ADVANCE

by (signify

LED Driver

Xitanium

XI190C275V054BSG1



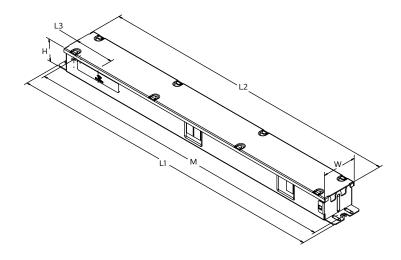
Advance Xitanium LED drivers with SimpleSet technology are designed to give OEMs ultimate flexibility with one driver to serve a complete portfolio. The operating window optimizes coverage for Class 2 in terms of power, output voltage and current. With two independent channels this driver allows the user to get much more than 100W in a compact form factor, while still complying with Class 2 limits. High driver efficiency enables very high system efficacies.

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. Protec- tion Rating | Driver Type |
|---------------------------|------------------------|--------------------------|--------------------------|---|---------------------------|-------------------------|-------------------------------|-----------------------------|-------------------------------|---|-------------------------------------|---------------------|
| 120 | 95W per channel | 27-54 | | 88 | Life - 85°C UL - 90°C | 1.83 | | <10% | >0.95 6 | 6 | UL damp & dry, Type HL | |
| 277 | | Class 2 Output | 0.1 - 2.75 | 89 | | 0.77 | 220 | | | | | Constant Current |

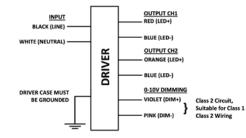
Enclosure

| | In. (mm) |
|----------------------------------|---------------|
| Case Length (L2) | 15.75 (400) |
| Case Width (W) | 1.8 (45.6) |
| Case Height (H) | 1.22 (31) |
| Mounting Length (M) | 16.33 (414.8) |
| Overall Length (L1) | 16.70 (424.2) |
| Center of SimpleSet Antenna (L3) | 2.05 (52) |



Wiring Diagram

| Dimming | 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 (Negative, 0-10V) | 270 (± 30) |



WARNING:

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

| Dimming | Dimming Range (with specified dimmers) | Minimum Output Current (A) |
|--------------------------------------|--|-------------------------------|
| 0-10V Analog Class 1 and 2 Wiring | 5% ~ 100% | 0.035 |



Features

- 50,000+ hour lifetime¹
- Programmable output current through SimpleSet
- Large operating window
- 6kV combi-wave surge rating to comply with ANSI C82.77-5 CAT C low

Benefits

- Designed for Class 2 luminaires
- Fast and simple way of programming
- Perfect for wide range of lumen outputs 12,000 to 24,000 lumens with single driver²
- Dual channel allows high power up to 190W with UL Class 2 outputs
- No external surge protection required to pass C82.77-5 CAT C low

Application

• Linear high-bay fixtures

Electrical Specifications

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

Product Data

| Order Information | | | | | |
|---|---|--|--|--|--|
| Full Product Code | XI190C275V054BSG1M (Mid-Pack, Qty/box: 6) 12NC = 929000744513 | | | | |
| Line Frequency | 50/60Hz | | | | |
| Min. Mains Voltage Operational | 108 Vac | | | | |
| Max. Mains Voltage Operational | 305 Vac | | | | |
| Output Information | | | | | |
| Maximum Open Circuit Voltage | < 60Vdc | | | | |
| Output Current Ripple (ripple = peak to average / average) | 15% max @ max lout | | | | |
| Output Current Tolerance (in the performance window) | <5% | | | | |
| Protections | Short Circuit, Open Circuit Protection for LED + and LED - and Temperature Foldback | | | | |
| Features | | | | | |
| # Of Output Channels | 2 Channels of 95W each | | | | |
| 0-10V Dimming | 150μA (±3%) source current from driver. See dim curve for detail. | | | | |
| AOC (Adjustable Output Current) | 0.1A-2.75A via SimpleSet (Factory Default at 2.3A) | | | | |
| Additional SimpleSet Configurable Features | Adjustable Min Dim Level, Adjustable Lumen Output, Adjustable Lumen Output Min, OEM Write Protection | | | | |
| Environment & Approbation | | | | | |
| Operating Ambient Temp. Range | -40°C to +55°C | | | | |
| Max Case Temperature (Tcase) | 90°C | | | | |
| Agency Approbations | UL 8750, UL1310, cUL, NOM | | | | |
| Electromagnetic Compliance | FCC Title 47 Part 15 Class A | | | | |
| Audible Noise | <24dB Class A | | | | |
| Weight | 0.991 Kg | | | | |

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.

2. 24,000 lumens based on an estimated 115 LPW luminaire efficacy, and can be proportionally higher for high efficacy luminaire designs. A luminaire with 150 LPW can achieve 30,000 lumens.

Electrical Specifications

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0-10V Dimming Curve

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

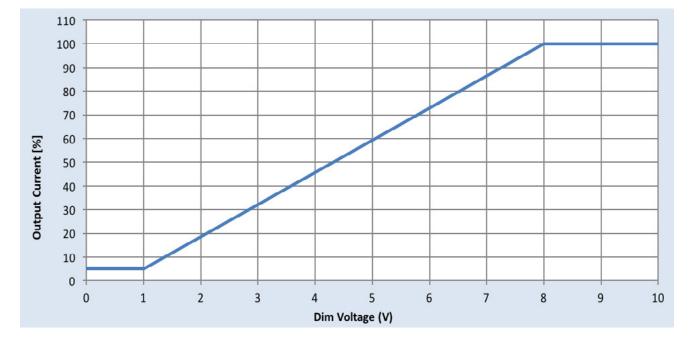
Minimum dim level: 5% of lout setting as default

Maximum output voltage on the dimming wires: 12V

Control Lead Leakage Current: 0.01mA, recommend max number of control circuits in parallel refer to Design-in Guide

Approved Dimmer List

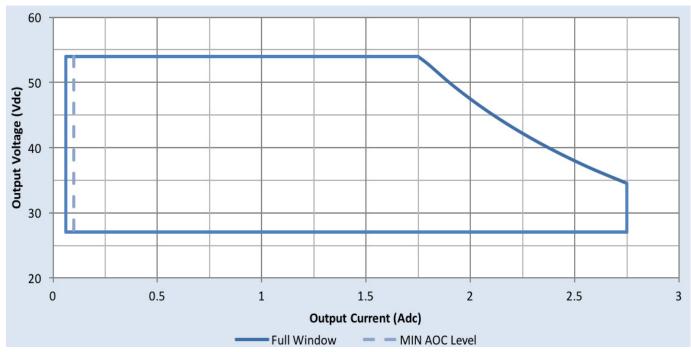
| Manufacturer | Manufacturer Part Number | | |
|--------------|---|--|--|
| Lutron | Visit www.lutron.com/ advance for a list of dimmers (Mark VII) that will work with this driver | | |
| Leviton | IllumaTech IP7 series | | |
| Advance | Sunrise - SR1200ZTUNV | | |



Electrical Specifications

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Driver Output Window



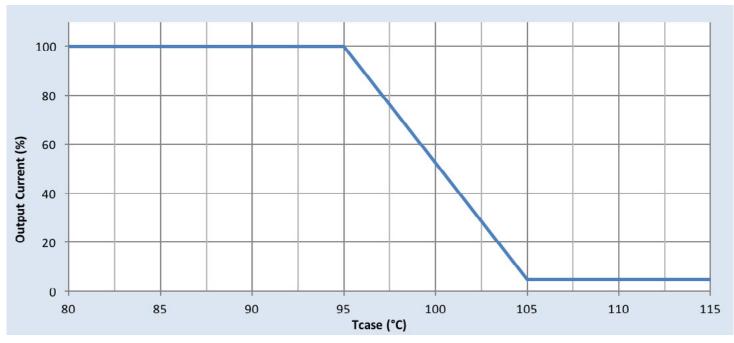
Notes

- 1. Factory default output current is 2.3A.
- 2. To get a 100% to 5% dimming range, the output current setting through AOC should be \geq 700mA (at 5% min dim).
- 3. Factory default minimum dimming level is 5%. This can be adjusted between 5% and 100% using Advance MultiOne.
- 4. See page 7 for Power Factor and Total Harmonic Distortion graphs.

Electrical Specifications

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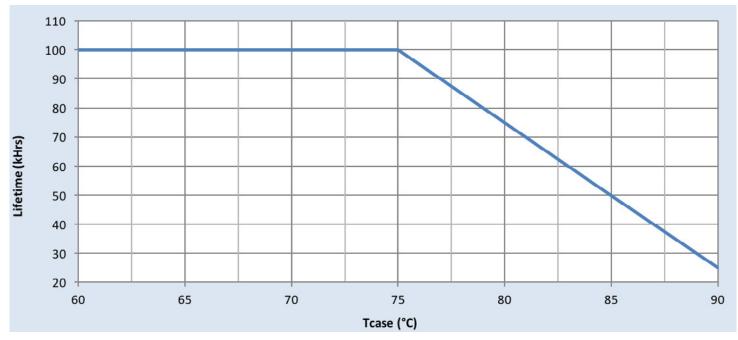
Output Current Vs. Driver Case Temperature



Note

There is $\pm 5^{\circ}$ C tolerance on the driver case temperature.

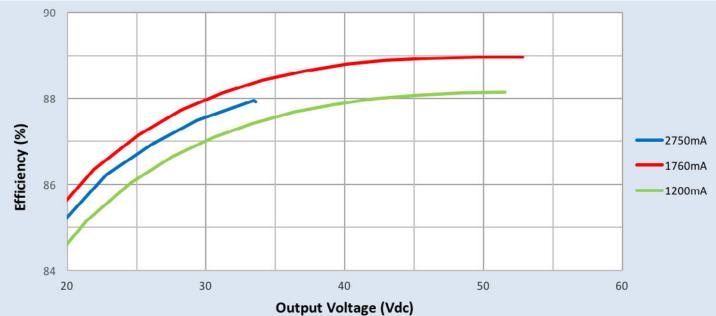
Driver Lifetime Vs. Driver Case Temperature

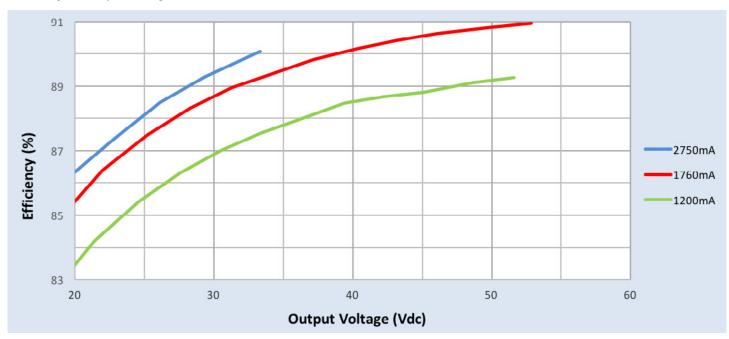


Performance Characteristics

Based on measurements on a typical sample at 75° C case. The accuracy of the measurements is within the tolerance of the measurement instruments.

Efficiency Vs. Output Voltage at 120Vac





Efficiency Vs. Output Voltage at 277Vac

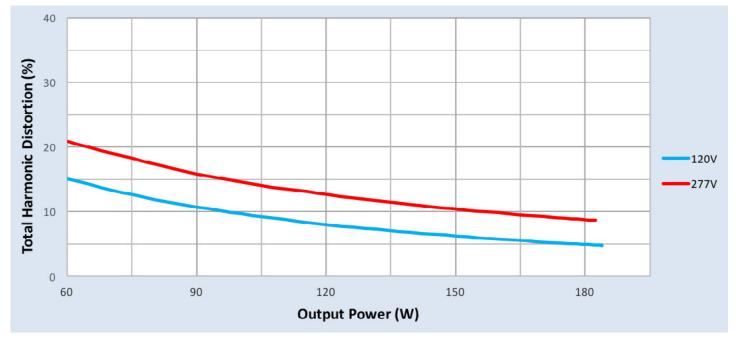
Performance Characteristics

Based on measurements on a typical sample at 75° C case. The accuracy of the measurements is within the tolerance of the measurement instruments.

Power Factor Vs. Total Output Power*

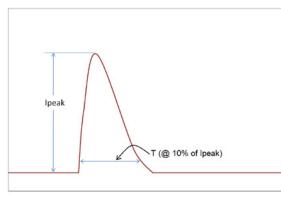


Total Harmonic Distortion (THD) Vs. Total Output Power*



Power Factor and Total Harmonic Distortion graphs are shown for combined output power of both channels.

Inrush Current Info



| Vin | lpeak | T (@ 10% of Ipeak) | |
|----------|--------|--------------------|--|
| 120 Vrms | 51A | 360µS | |
| 277 Vrms | 119.2A | 353µS | |

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 | Enclosure |
|-----------|---------|---------|-------|-----------|
| Input | NA | 2xU+1kV | 2.5kV | 2xU+1kV |
| Output | 2xU+1kV | NA | 2.5kV | 2xU+1kV |
| 0-10V | 2.5kV | 2.5kV | NA | 2.5kV |
| Enclosure | 2xU+1kV | 2xU+1kV | 2.5kV | NA |

U = Max. input voltage

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