ADVANCE
by signify

LED Driver

Xitanium

XI040C110V054BPT1

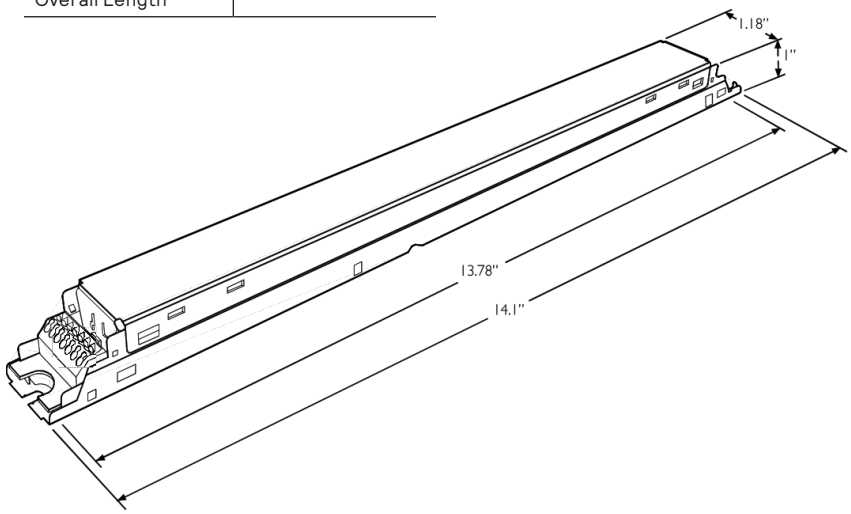
Advance Xitanium Linear LED Drivers with SimpleSet technology are designed to give OEMs ultimate flexibility. With wide operating windows, slim profile and simple programming, luminaire manufacturers can design luminaires of different sizes and lumen levels for office and retail applications.

Specifications

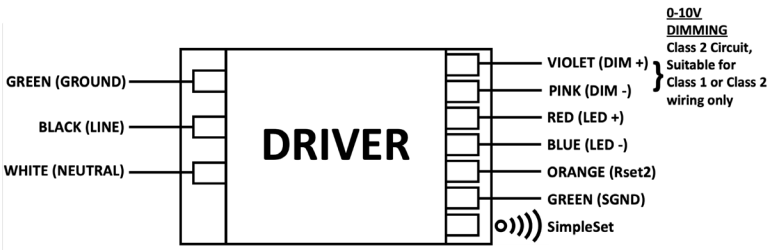
Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load and 70°C Case	Max. Case Temp. (°C)	Input Current (A)	Max. Input Power (W)	Inrush Current (Apk/ 50%-µs)	THD @ Max. Load	Power Factor @ Max. Load	Surge Protection Common/ Diff (KV)	Weight (Lbs/kgs)	Envir. Protection Rating	Driver Type
120	40	27 - 54 Class 2 Output	0.1 - 1.1	85	75°C Life 80°C UL	0.40	47	21/170	<10%	>0.95	>2.5	0.697/ 0.316	UL Dry & Damp	Constant Current
277				87		0.17		42/177	<15%					

Enclosure

	In. (mm)
Case Length	14.17 (360)
Case Width	1.18 (30)
Case Height	1.00 (25)
Mounting Length	13.78 (350)
Mounting Width	
Overall Length	



Wiring Diagram



Warning

Install in accordance with National and Local Electrical Codes.

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

Use 18 AWG solid copper wire rated >=300V/85°C.

Strip wire 3/8".

Driver case must be grounded.

Dimming	Dimming Range	Minimum Output Current (A)	Other Comments
0-10V Class 2 Wiring	5% ~ 100% (for output current range 0.25-1.1A)	0.005	Dimming source current: 150 µA

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40W 0.1–1.1A 54V 0–10V with SimpleSet

Features

- Programmable output current through SimpleSet
- Large operating window, with max current of 1.1A
- Slim linear form factor

Benefits

- Fast and simple way of programming
- Enables fixture designs with wide variety of loads and current
- Enables easy integration into narrow fixtures and troffers

Application

- Indoor linear applications such as troffers and pendants
- Office
- Retail

Electrical Specifications

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

Product Data

Order Information	
Order Code	XI040C110V054BPT1
Full Product Code	XI040C110V054BPT1M (Mid-Pack, 18pcs/box)
Full Product Name	XITANIUM 40W 0.1–1.1A 54V 0–10V INT-T
Input Information	
Line Voltage	120–277Vac_rms
Line Current	0.40A @ 120V, 0.17A @ 277V
Line Frequency	50/60Hz
Min. Mains Voltage Operational	108 V [min]
Max. Mains Voltage Operational	305V [max]
Inrush Current	Per NEMA 410
Output Information	
Output Voltage Range	27V to 54Vdc
Maximum Open Circuit Voltage	60V
Output Current Ripple (ripple = peak to average / average)	15% max @ max Iout Low frequency (≤120 Hz) content <5%
Output Current Tolerance (at max current)	<5%
Protections	Short Circuit, Open Circuit Protection for LED + and LED –, mis-wiring protection
Features	
Ambient Temp Range	-20C to +50C
Max Case Temperature (Tcase)	75°C for Life and 85°C for UL
Interfaces	0–10V Dimming, AOC
0–10V Dimming	150µA source current from driver. See dim curve for detail.
AOC (Adjustable Output Current)	100mA to 1100mA via external resistor or SimpleSet programming (Refer to graph and notes below.)
Environment & Approbation	
Environmental Protection Rating	UL damp and dry
Agency Approbations	UL8750, UL1310, UL935, cUL
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Isolation	Refer to table
Audible noise	<24dB Class A

Electrical Specifications

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0–10V Dimming Curve

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

LED Current Tolerance at 1100mA ≤ 5% over temperature and component variations

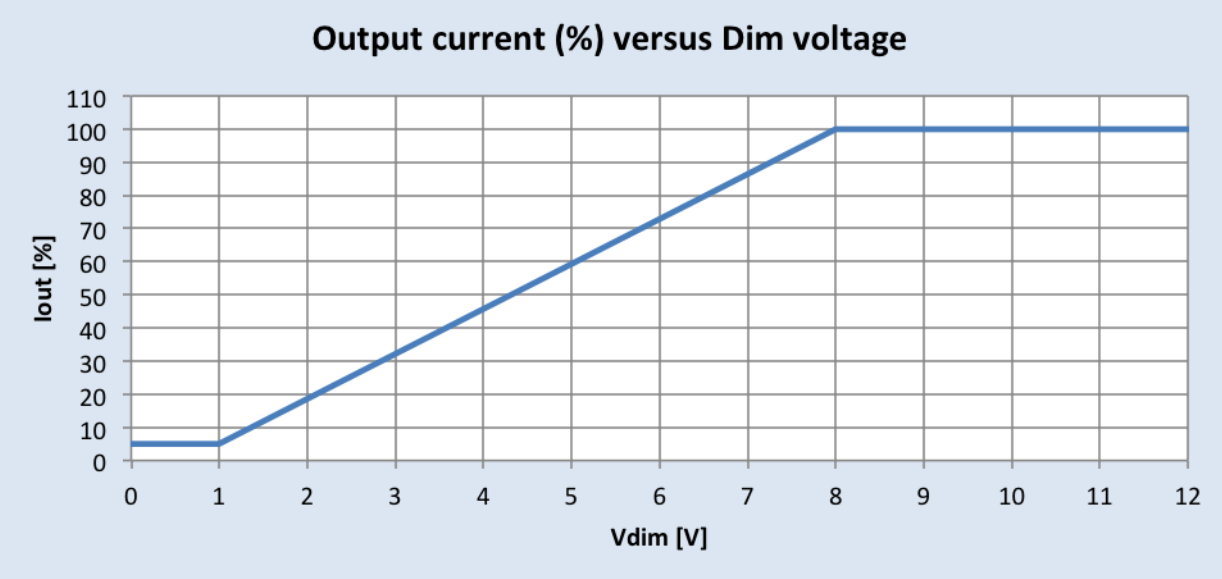
Minimum Dim Level: 5% of Iout (minimum 12.5mA)

Maximum output voltage on the dimming wires: 12V

The dimming lead leakage current is 0.01mA. The maximum number of drivers that can be connected in parallel to one dimming control circuit is based on this dimming lead leakage current and the calculation is described in the corresponding 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



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40W 0.1–1.1A 54V 0–10V with SimpleSet

Electrical Specifications

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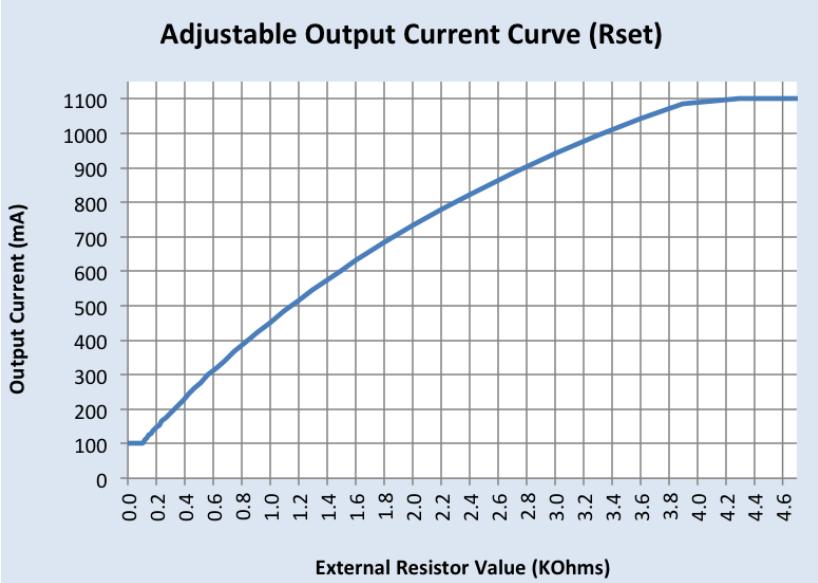
AOC (Adjustable Output Current) Settings (Rset)

LED Current Tolerance over temperature and component variations for AOC ≤ 10% at any level.

Rset (Ohms)	Current (mA)	Rset (Ohms)	Current (mA)
1	100	1800	684
100	100	2000	733
110	106	2200	780
120	111	2400	823
130	116	2700	883
150	125	3000	941
160	130	3300	993
180	138	3600	1042
200	146	3900	1085
220	155	4300	1100
240	166	4700	1100
270	176	>100,000	1100
300	190		
330	204		
360	215		
390	228		
430	245		
470	261		
510	277		
560	300		
620	318		
680	340		
750	368		
820	392		
910	422		
1000	452		
1100	485		
1200	515		
1300	545		
1500	602		
1600	632		



Notes:

1. There are two ways to adjust the current
    a. Using a resistor between Rset2 & SGND leads
        i. Any through hole or SMD resistor with >0.25W and >20V can be used as RSET between Rset and SGND pins.
        ii. Driver will default to 1100mA when Rset is left open.
    b. Using SimpleSet programming (visit www.philips.com/simpleset for details).
2. The driver is by default set to Rset2.

Electrical Specifications

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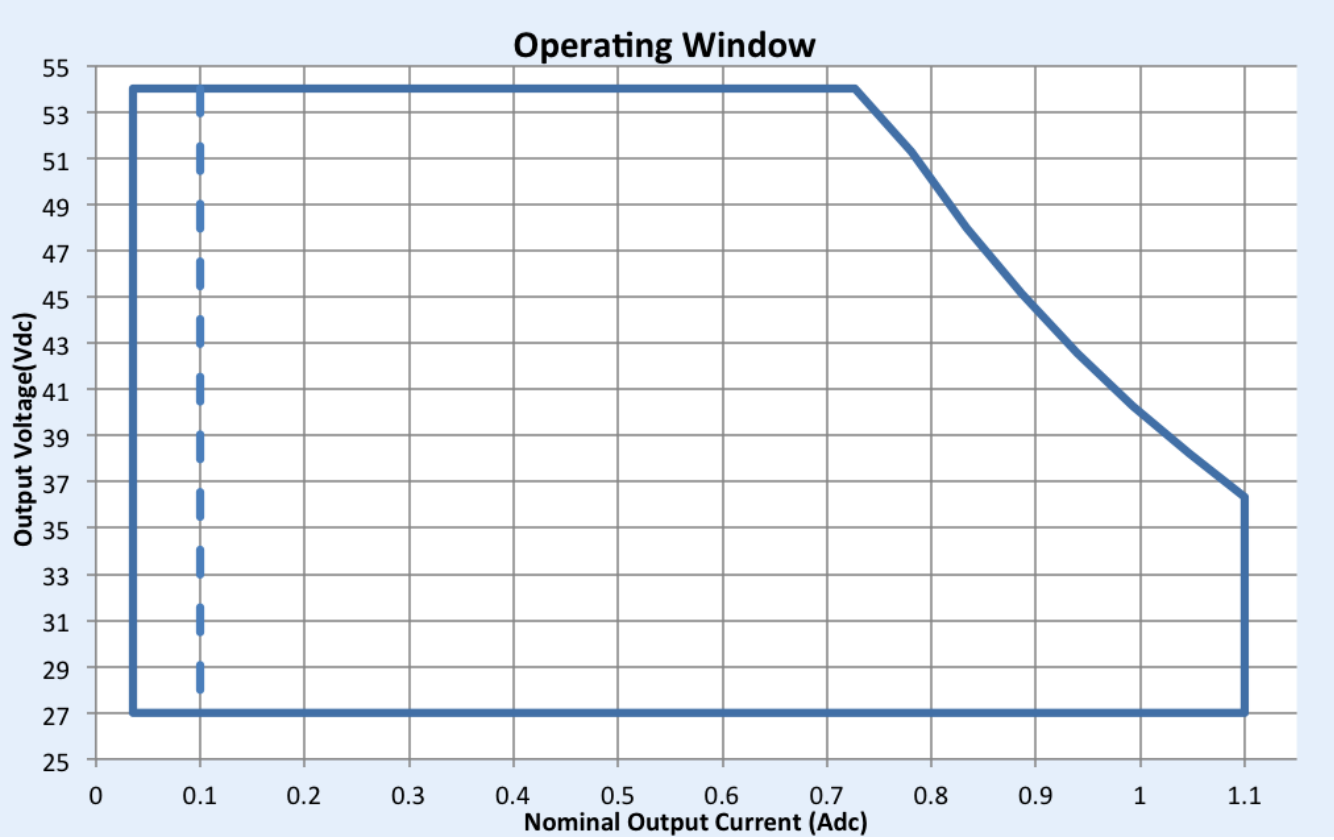
Operating Window



Notes

For 5% dimming output current setting through AOC should be >0.25A.

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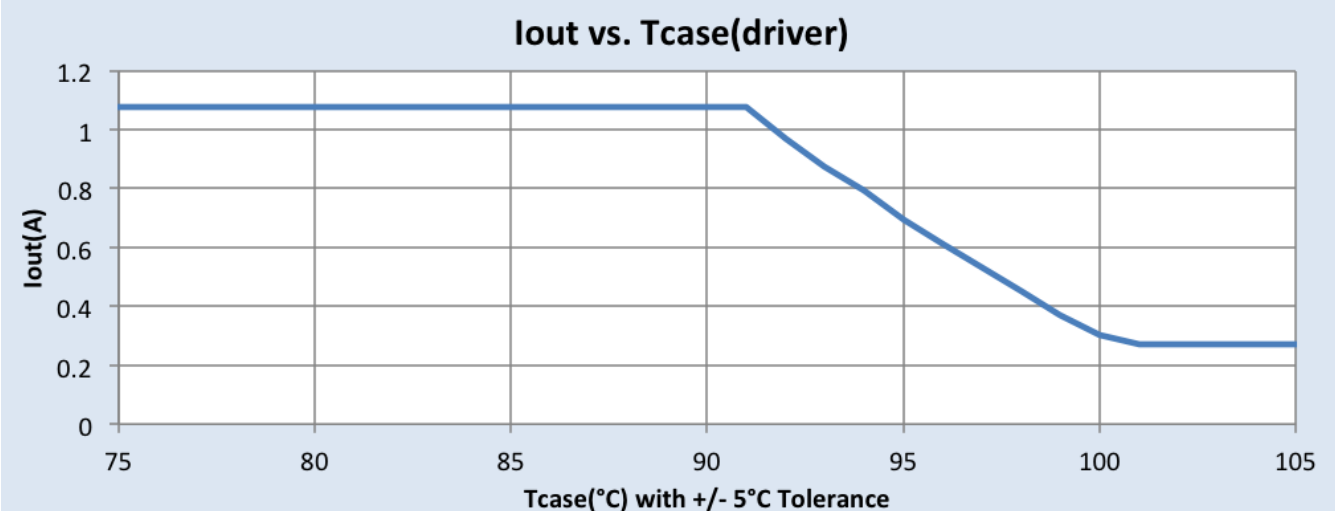
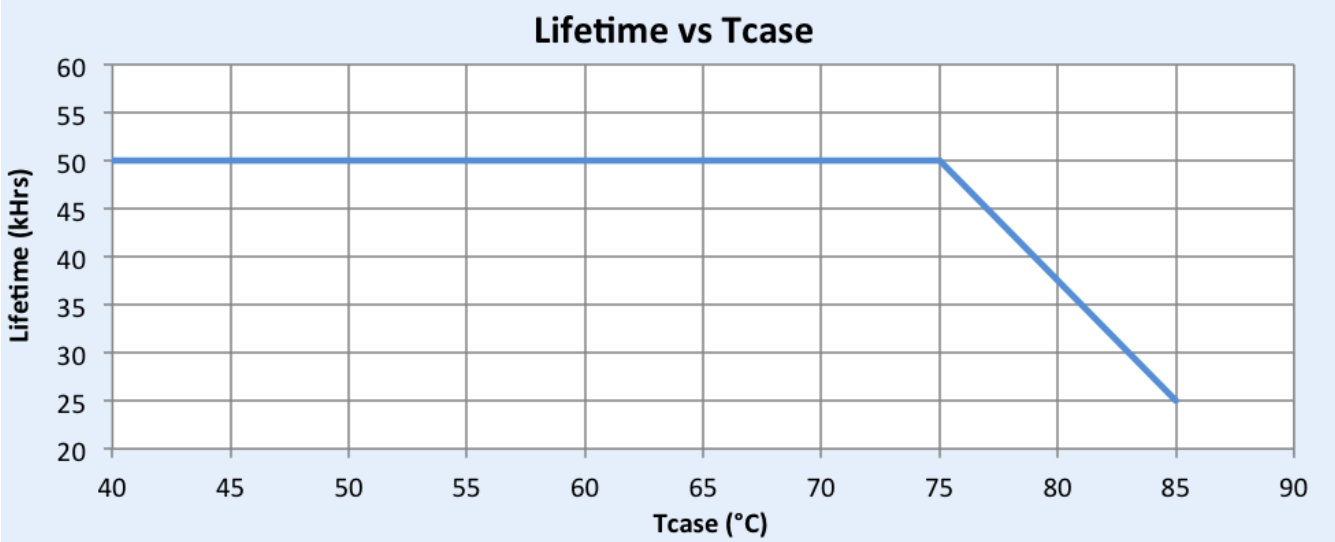
Iout Vs. Tcase of Driver



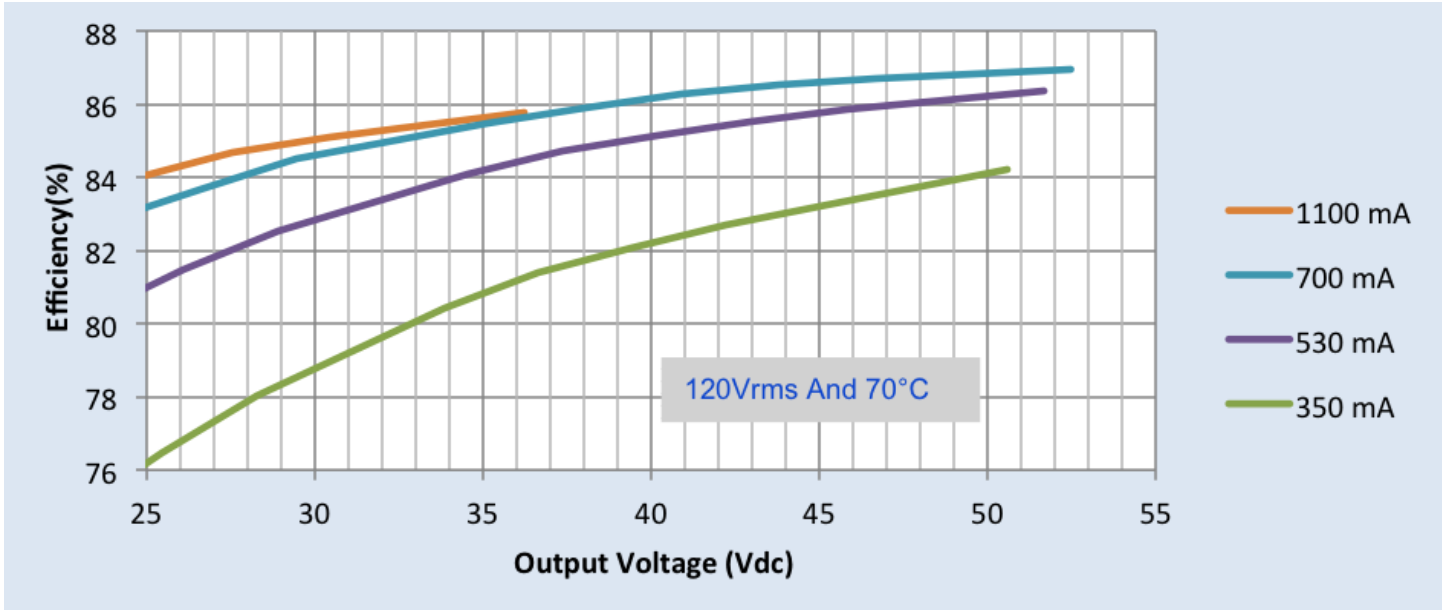
Lifetime Vs. Tcase of Driver



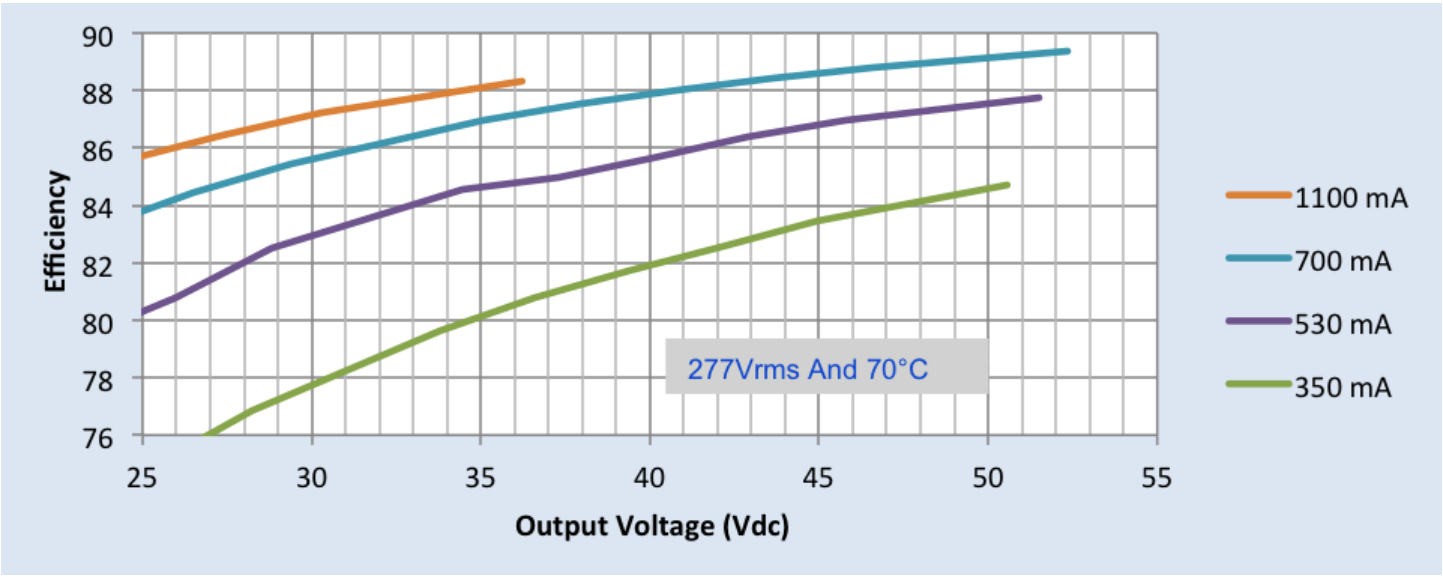
Performance Characteristics

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 120Vac



Efficiency Vs. Output Voltage at 277Vac



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40W 0.1–1.1A 54V 0–10V with SimpleSet

Performance Characteristics

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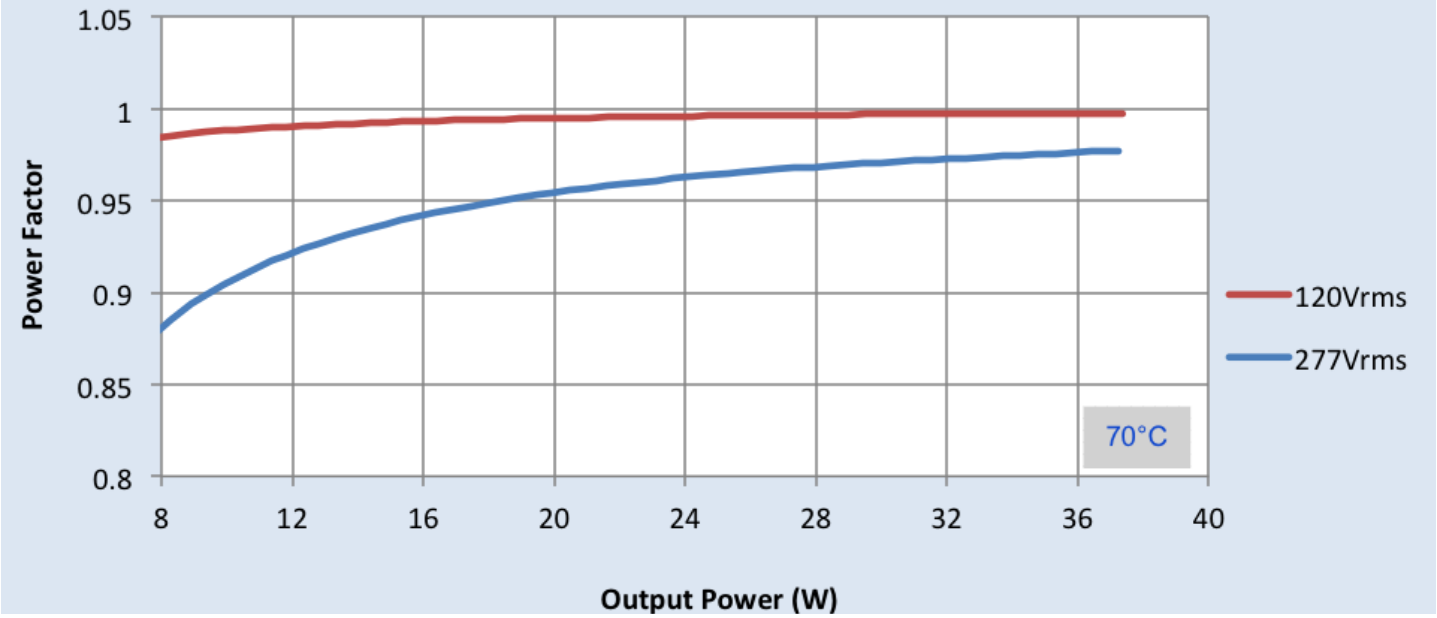
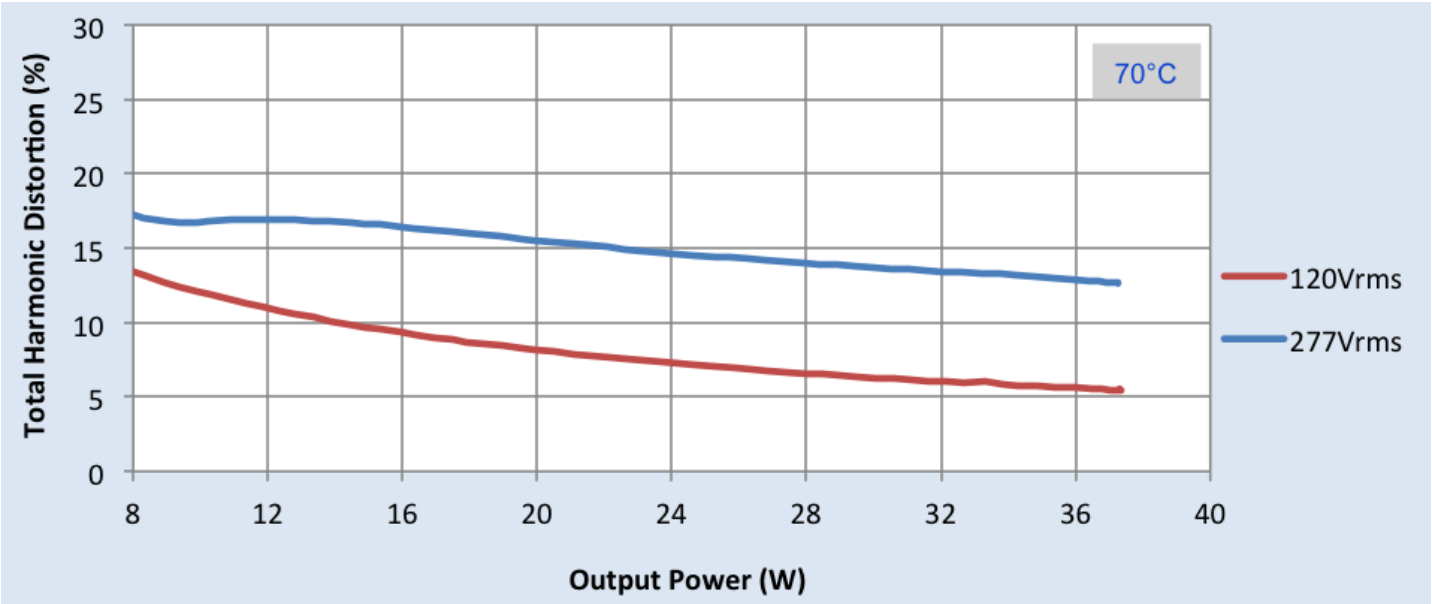
Power Factor Vs. Output Power



Total Harmonic Distortion (THD) Vs. Output Power



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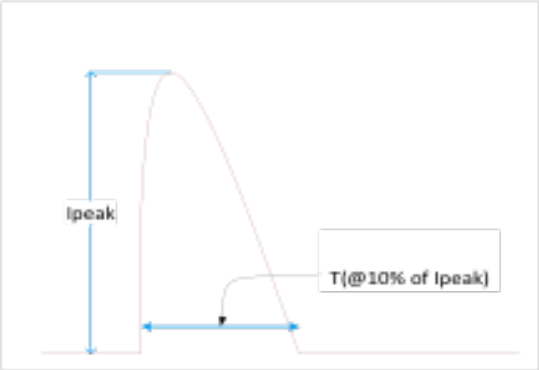
Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
120 Vrms	21A	170µS
277 Vrms	42A	177µS

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)
100 kHz Ring Wave (w/t 30_2)	>2.5kV	>2.5kV

Isolation

Isolation	Input	Output	0–10V (Class 2)	Enclosure
Input	NA	2xU+1kV	2xU+1kV	2xU+1kV
Output	2xU+1kV	NA	Non-isolated	500V
0–10V (Class 2)	2xU+1kV	Non-isolated	NA	500V
Enclosure	2xU+1kV	500V	500V	NA

U = Max input voltage

UL Conditions of Acceptability

Please contact your representative for a copy of the latest UL Conditions of Acceptability (COA).

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