

# PHILIPS ADVANCE



## LED Driver

### Xitanium

54W 0.1-1.5A 27-54V 0-10V 347V  
XG054C150V054BPT1



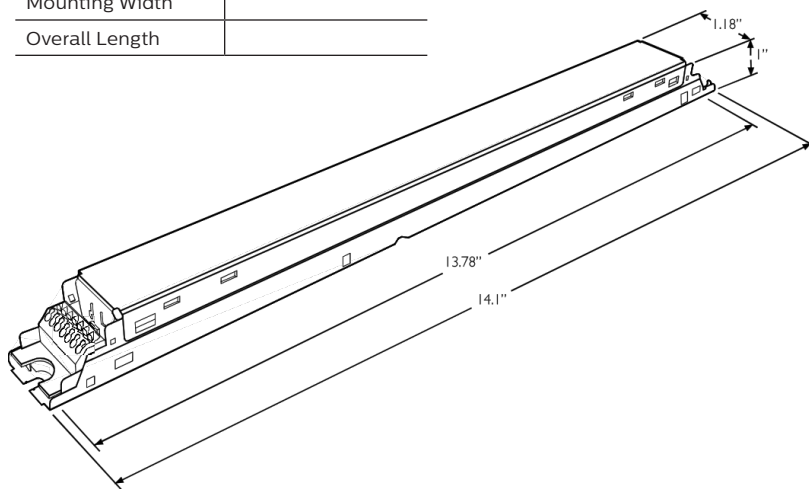
Philips Advance Xitanium Linear LED Drivers with SimpleSet technology are designed to give OEMs ultimate flexibility. With wide operating windows, slim profile and simple programming, luminaire manufacturers can design luminaires of different sizes and lumen levels for office and retail applications.

#### Specifications

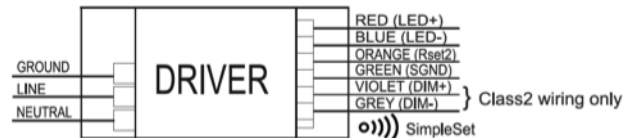
Input Voltage (Vrms)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load and 70°C Case	Max. Case Temp. (°C)	Input Current (Arms)	Max. Input Power (W)	Inrush Current (A <sub>pk</sub> /10%-µs)	THD @ Max. Load	Power Factor @ Max. Load	Surge Protection Common/Diff (KV)	Weight (Lbs/kgs)	Envir. Protection Rating
347	54	27 - 54	0.1 - 1.5	89	85°C	0.2	62	55/200	<10%	>0.95	>2.5	0.736/0.334	UL Dry & Damp

#### 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



Install in accordance with National and Local Electrical Codes.

Use 18AWG solid copper wire, rated  $\geq 600V/90C$ .

Strip wire to 3/8".

Dimming	Dimming Range	Minimum Output Current (A)	Other Comments
0-10V Analog Class 2 Wiring	5% ~ 100% (for output current range 0.34-1.5A)	0.017	Dimming source current: 150 µA

#### UL Conditions of Acceptability:

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

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## Features

- Programmable output current through SimpleSet
- Large operating window, with max current of 1.5A
- 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	XG054C150V054BPT1
Full Product Code	XG054C150V054BPT1M (Mid-Pack, 18pcs/Box)
Full Product Name	XITANIUM 54W 0.1-1.5A 27-54V 0-10V 347V
Line Voltage	347Vac_rms
Line Current	0.20A @ 347V
Line Frequency	50/60Hz
Min. Mains Voltage Operational	312V
Max. Mains Voltage Operational	382V
Inrush Current	Per NEMA 410
Output Information	
Output Voltage Range	27Vdc to 54Vdc
Maximum Open Circuit Voltage	<60Vdc
Output Current Ripple (ripple = peak to average / average)	15% max @ max lout Low frequency ( $\leq 120$ Hz) content <5%
Output Current Tolerance (in the performance window)	<5%
Protections	Short Circuit and Open Circuit Protection for LED + and LED -
Features	
Interfaces	0-10V Dimming
0-10V Dimming Specifications	150 $\mu$ A source current from driver. See dim curve for detail.
AOC (Adjustable Output Current)	100mA to 1500mA via external resistor or SimpleSet programming (refer to graph and notes below)
Environment & Approbation	
Operating Ambient Temp. Range	-20°C to +55°C
Max Case Temperature (Tcase)	85°C
Environmental Protection Rating	UL dry and damp
Agency Approbations	UL8750, UL1310, CSA-C22.2 No. 250.13-12, CSA C22.2 No. 223
Electromagnetic Compliance	FCC Title 47 Part 15 Class A
Isolation	Refer to table
Audible Noise	<24dB Class A

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## Electrical Specifications

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### 0-10V Dimming Curve:

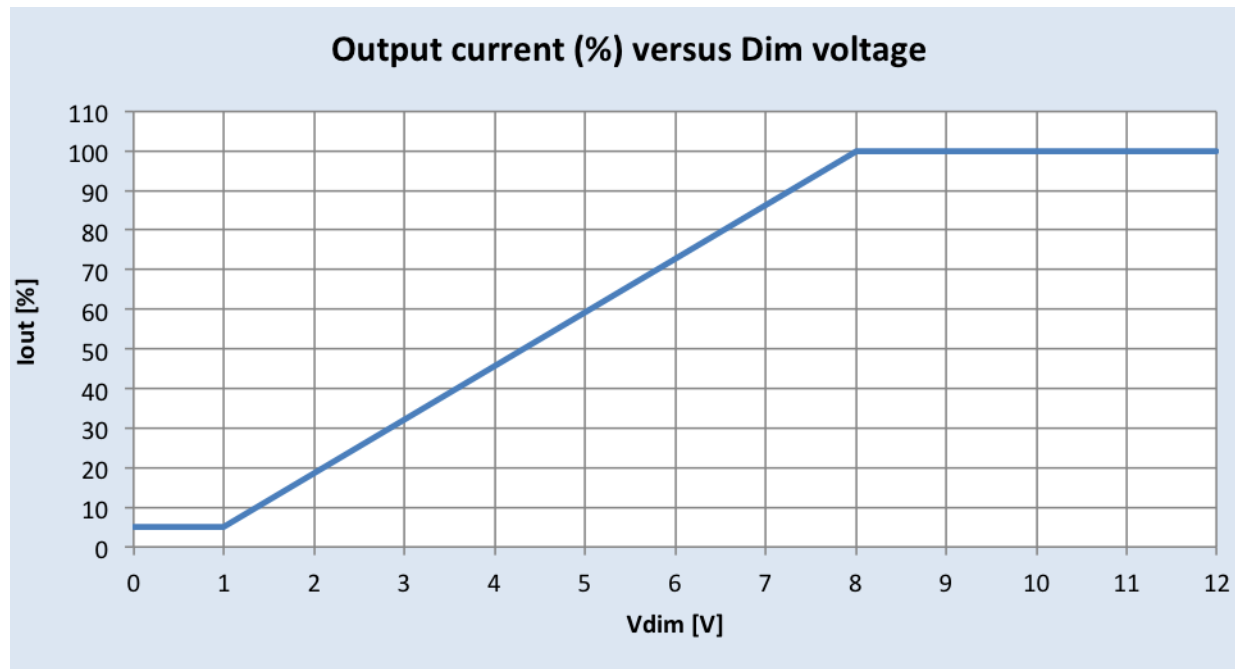
Dimming source current from the driver: 150µA (@ 0<Vdim<8V)

Minimum Dim Level: 5% of Iout (minimum 17mA)

Maximum output voltage on the dimming wires: 12V

### Approved Dimmer List

Manufacturer	Manufacturer Part Number
Lutron	Visit <a href="http://www.lutron.com/advance">www.lutron.com/advance</a> for a list of dimmers (Mark VII) that will work with sthis driver
Leviton	IllumaTech IP7 series
Philips	Sunrise - SR1200ZTUNV



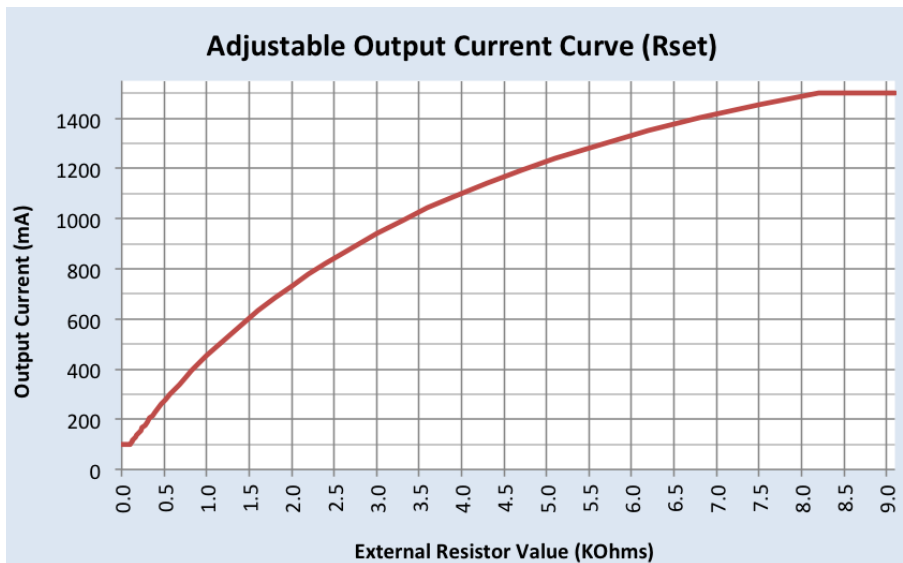
# Xitanium 54W 0.1-1.5A 27-54V 0-10V 347V

## Electrical Specifications

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## AOC (Adjustable Output Current) Settings

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	1143
240	166	4700	1192
270	176	5100	1238
300	190	5600	1293
330	204	6200	1350
360	215	6800	1402
390	228	7500	1454
430	245	8200	1500
470	261	9100	1500
510	277	>100,000	1500
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

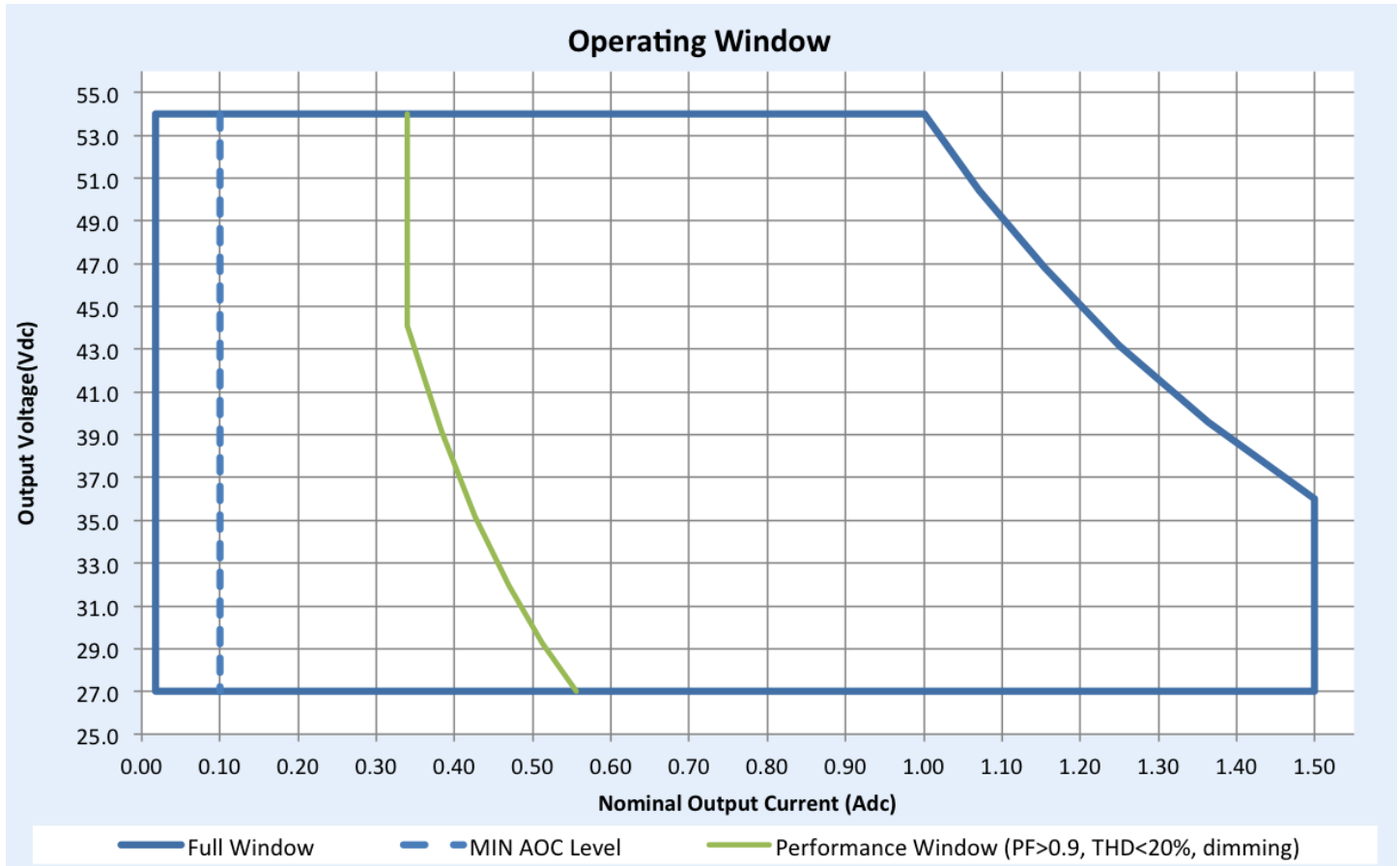
- There are two ways to adjust the current.
  - Using a resistor between Rset2 & SGND leads
    - Any through hole or SMD resistor with rating >0.25W and >20V can be used as RSET between Rset and SGND pins.
    - Driver will default to 1500mA when Rset is left open.
  - Using SimpleSet programming  
(Visit [www.philips.com/simpleset](http://www.philips.com/simpleset) for details.)
- The driver is by default set to Rset2

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## Operating Window



## Notes

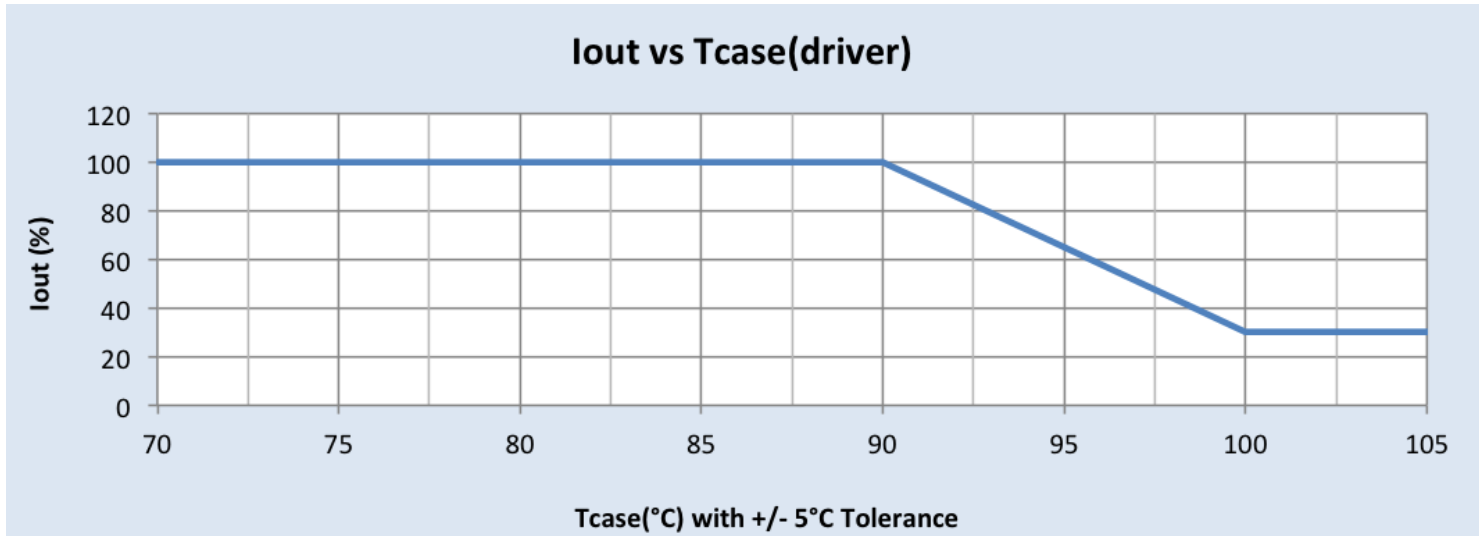
For 5% dimming output current setting through AOC should be >0.34A.

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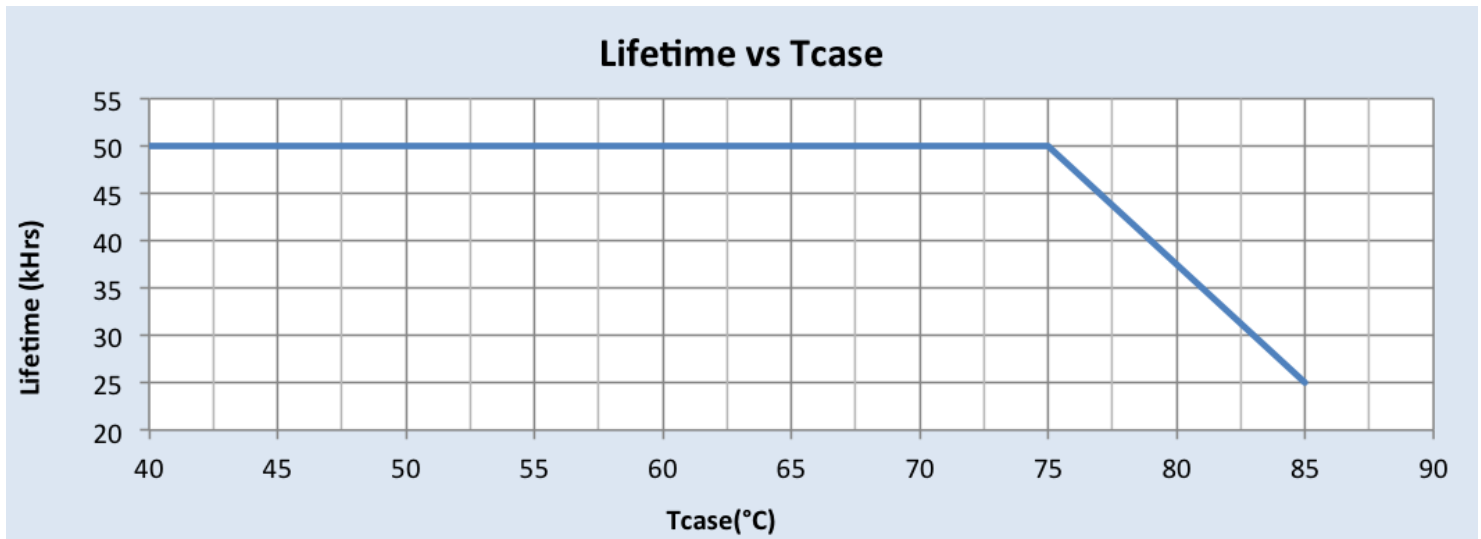
## Electrical Specifications

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### Iout vs. Tcase of Driver:



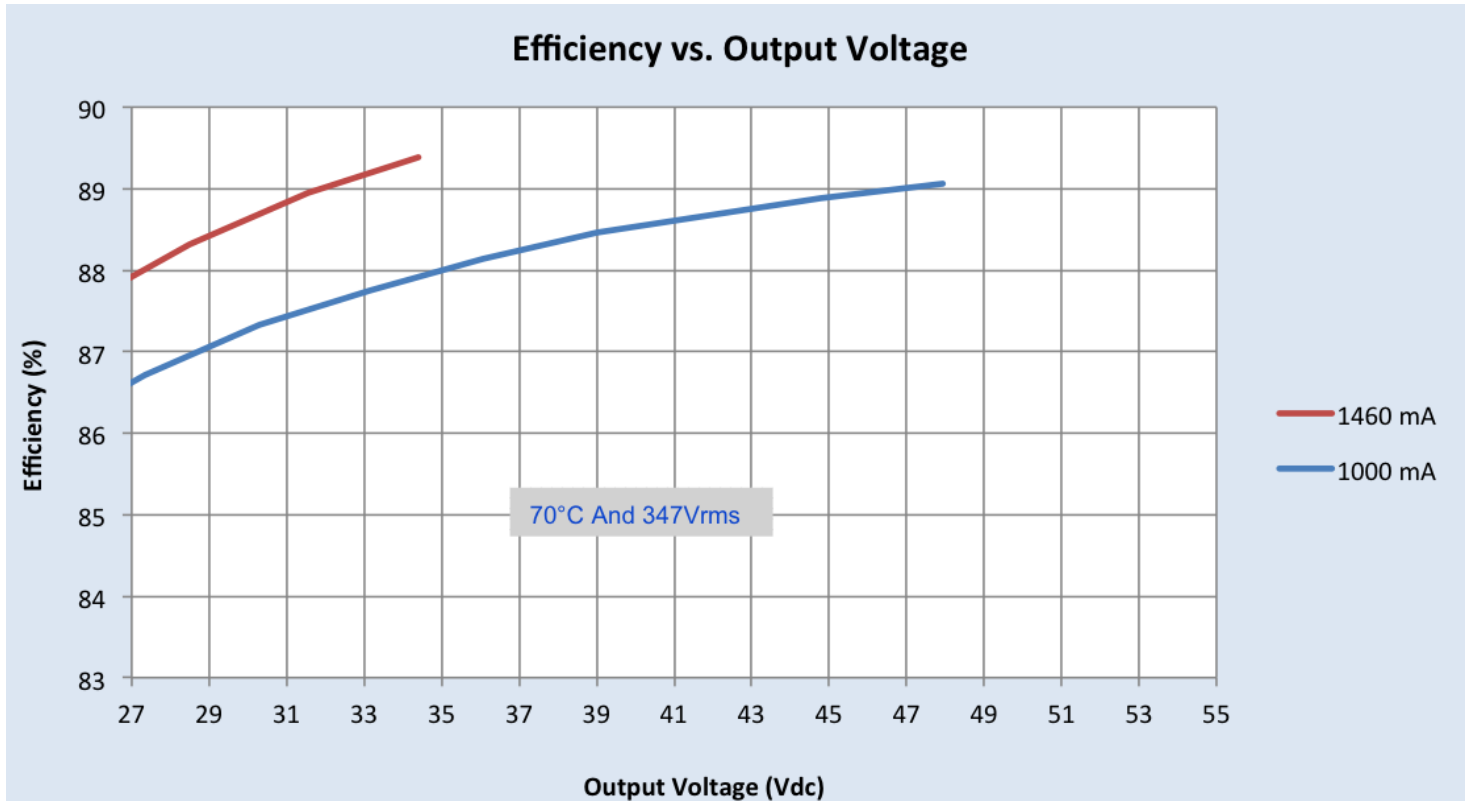
### Lifetime vs. Tcase of Driver:



# Xitanium 54W 0.1-1.5A 27-54V 0-10V 347V

## Performance Characteristics

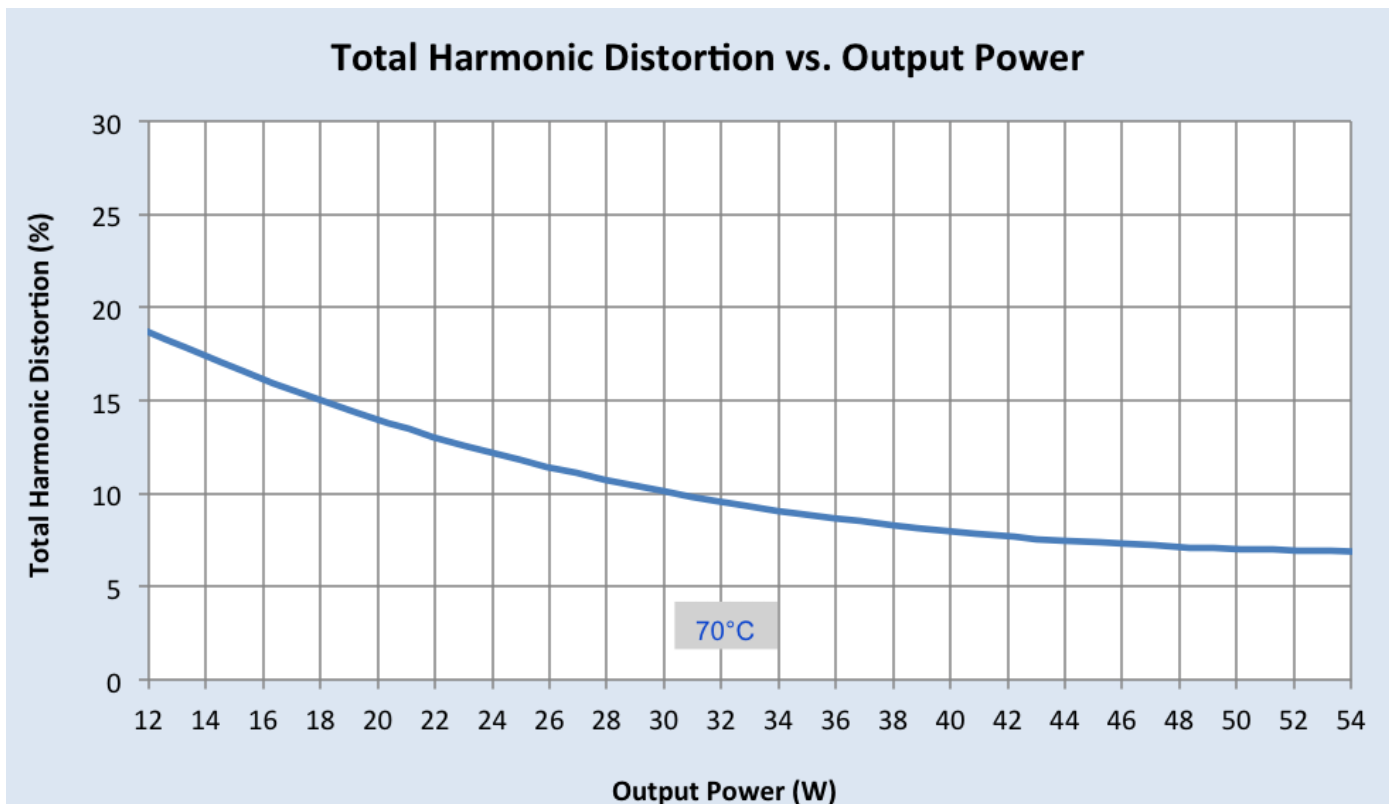
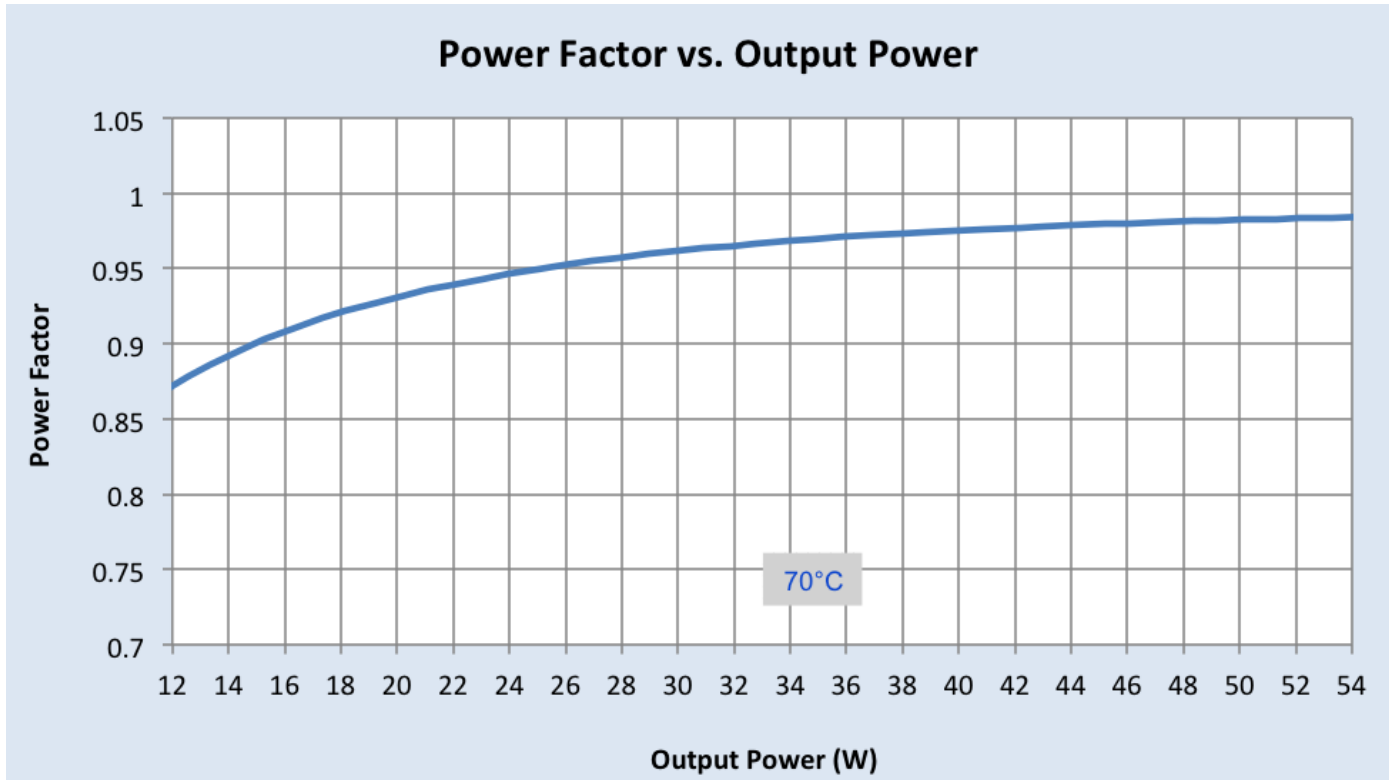
Based on measurements on a typical sample. The accuracy of the measurements is within the tolerance of the measurement instruments. The graphs are meant to be a guideline and not a specification.



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## Performance Characteristics

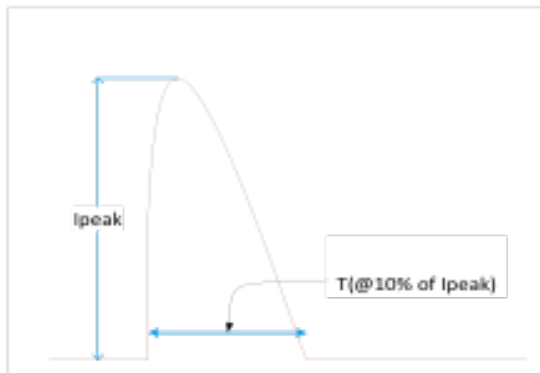
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## Inrush Current Info:



Vin	Ipeak	T (@10% of Ipeak)
347 Vrms	55A	200 $\mu$ S

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 $\Omega$ )	>2.5kV	>2.5kV

## Isolation:

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

U = Max input voltage



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