LED Driver

ADVANCE

by (s) ignify

Xitanium

XI190C275V054BSG2







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.

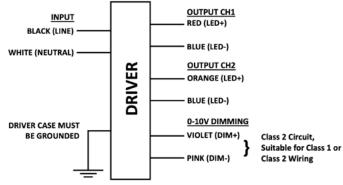
Specifications

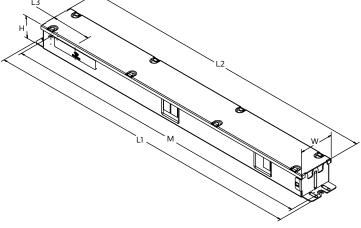
Input Voltage (Vac)	Output Power (W)	Out- put Volt- age (V)	Out- put Cur- rent (A)	Efficien- cy @ Max Load and 75°C Case	Max Case Temp. (°C)	Input Cur- rent (A)	Max. Input Power (W)	THD @ Max Load (%)	Power Fac- tor @ Max Load	Surge Protect. (Combi- Wave, KV)	Envir. Protect. Rating	Dim.	Dimming Range	Minimum Output Current (A)	Driver Type	Other Com- ments
120	190 20- (2X95) 54	20-	20- 0.1-	88	Life - 1.	1.83		×10% >0.95	6	UL damp & dry, Type HL	0-10V Analog	5% ~		Con- stant	Dimming	
277		2.75	89	UL -	0.77	220 <109	<10%				Class 1 and 2 Wiring	100%	0.035	Cur- rent	current: 150 µA	

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





WARNING:

Risk of fire or electric shock.

Do not interconnect ouput terminations.

Driver case must be grounded.

Install in accordance with national and local electrical codes.

The field-wiring leads or push-in terminals shall be fully enclosed.

For connections use wire rated for at least 90°C.





190W 2.75A 0-10V Dimming with SimpleSet

Features

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

Benefits

- · Designed for Class 2 luminaires
- Improved electrical efficiency vs. XI190C275V054BSG1
- Perfect for wide range of lumen outputs
 15,000 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 unless specified otherwise.

Product Data

Order Information						
Full Product Code	XI190C275V054BSG2 (12NC = 929001780913)					
Line Frequency	50/60Hz					
Min. Mains Voltage Operational	108 Vac					
Max. Mains Voltage Operational	305 Vac					
Output Information						
Maximum Open Circuit Voltage	<= 60Vdc (Class 2 Output)					
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, Advance programmable driver thermal limit					
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	0.90kg					

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.

190W 2.75A 0-10V Dimming with SimpleSet

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0-10V Dimming Curve

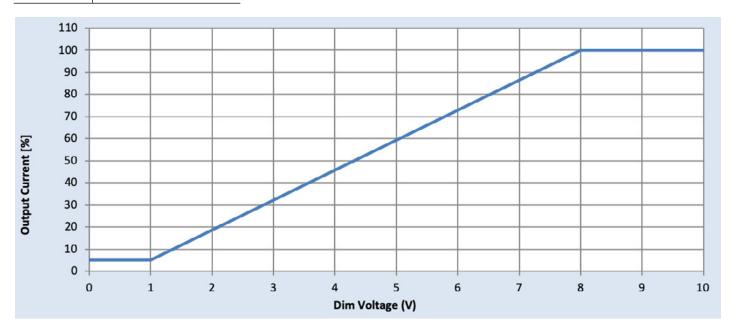
Dimming source current from the driver: 150µA (@ 0<Vdim<8V)

Minimum dim level: 5% of lout setting as default

Maximum output voltage on the dimming wires: 12V

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			

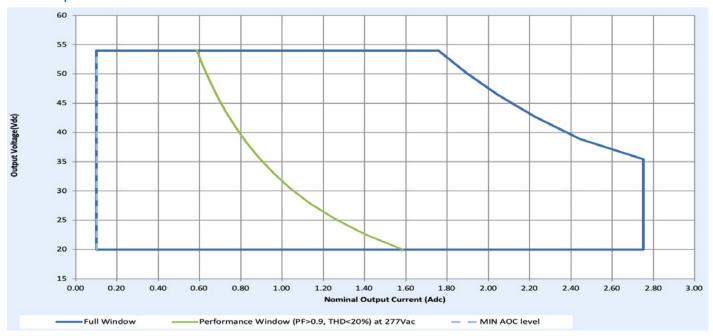


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Driver Output Window



Notes

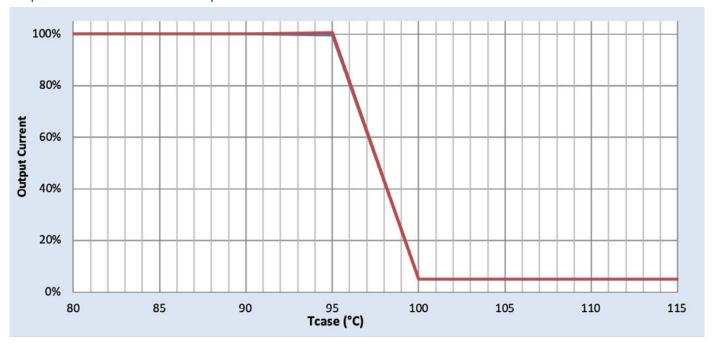
- 1. Factory default output current is 2.3A.
- 2. To get a 100% to 5% dimming range, the output current setting through AOC should be \geq 700mA (at 5% min dim).
- 3. Factory default minimum dimming level is 5%. This can be adjusted between 5% and 100% using Advance MultiOne.
- 4. See page 7 for Power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

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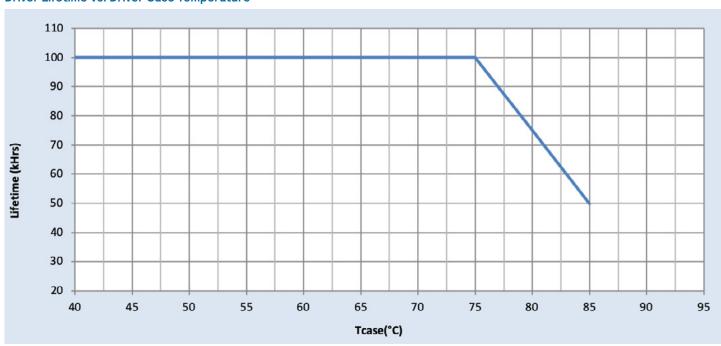
Output Current Vs. Driver Case Temperature



Note

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

Driver Lifetime Vs. Driver Case Temperature

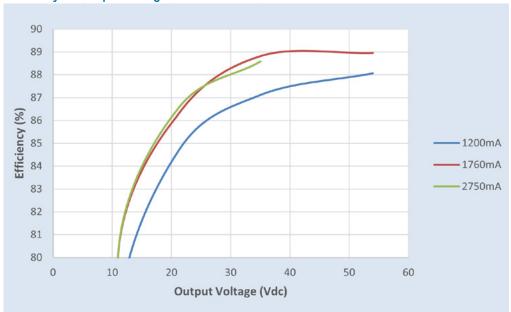


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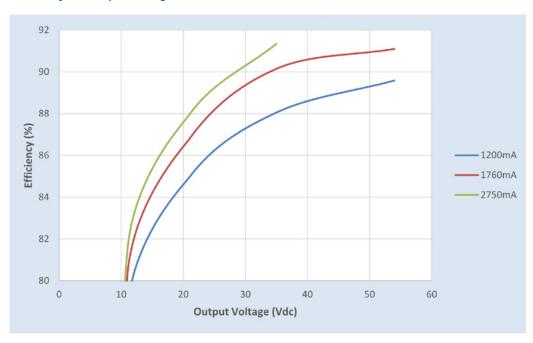
Performance Characteristics

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

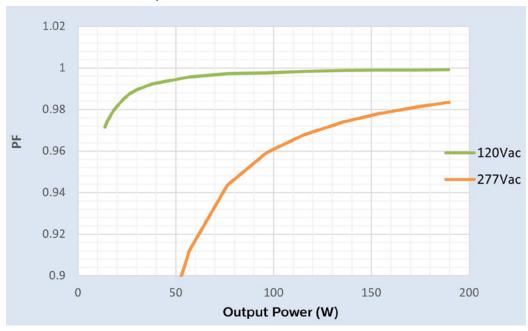


190W 2.75A 0-10V Dimming with SimpleSet

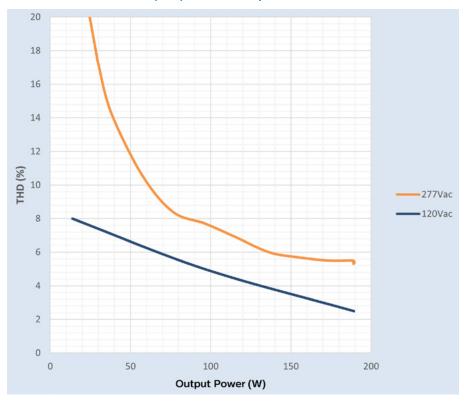
Performance Characteristics

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Power Factor Vs. Total Output Power*



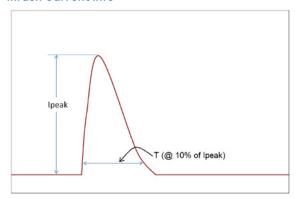
Total Harmonic Distortion (THD) Vs. Total Output Power*



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

190W 2.75A 0-10V Dimming with SimpleSet

Inrush Current Info



Vin	lpeak	T (@ 10% of Ipeak)		
120 Vrms	65A	208µS		
277 Vrms	154A	192µS		

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 (Class 2)	2.5kV	2.5kV	NA	2.5kV	
Enclosure	2xU+1kV	2xU+1kV	2.5kV	NA	

U = Max. input voltage

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