SR 150W 120-277V 0.7A

**Electrical Specifications**

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

**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%.
**Xitanium SR 150W 120-277V 0.7A**

### Electrical Specifications

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

### Dimming Characteristics

Dimming is accomplished through the two-wire SR connection to the sensor. DALI standard IEC62386_107 Edition 1 defines the linear dimming curve, as well as the command for switching between logarithmic and linear curves. Only a linear dimming curve is utilized.

![DALI Linear Dimming Curve](image)
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.

Efficiency Vs. Output Voltage @ 120VAC

![Graph showing efficiency vs. output voltage at 120VAC]

Efficiency Vs. Output Voltage @ 277VAC

![Graph showing efficiency vs. output voltage at 277VAC]
Xitanium SR 150W 120-277V 0.7A

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.

Power Factor Vs. Output Power

Total Harmonic Distortion Vs. Output Power
Xitanium SR 150W 120–277V 0.7A

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

Output Current Vs. Driver Case Temperature

Driver Lifetime Vs. Driver Case Temperature
Xitanium SR 150W 120-277V 0.7A

Inrush Current Info

<table>
<thead>
<tr>
<th>Vin</th>
<th>Ipeak</th>
<th>T (@ 10% of Ipeak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>120 Vac</td>
<td>54A</td>
<td>280µs</td>
</tr>
<tr>
<td>277 Vac</td>
<td>133A</td>
<td>270µs</td>
</tr>
</tbody>
</table>

Inrush current is measured at peak of the corresponding line voltage, source impedance per NEMA 410.

Lightning Surge Info

<table>
<thead>
<tr>
<th>ANSI Surge Type</th>
<th>Differential Mode (L-N)</th>
<th>Common Mode (L-G, N-G, L&amp;N-G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2/50µs Combination Wave (w/t 2δ)</td>
<td>6kV</td>
<td>6kV</td>
</tr>
</tbody>
</table>

Isolation

<table>
<thead>
<tr>
<th>Isolation</th>
<th>Input</th>
<th>Output</th>
<th>0-10V (Class 1 &amp; 2)</th>
<th>Enclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>NA</td>
<td>2xU+1kV</td>
<td>2.5kV</td>
<td>2xU+1kV</td>
</tr>
<tr>
<td>Output</td>
<td>2xU+1kV</td>
<td>NA</td>
<td>2.5kV</td>
<td>2xU+1kV</td>
</tr>
<tr>
<td>SR</td>
<td>2.5kV</td>
<td>2.5kV</td>
<td>NA</td>
<td>2xU+1kV</td>
</tr>
<tr>
<td>Enclosure</td>
<td>2xU+1kV</td>
<td>2xU+1kV</td>
<td>2xU+1kV</td>
<td>NA</td>
</tr>
</tbody>
</table>

U = Max input voltage