ADVANCE
by signify

LED Driver

Xitanium SR

XG050C140V054VPT1

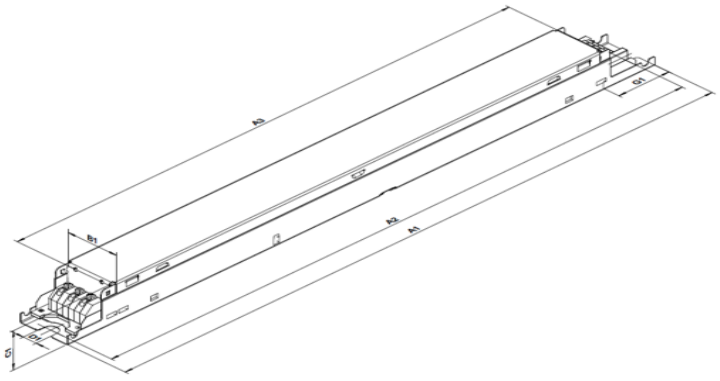
The Advance Xitanium Sensor Ready (SR) LED driver can help reduce complexity and cost of light fixtures used in connected lighting systems for indoor lighting applications. It's D4i certified and features a standard-compliant digital interface to enable direct connection to compatible networked lighting control (NLC) solutions. The minimum dimming level has been improved to be as low as 1%. Advanced lighting control functionalities that ordinarily would require additional auxiliary component are integrated into this driver. The result is a simple, cost-effective light fixture that supports the most advanced smart lighting use cases.

Specifications

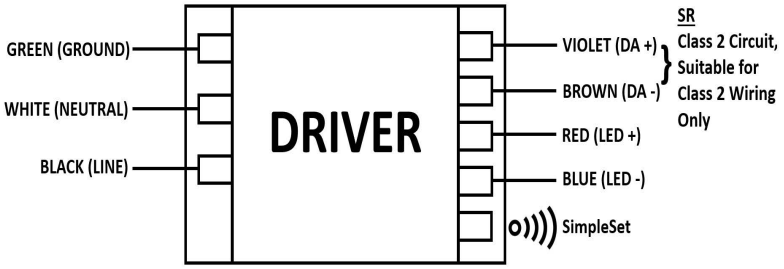
Input Volt. (Vac)	Out-put Power (W)	Output Voltage (V)	Output Current (A)	Efficiency @ Load and 70°C Case (%)	Max Case Temp. (°C)	Input Cur-rent (A)	Max. Input Power (W)	THD @ Max Load	Power Factor @ Max Load	Surge Protect. (Ring Wave, KV)	Envir. Pro-tect. Rating	Dim.	Dim. Range (with specified dimmers	Min. Output Cur-rent (A)	Other Com-ments	Driver Type
347	50	10 - 54 Class 2 Output	0.1 - 1.4	88%	Life - 75°C UL - 85°C	0.17	58	<15%	>0.95	3.0	UL damp & dry	DALI	1% ~ 100%	0.004	DALI input current (PSU off), max 2mA	Con-stant Cur-rent

Enclosure

	In. (mm)	Tolerance (mm)
Overall Length (A1)	14.17 (359.8)	± 0.5mm
Mounting Length (A2)	13.78(350)	± 0.5mm
Case Length (A3)	11.87(301.5)	± 0.5mm
Case Width (B1)	1.18 (29.4)	± 0.5mm
Case Height (C1)	1.00 (25.4)	± 1.0mm
Mounting Hole Diameter (D1)	0.31(7.9)	±0.3mm
Center of SimpleSet Antenna (G1)	0.84(21.3)	±3.0mm



Wiring Diagram



WARNING
Install in accordance with national and local electrical codes.
Use 18 AWG Solid Copper Wire Rated >= 90 °C.
Strip Wire 3/8".
For Class 2 wiring, use 20 AWG - 16 AWG.
The field-wiring leads or push-in terminals shall be fully enclosed.

USE ONLY WITHIN AN ENCLOSURE.

DOIT ÊTRE INSTALLÉ DANS UNE ENCEINTE

GROUNDING
Driver case must be grounded.

Features

- Standard-compliant (ANSI C137.4 and DiiA) digital interface including:
  - Integrated DALI bus power supply (Part 250)
  - Memory Bank 1 extension, Energy Monitoring and Diagnostics (Parts 251, 252, 253)
- Energy metering and advanced diagnostics
- Continuous dimming down to 1%
- Low standby power <0.5W with no loading and <1.0W with 0.25W load
- Drive current setting via SimpleSet wireless programming
- 5-year limited warranty*

Benefits

- Enable interoperability with diverse wireless sensors/network systems
- Reduce complexity and cost of fixture by eliminating auxiliary components ordinarily required for powering sensors, switching fixture off and monitoring energy use
- Future proof through standard interface to any suitable sensor and ease of adjustable drive current

Application

- Indoor linear applications such as troffers and pendants

Product Data

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

Order Information	
Order Code	XG050C140V054VPT1 (Mid-Pack, 18pcs/Box), 12NC: 929002769413
GTIN	781087171301
Input Information	
Line Frequency	50/60Hz
Min. Mains Voltage Operational	312Vac
Max. Mains Voltage Operational	382Vac
Outpit Information	
Maximum Open Circuit Voltage	<60Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max Iout 4% max @ Visible for Stroboscopic Frequency range 60Hz-3KHz
Pst/SVM	Meets NEMA77
Output Current Tolerance	<5%
Protections	Short Circuit, Open Circuit Protection for LED + and LED – and Temperature Foldback
Control Lead Leakage Current (SR)	0.01mA, recommended max number of control circuits in parallel, refer to Design In Guides

Features	
AOC (Adjustable Output Current)	0.1A-1.4A via SimpleSet (Factory Default at 1.4A)
Suitable for Outdoor Use?	No
Interfaces	Simpleset, Sensor Ready(SR)
Power Reporting Accuracy	+/-4% in performance window and under nominal operating conditions
Configurable Features	Adjustable Light Output (ALO) Adjustable Output Current (AOC) Constant Light Output (CLO) Diia specification DALI Part 253 - Luminaire Maintenance (DALI 253 M) Luminaire (Fixture) Information (Luminaire Info) OEM Write Protected features (OWP) DALI Power Supply (DALI PSU)
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
Environment & Approbation	
Operating Ambient Temp. Range	-20°C to +50°C
Max Case Temperature (Tcase)	85°C for UL, 75°C for life
Agency Approbations	UL8750, cUL, Class P (UL, cUL)
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Audible Noise	<24dB Class A
Weight	0.599Lbs/ 0.272Kgs
Envir. Protection Rating	UL Dry and Damp

*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 MTTF modeling

Xitanium SR XG050C140V054VPT1

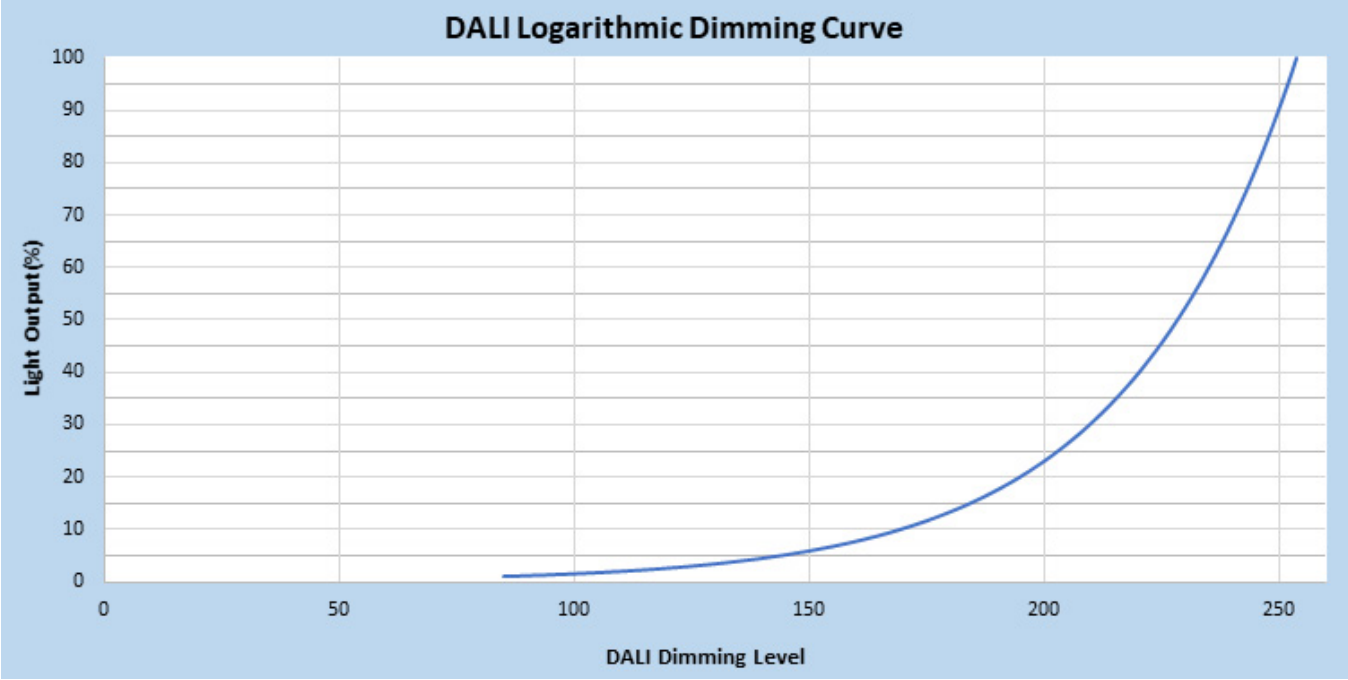
50W 1.4A 54V SR (1%) with SimpleSet

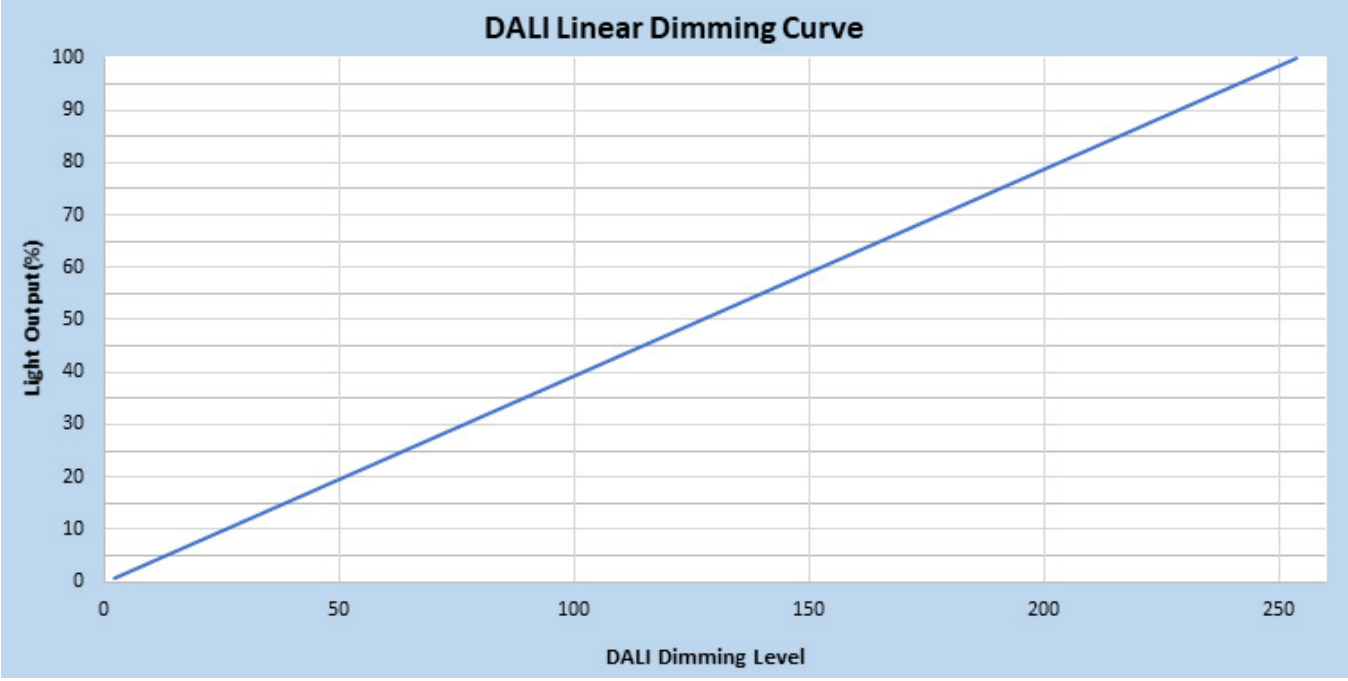
Electrical Specifications

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

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.





Electrical Specifications

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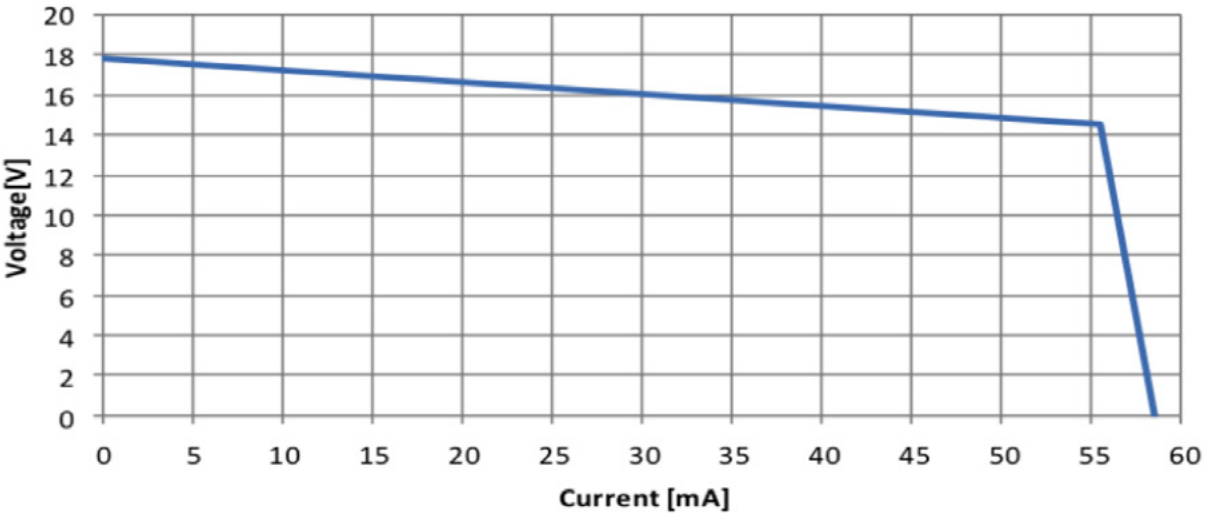
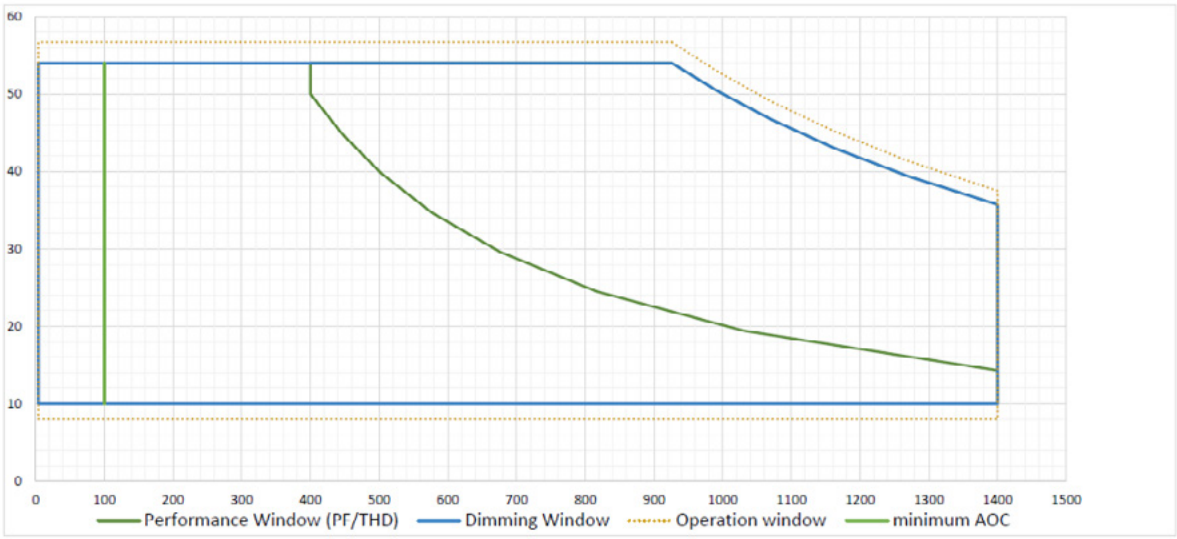
DALI Power Supply Characteristics (Typical)



Note:

Power supply through digital connection, default "on," for connection of one driver to one sensing/RF device. Consult your representative for use with multiple devices.

Operating Window



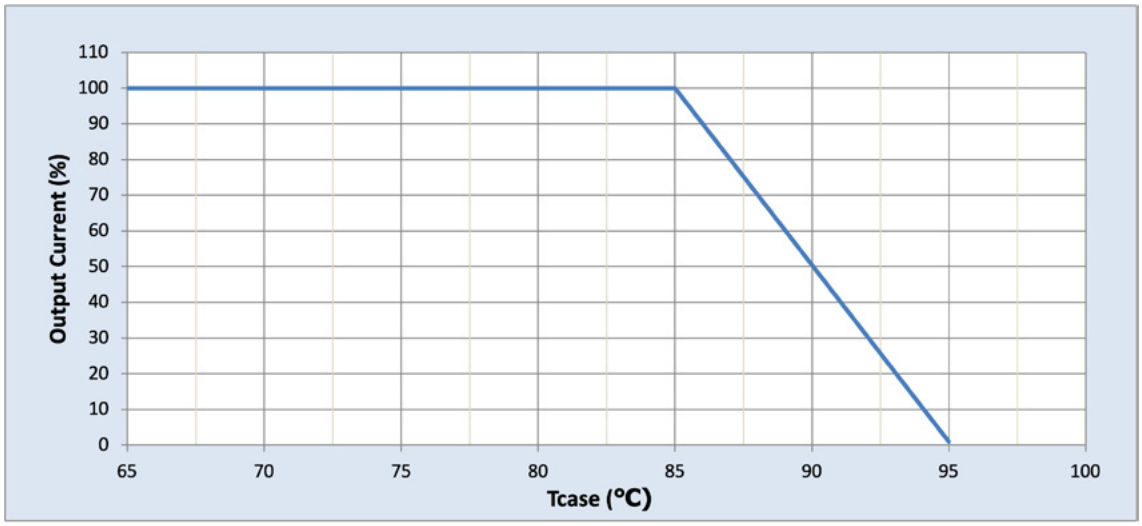
Note:

1. Factory default output current is 1.4A.
2. To get a 100% to 1% dimming range, the output current setting through AOC should be ≥ 0.4A.

Performance Characteristics

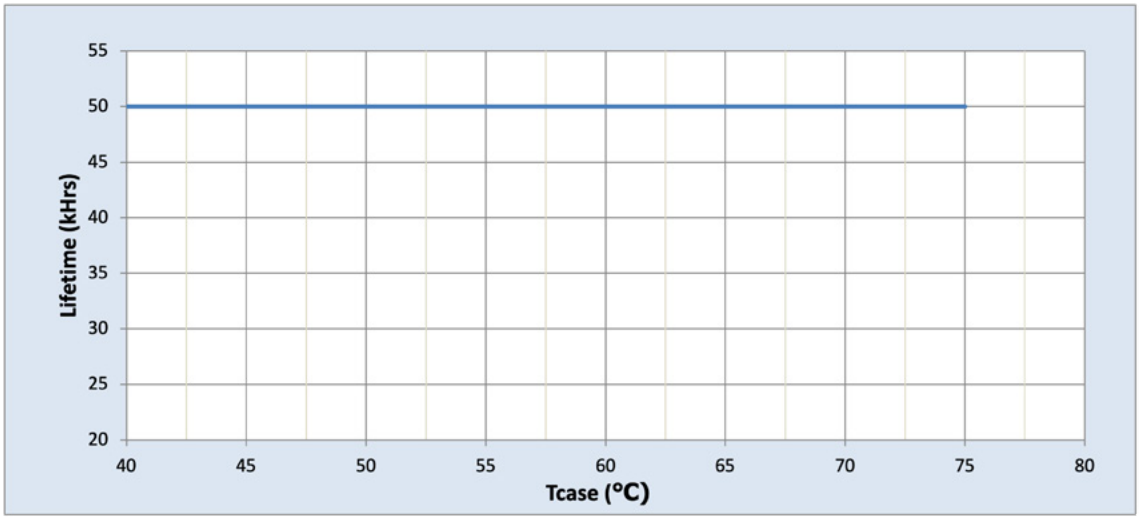
Based on measurements on a typical sample. The accuracy of the measurements is within the tolerance of the measurement instruments. The graphs are meant to be a guideline and not a specification.

Output Current Vs. Driver Case Temperature



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

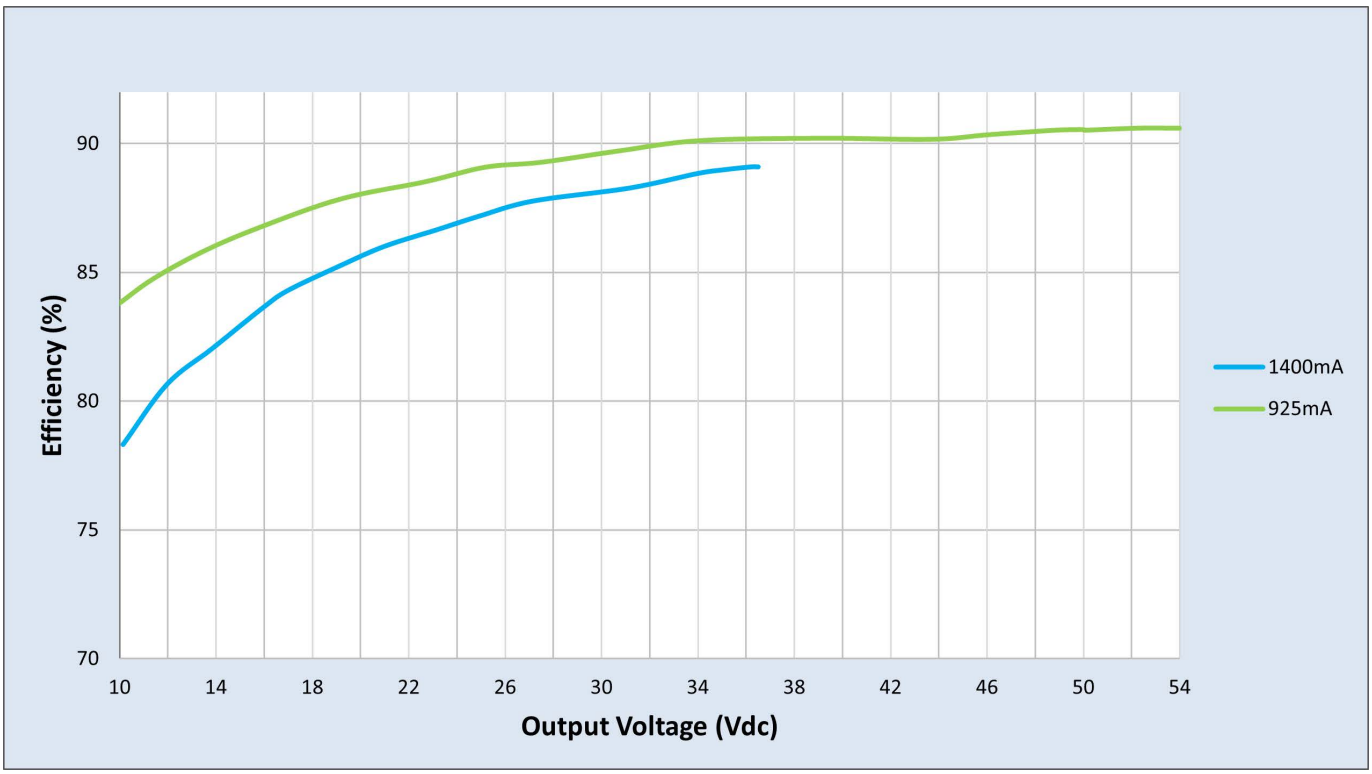
Driver Lifetime vs. Driver Case Temperature



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.

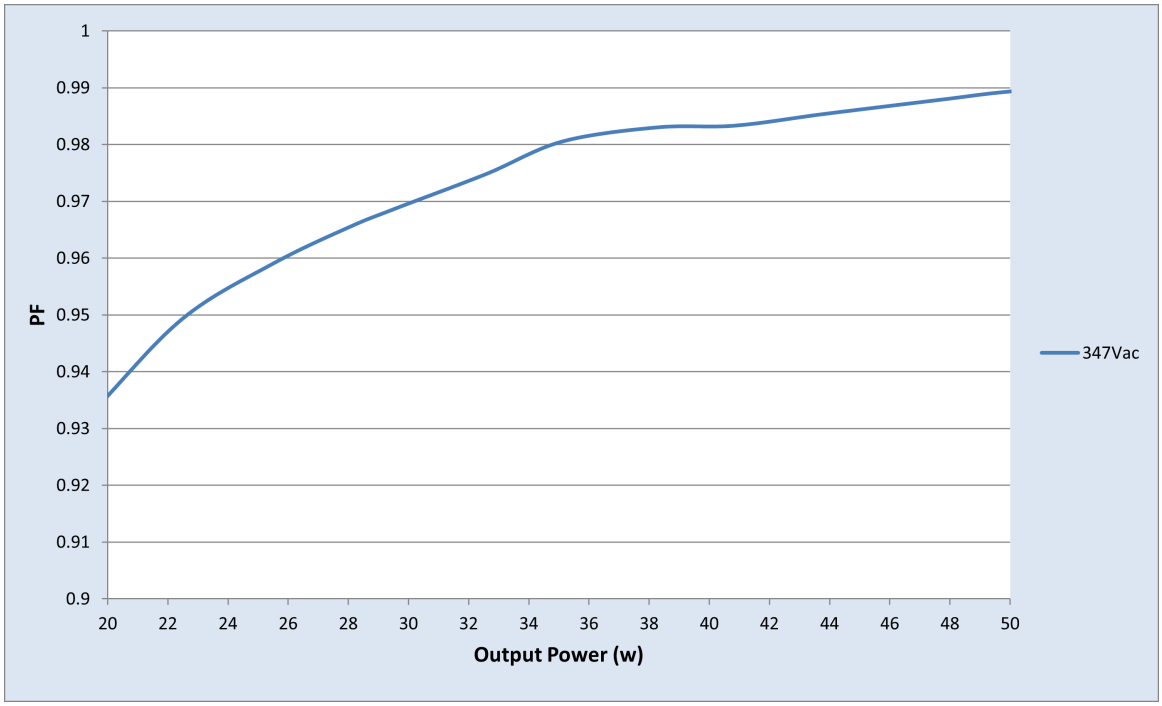
Efficiency Vs. Output Voltage at 347Vac



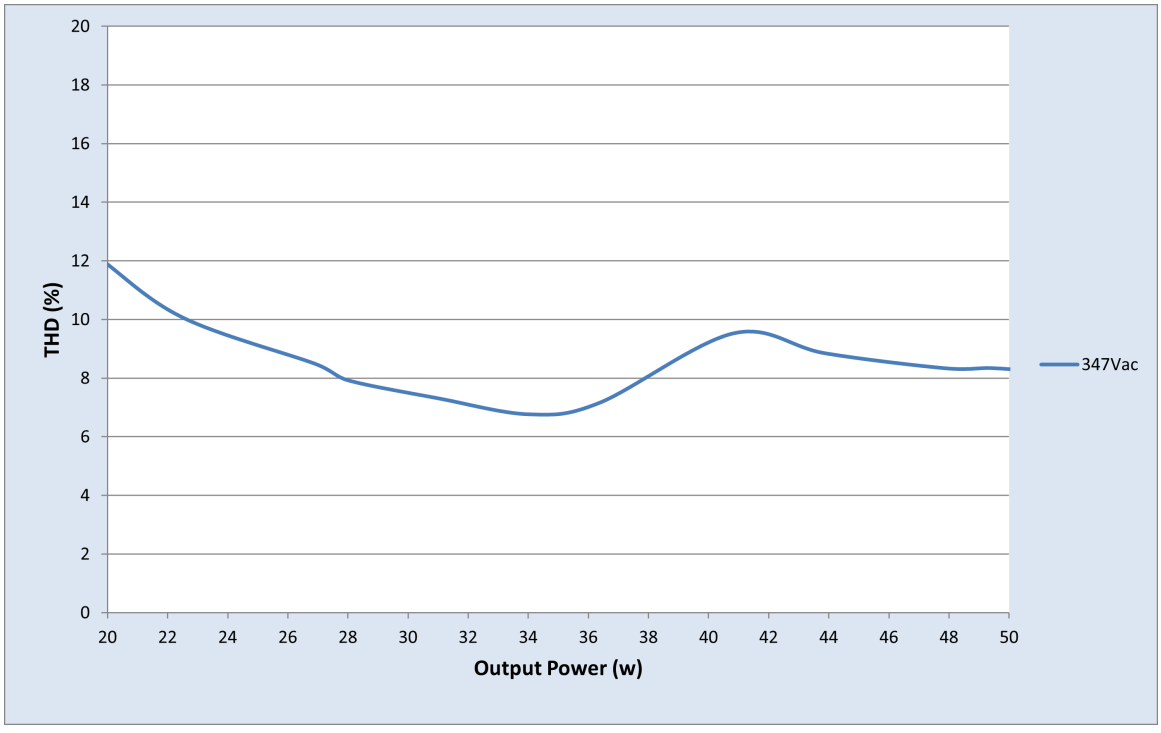
Performance Characteristics

Based on measurements on a typical sample at 75°C case. The accuracy of the measurements is within the tolerance of the measurement instruments. The graphs are meant to be a guideline and not a specification.

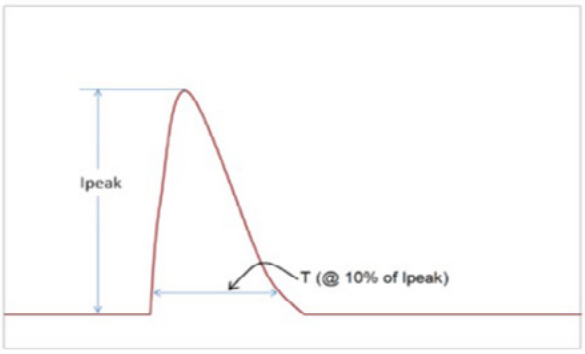
Power Factor vs. Output Power



Total Harmonic Distortion vs. Output Power



Inrush Current Info



Vin	Ipeak	T (@10% of Ipeak)
347 Vrms	9.54	12.12µs

Lightning Surge Info

ANSI Surge Type	Differential Mode (L-N)	Common Mode (L-G, N-G, L&N-G)
100 kHz Ring Wave (w/t 30Ω)	6kV	3kV
1.2/50uS Combi Wave (w/t 2Ω)	2.0kV	2.0kV

Isolation:

Isolation	Input	Output	DA	Enclosure
Input	–	2xU+1kVac	2xU+1kVac	2xU+1kVac
Output	2xU+1kVac	–	500Vac	500Vac
DA	2xU+1kVac	500Vac	-	500Vac
Enclosure	2xU+1kVac	500Vac	500Vac	-

U=Max input voltage

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