



The Advance Xitanium Sensor Ready (SR) LED driver can help reduce complexity and cost of light fixtures used in connected lighting systems in outdoor lighting applications. It's D4i certified and features a standard compliant digital interface to enable direct connection to compatible networked lighting control (NLC) solutions. 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

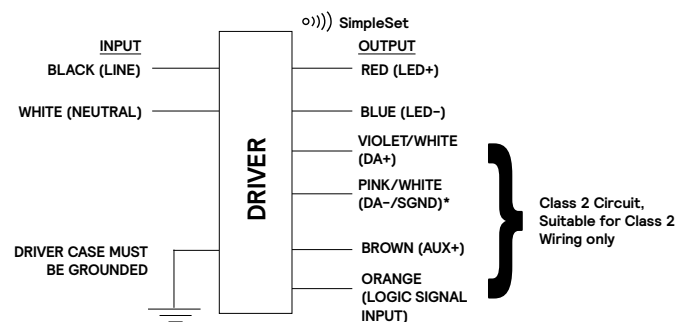
Input Voltage (Vrms)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max. Load and 70°C Case	Max. Case Temp. (°C)	Input Current (Arms)	Max. Input Power (W) ¹	THD @ Max. Load	Power Factor @ Max. Load	Surge Protection Common/Diff (KV)	DIM	Dimming Range	Minimum Output Current (A)	Driver Type
120	55	18-54 Class 2 Output	0.1-1.8	87	Life-85 UL-90	0.55	67	<10%	>0.95	6/6	DALI	1% - 100%	0.007	Constant Current
277				88		0.24		<15%						

Enclosure

	In. (mm)	Tolerance
Overall Length (A1)	6.61 (168.0)	±0.5
Mounting Hole Distance (A2)	6.06 (153.8)	±0.5
Case Length (A3)	5.50 (139.8)	±0.5
Case Width (B1)	1.78 (45.1)	±0.5
Mounting Hole Distance (B2)	1.22 (31)	±0.5
Case Height (C1)	1.11 (28.2)	±1.0
Mounting Hole Diameter (D1)	0.20 (5.0)	±0.5
Mounting Hole Diameter (D2)	0.35 (8.8)	±0.5
Center of SimpleSet Antenna (G1)	3.99 (101.5)	±3.0

Wiring Diagram

	Wire length (mm)
Black (Line)	280 (± 30)
White (Neutral)	280 (± 30)
Red (Positive, LED output)	270 (± 30)
Blue (Negative, LED output)	270 (± 30)
Violet/White (DA+)	270 (± 30)
Pink/White (DA-/SGND)	270 (± 30)
Brown (AUX+)	270 (± 30)
Orange (LSI)	270 (± 30)



*DA-/SGND is the common return for DA+, AUX+ and Logical Signal Input

WARNING:

Install in accordance with national and local electrical codes.

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

1. Based on 3W load on auxiliary power supply.

Xitanium SR XI055C180V054VSJ1

55W 120–277V 1.8A SR

Electrical Specifications

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

Features

- Compatible with SR-certified devices
- Standard-compliant (ANSI C137.4 and DiiA D4i) digital interface including:
 - Integrated DALI bus power supply (Part 250)
 - Memory Bank 1 extension
 - Energy Monitoring and Diagnostics (Parts 251, 252, 253)
 - 24V Auxiliary power supply for higher power device requirements (Part 150)

- Accurate energy metering
- Logic signal input
- Drive current setting via SimpleSet
- 5-year limited warranty¹

Benefits

- Enables interoperability with compatible networked lighting control solutions (NLCS) from multiple third-party
- Reduces cost and complexity of outdoor connected lighting systems²
- Standardized luminaire data for Asset Management

- 4% metering accuracy meets proposed ANSI standard C136.52
- Can be used with standard motion sensors for local control to complement net-work control.

Application

- Area
- Roadway
- Parking garages
- Floodlights

Product Data

Ordering Information	
Order Code	XI055C180V054VSJ1 (Mid-Pack, 12pcs/Box), 12NC: 929002766213
GTIN	781087170946
Input Information	
Min Mains Voltage Operational	108Vac
Max Mains Voltage Operational	305Vac
Line Frequency	50/60Hz
Output Information	
Flicker	Meets NEMA77
Leakage Current of Control Circuit (SR,Aux and LSI)	0.05mA, recommended max number of control circuits in parallel refer to Design-In Guide
Output Current Ripple= pk-avg/avg	<15% at max. lout
Output Current Tolerance	±5% at max. output current
Maximum Open Circuit Voltage	60VDC
Protections	Short Circuit and Open Circuit Protection for LED + and LED- and Thermal foldback protection
Features	
AOC (adjustable output current)	0.1A to 1.8A via SimpleSet programming (refer to graphs and notes)
Suitable for Outdoor Use	Yes
Interfaces	Simpleset, Sensor Ready(SR), Logical Signal Input (LSI), Auxilairy Power Supply
Power Reporting Accuracy	+/-4% in performance window and under nominal operating conditions

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.

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Product Data (continued)

Configurable Features	Adjustable Light Output (ALO) Adjustable Output Current (AOC) Constant Light Output (CLO) DALI 102 variables (DALI 102) DALI 207 variables (DALI 207) Dia specification DALI Part 253 – Luminaire Maintenance (DALI 253 M) Driver Temperature Limit (DTL) Dynadimmer (Dynadimmer) End Of Life indication (EOL) Logical Signal Input (LSI) Luminaire (Fixture) Information (Luminaire Info) Min dim level (Min dim level) OEM Write Protected features (OWP) DALI Power Supply (DALI PSU) Adjustable Startup Time (Startup Time)
Auxiliary Power Supply (According to ANSI C137.4)	
Nominal Aux. Output Voltage	24Vdc
Rated Aux. Output Power	3W continuous, 6W peak
Protections	Short Circuit & Open Circuit Protection for Aux+ and Aux-
DALI power supply	
Current Source	52mA to 60mA
Voltage Range	12V to 20V
Communication Protocol	DALI-2, D4i, ANSI C137.4
Mis-wiring to Mains Protection	No
Logic Signal Input (LSI)	
Dry Contact Input	Yes
Logic Low	<3V or open
Logic High	>7V
Max. Current Draw	2mA
Environment & Approbation	
Operating Ambient Temp. Range	-40°C to +55°C
Max Case Temperature (Tcase)	85°C for Life & 90°C for UL Safety
Agency Approbations	UL 8750, NOM, cUL, Class P (UL, cUL)
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Audible Noise	<24dB Class A
Weight	0.908 lbs/0.412 kgs
Envir. Protection Rating	UL Dry and Damp

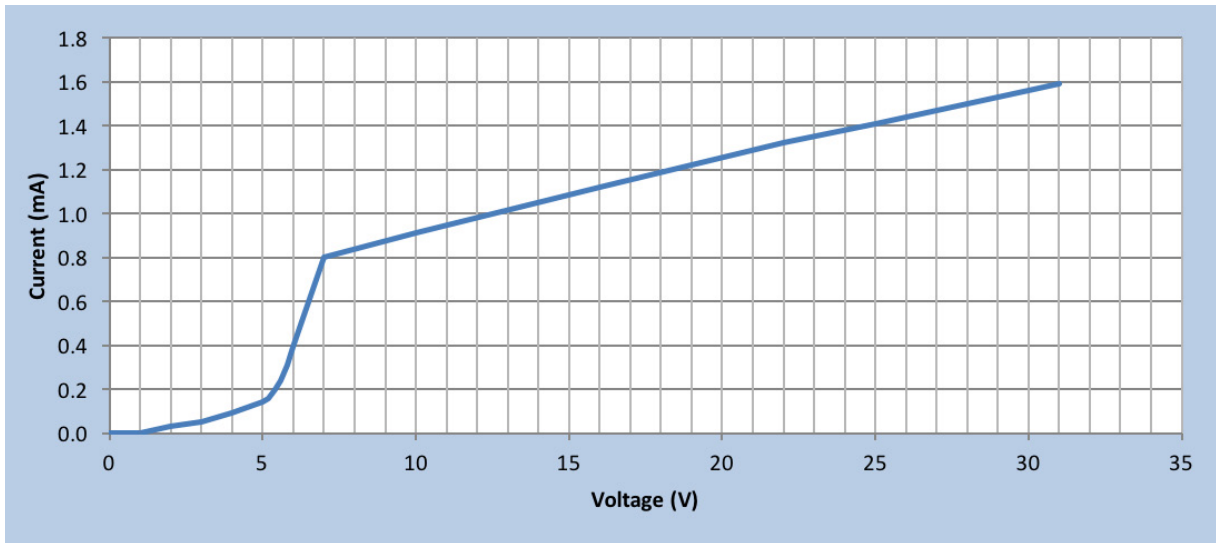
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Logic Signal Input (LSI) Characteristics (Typical)



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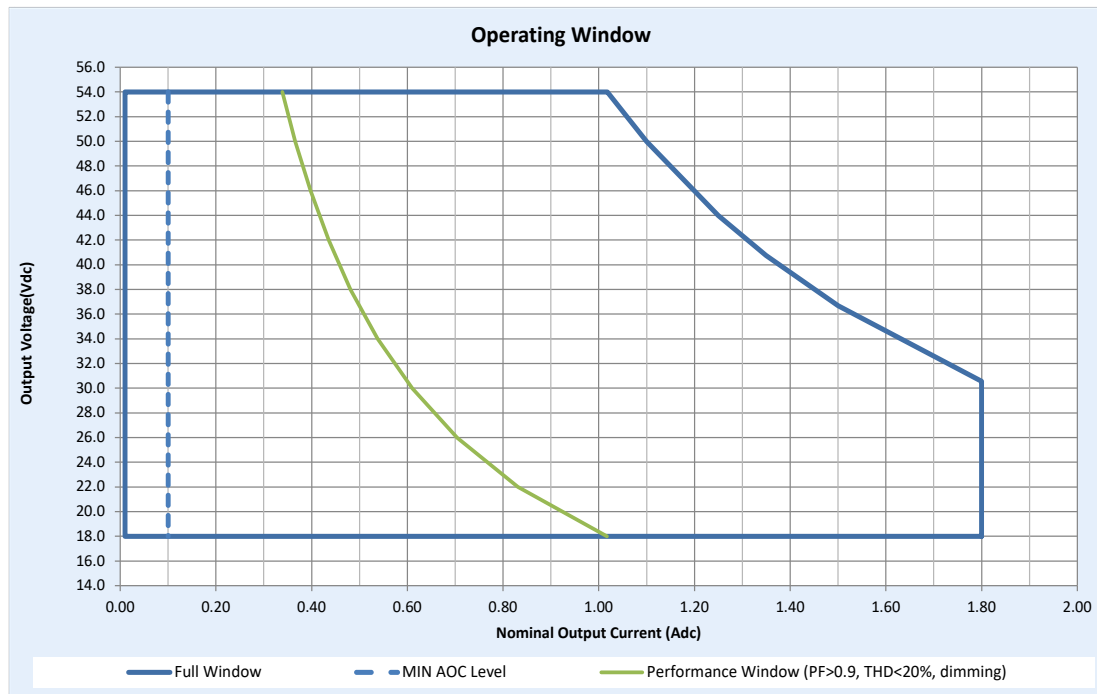
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Operating Window

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.



1. Factory default output current is 1.05A.
2. To get a 100% to 1% dimming range, the output current setting through AOC should be $\geq 0.7A$.
3. Factory default min. dim level is 10%.

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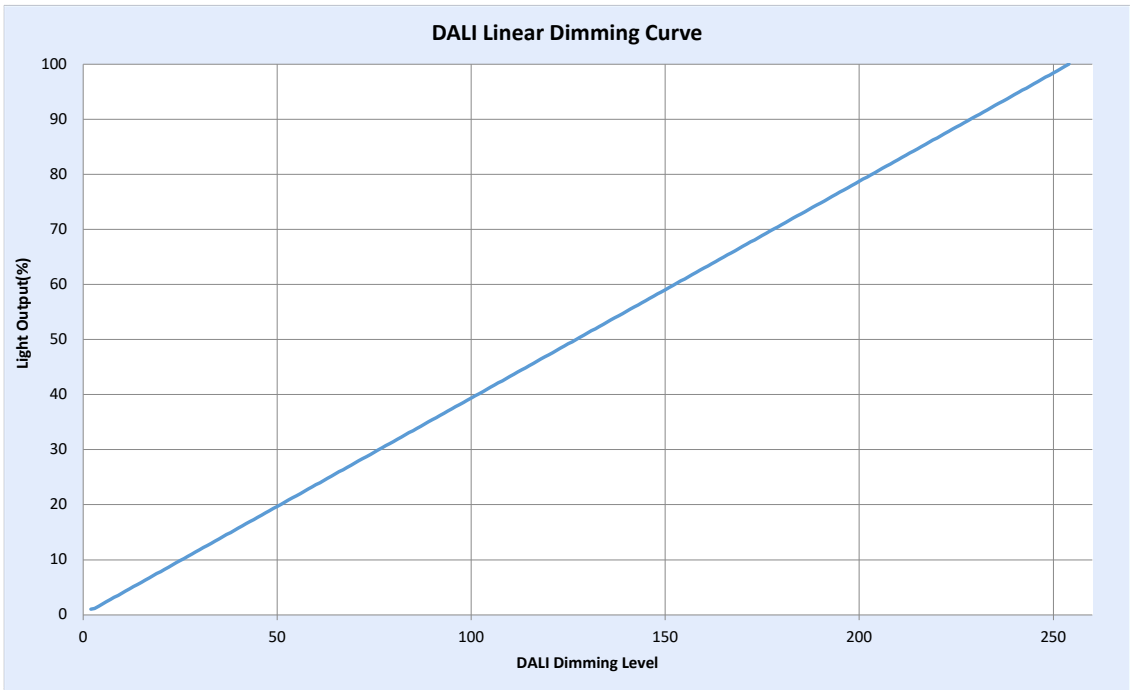
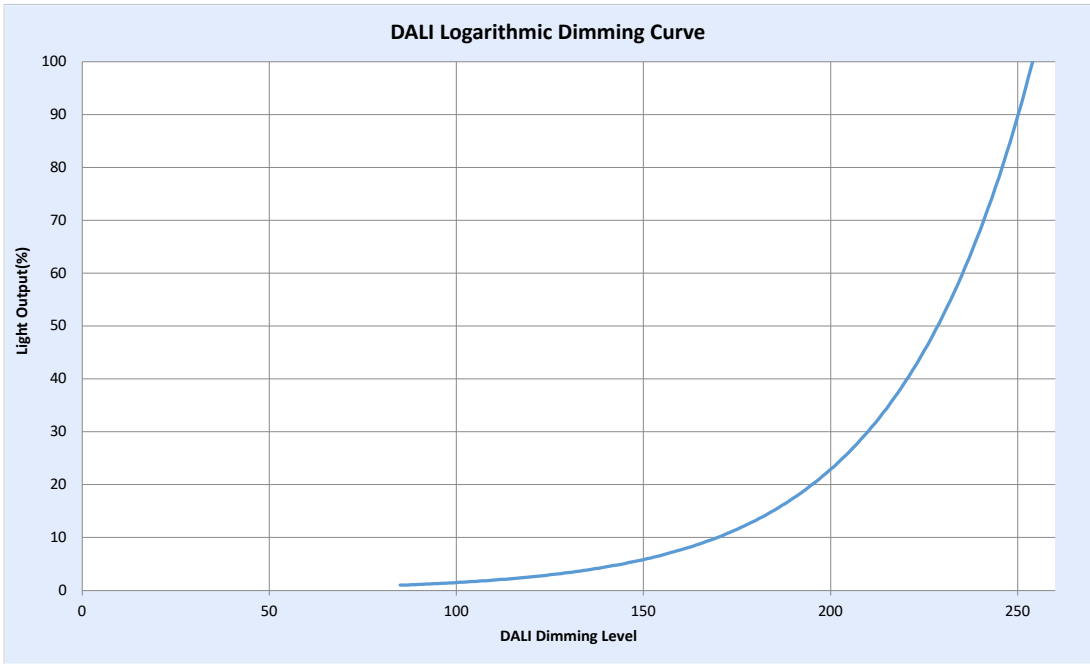
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Dimming Characteristics

Dimming is accomplished through the 2-wire DALI connection to the sensor. Driver supports both logarithmic and linear dimming curves with the default being logarithmic. The switching process between logarithmic and linear is defined in the DALI standard IEC62386-207.



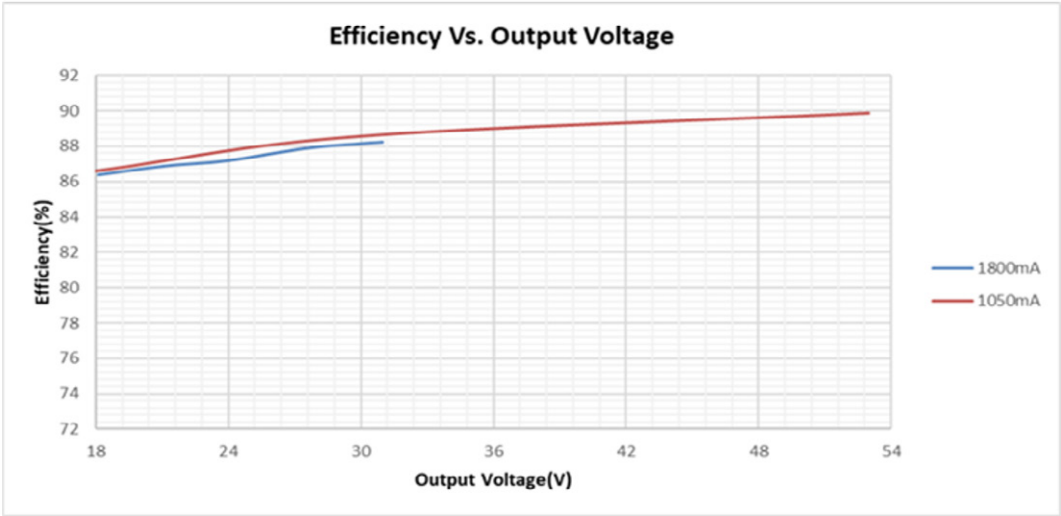
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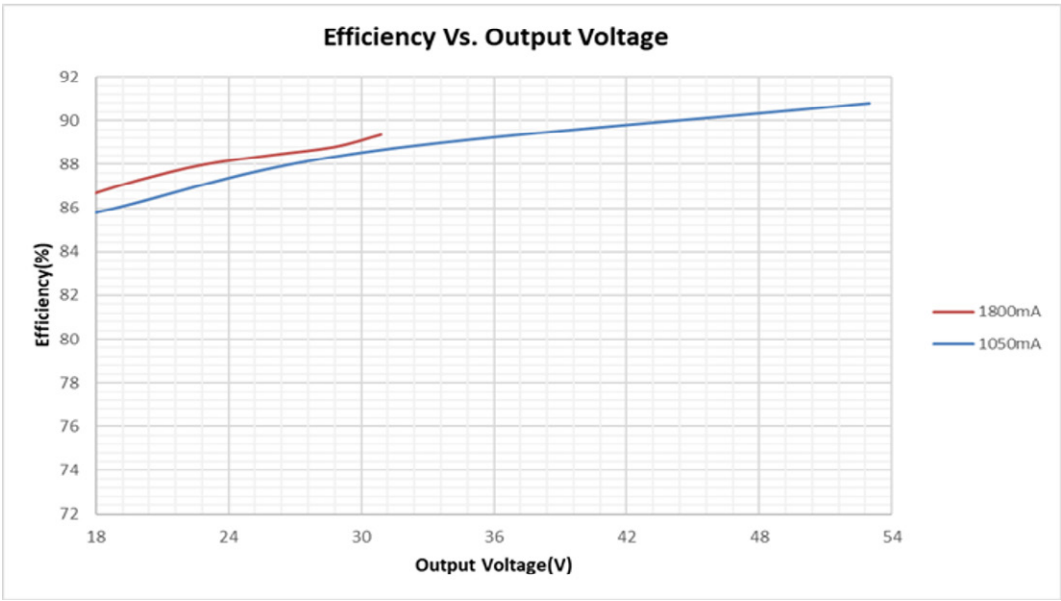
Performance Characteristics

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



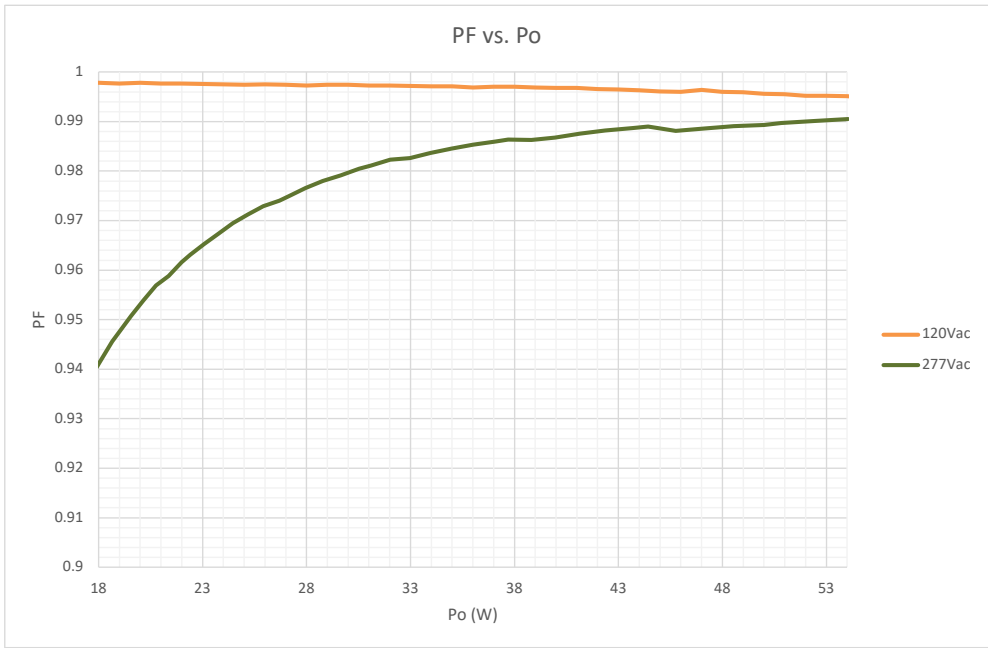
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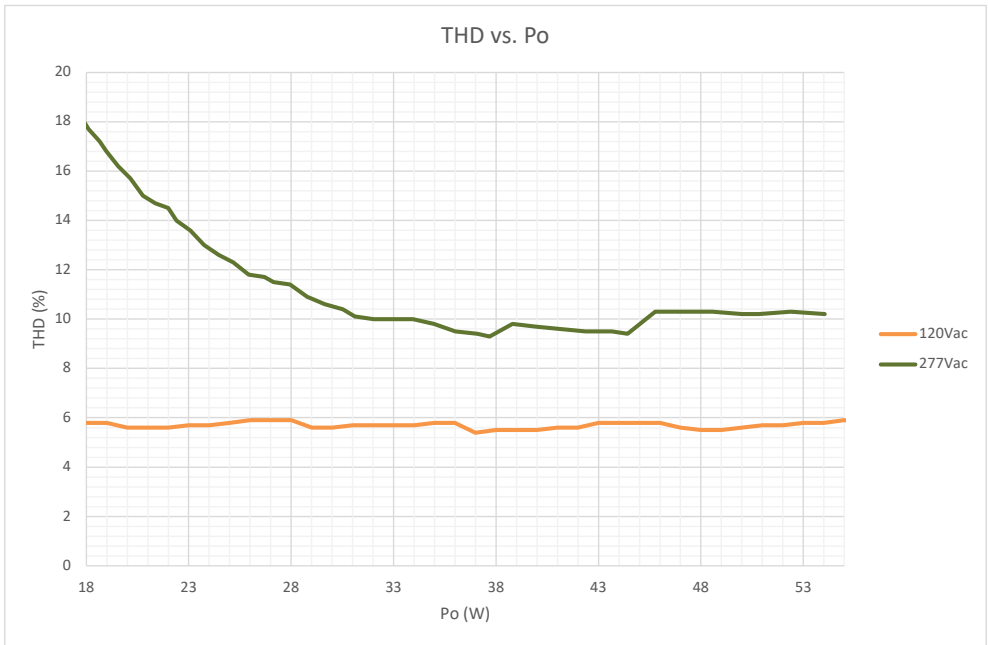
Performance Characteristics

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Power Factor Vs. Output Power



Total Harmonic Distortion Vs. Output Power



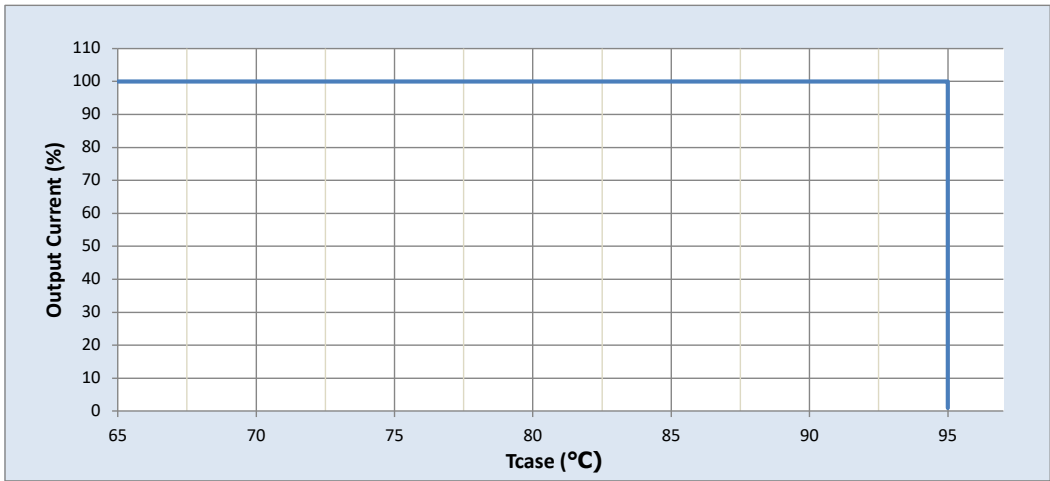
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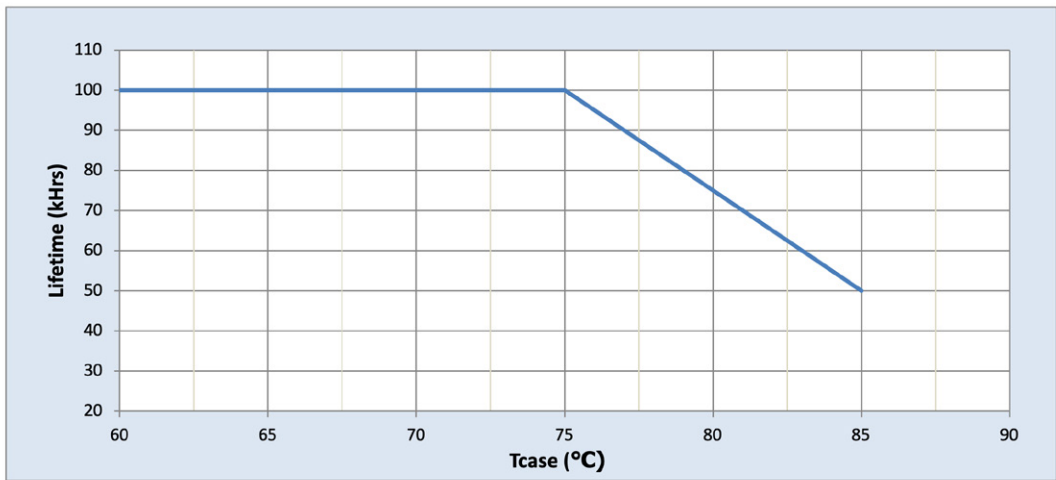
Electrical Specifications

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Output Current Vs. Driver Case Temperature



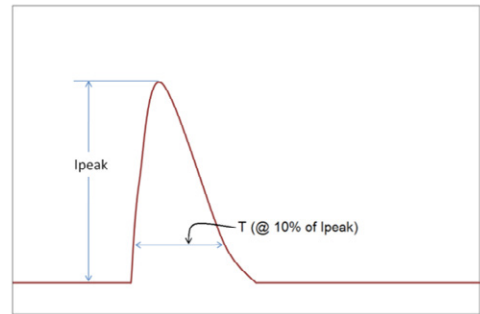
Driver Lifetime Vs. Driver Case Temperature



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Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
120 Vac	8A	32μS
277 Vac	22A	29μS

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 2 ₂)	6kV	6kV

Isolation

Isolation	Input Leads	Output Leads	(DA+, DA–/SGND, Aux and LSI), Class 2 Only	Enclosure
Input Leads	NA	2xU+1kV	2xU+1kV	2xU+1kV
Output Leads	2xU+1kV	NA	500Vrms	500Vrms
(DA+, DA–/SGND, Aux and LSI), Class2 Only	2xU+1kV	500Vrms	NA	500Vrms
Enclosure	2xU+1kV	500Vrms	500Vrms	NA

U = Max. input voltage



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