

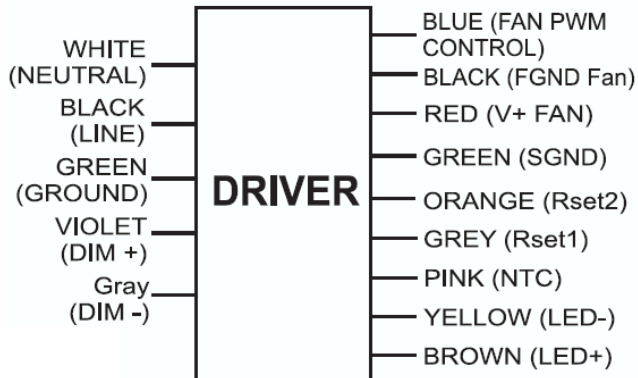
XR050C100V054XPM1

Electrical Specifications

Brand Name	XITANIUM
Description	50W SM 0.3-1A 54V TE/0-10V 120V
Input Voltage	120V
Input Frequency	60Hz
RoHS	Yes
Status	Active

Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load	Max Case Temp. (°C)	Input Current	Max. Input Power (W)	Inrush Current (A _{in} /50%- μ s)		THD @ Max Load (%)	Power Factor @ Max Load	Surge Protection Common/Diff (KV)	Weight (Lbs/kgs)	Envir. Protection Rating
50	27 ~ 54	0.3-1.0	85%	75 °C	0.5A	60	120 Vin	13.5/700	<20	>0.9	1.5/1.5	0.71/0.322	UL Dry & Damp

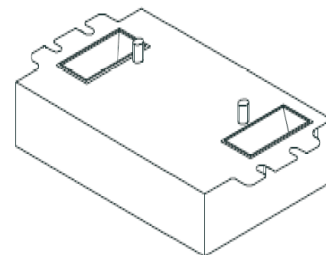
Wire Diagram



Input and output use lead-wires.
Lead-wires are 18AWG 105C/600V solid copper.

Dimming Method	Dimming Range	Minimum Output Current (A)	Other Comments
0-10V Isolated	10% ~ 100%	0.030	Dimming source current: 150 μ A
Phase cut	10% ~ 100%	0.030	Trailing edge

Enclosure



	in. (mm)
Case Length	4.21 (107)
Case Width	2.99 (76)
Case Height	1.29 (33)
Mounting Length	4.96 (126)
Mounting Width	2.99 (76)



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Electrical Specifications

Product Data	
Order code	XR050C100V054XPM1
Full product code	XR050C100V054XPM1
Full product name	Xitanium 50W SM 0.3-1A 54V 0-10V 120
Net weight per piece	0.322 KG / 0.71lbs
Interfaces	0-10V / Phase cut Dimming
Ambient Temp Range	-20C to +50C
Corresponding Tcase	-15C to +75C
Line Voltage	120V
Line Current	0.44A @ 120V
Line Frequency	60Hz
Envir. Protection Rating	UL Dry & Damp
EMI	FCC47 part 15 class A
Life @ TC 75 C	50000 hr
Suitable for Outdoor use?	NO
Max TC	75C
Inrush current Width	Refer to table
Min ballast number on MCB 16A type B	34
Input Over-voltage	Can survive input over-voltage stress of 320VAC for 48 hours and 350VAC for 2 hours
LED Current Tolerance at I out max	+/- 50mA
Earth leakage current	0.7 mA [max]
Mains voltage safety (AC)	+/-10%
Mains voltage performance (AC)	+/-10%
Min. Mains voltage operational	108 V [min]
Output peak voltage	60V [max]
Output Current ripple	20% @ 1000 mA (ripple = pk-pk/avg)
THD total	< 20% @ max load
PF @ Max Load	>0.90
Protections	Short Circuit and Open Circuit Protection for LED + and LED-
Connector (input/output)	Wago 250 / Wago 744

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Installation & Application Notes:

Section I – Physical Characteristics

- 1.1 LED Driver shall be installed inside an electrical enclosure
- 1.2 Wiring inside electrical enclosure shall comply with 600V/105°C rating or higher.

Section II – Performance

- 2.1 LED Driver has a rated lifetime of 50,000 hours @ TC <=75C.
- 2.2 LED Driver tolerates sustained open circuit and short circuit output conditions without damage.
- 2.3 LED Driver maximum allowable case temperature is 75°C – see product label for measurement location.
- 2.4 LED Driver complies with the requirements of UL, CSA, FCC47 subpart 15.

Section III – Conditions of Acceptability (File E321253)

When installed in the end product, consideration shall be given to the following:

- 3.1 The maximum available output parameters of the driver met the limitation for Class 2 Inherently limited as specified Table 30.1 of the UL 1310 standard for Class 2 Power Units.
- 3.2 Primary wiring to be 18-AWG-Solid-Copper wire, rated 300V minimum, 105° and stripped wire 3/8 in prior to inserting into primary terminal blocks.
- 3.3 The primary and secondary terminal blocks are R/C (XCFR2/8) suitable for field wiring.
- 3.4 The LED Driver is suitable for use in “Dry” and “Damp” Locations.
- 3.5 The driver enclosure temperature in the end-use application should not exceed 75°C at the (Tc) location specified on the marking label.
- 3.6 The enclosure must be connected to earth ground in the end-use application.
- 3.7 The need for a leakage current test must be determined in the end-use product. However, the maximum measured enclosure leakage current from the case using Simpson model 228 leakage current meter were as follows:

Model Test	Voltage Measured	Leakage, MIU
XR050C100V054XPM1	120	0.12
XV050C100V054DPM1	277	0.28

- 3.8 The output designated “Fan Output” is isolated and the maximum available parameters met the limits for LVLE circuit specified in the UL 8750 standard.
- 3.9 The maximum available output parameters from the (0-10 V) dimming circuit provided on LED driver met the limitations for Class 2 Inherently Limited per the UL 1310 standard.
- 3.10 The maximum output of these drivers is 54 VDC and is suitable for Class 2 wiring per the Canadian Electrical code, Section 16. However, the outputs and the associated circuitry cannot be user accessible when the drivers are installed in the end-use product based on maximum voltage restrictions

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Electrical Specifications

Label.

XITANIUM
50W 0.3-1.0A 54V
0-10V/TE Dimming

PHILIPS ADVANCE
Technical Information 1.800.372.3331
Rosemont, IL

LED Electronic Driver
XR050C100V054XPM1

120V
443529095221 REV. B

Vin: 120Vac PF: >0.9min
Iin: 0.5A Vout: 27-54Vdc
Freq: 60Hz Iout: 0.3-1.0A
FANout: 12V, 170mA, 2W

UL Class 2 Power Unit Dry & Damp location
RoHS COMPLIANT

WARNING:
Install in accordance with National and Local Electrical Codes.
Use 18AWG Solid Copper Wire, Rated >=300V/105°C.
Strip wire to 3/8"
Enclosure must be grounded

Max 75°C
ASSEMBLED IN MEXICO

INPUT
WHITE (NEUTRAL)
BLACK (LINE)
GREEN (GROUND)
VIOLET (DIM +)
Gray (DIM -)

OUTPUT
BLUE (FAN PWM CONTROL)
BLACK (FGND Fan)
RED (V+ FAN)
GREEN (SGND)
ORANGE (Rset2)
GREY (Rset1)
PINK (NTC)
YELLOW (LED-)
BROWN (LED+)

7 1 3 1 0 8 7 1 1 1 0 6 4 1 5

Operating window



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Electrical Specifications

1.1 Rset2 table (Valid Range of Current 0.3-1.0A)

Rset [Ω]	Iset [mA]	Rset [Ω]	Iset [mA]
0	100	2200	779.7414
100	100	2400	823.4195
110	105.4598	2700	883.477
120	110.9195	3000	940.8046
130	116.3793	3300	992.6724
150	124.569	3600	1041.81
160	130.0287	3900	1085.489
180	138.2184	4300	1142.816
200	146.408	4700	1191.954
220	154.5977	5100	1238.362
240	165.5172	5600	1292.96
270	176.4368	6200	1350.287
300	190.0862	6800	1402.155
330	203.7356	7500	1454.023
360	214.6552	8200	1503.161
390	228.3046	9100	1557.759
430	244.6839	10000	1604.167
470	261.0632	11000	1653.305
510	277.4425	12000	1694.253
560	296.5517	13000	1729.741
620	318.3908	15000	1792.529
680	340.2299	16000	1817.098
750	367.5287	18000	1863.506
820	392.0977	20000	1901.724
910	422.1264	22000	1934.483
1000	452.1552	24000	1964.511
1100	484.9138	27000	2000
1200	514.9425	>100000	700
1300	544.9713		
1500	602.2989		
1600	632.3276		
1800	684.1954		
2000	733.3333		

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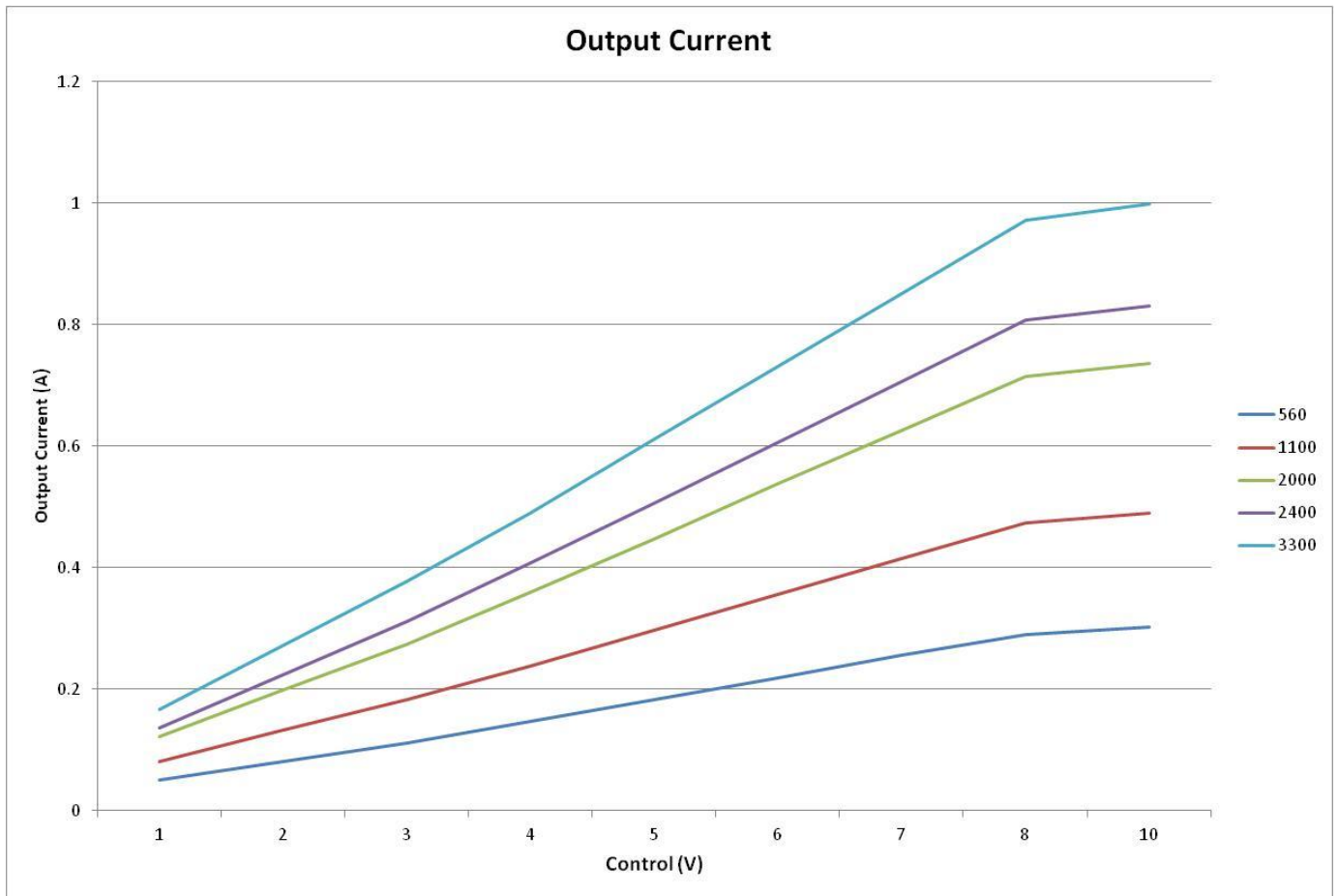
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Electrical Specifications

Output current vs. control voltage vs. Rset2 @ Vmains =120V.



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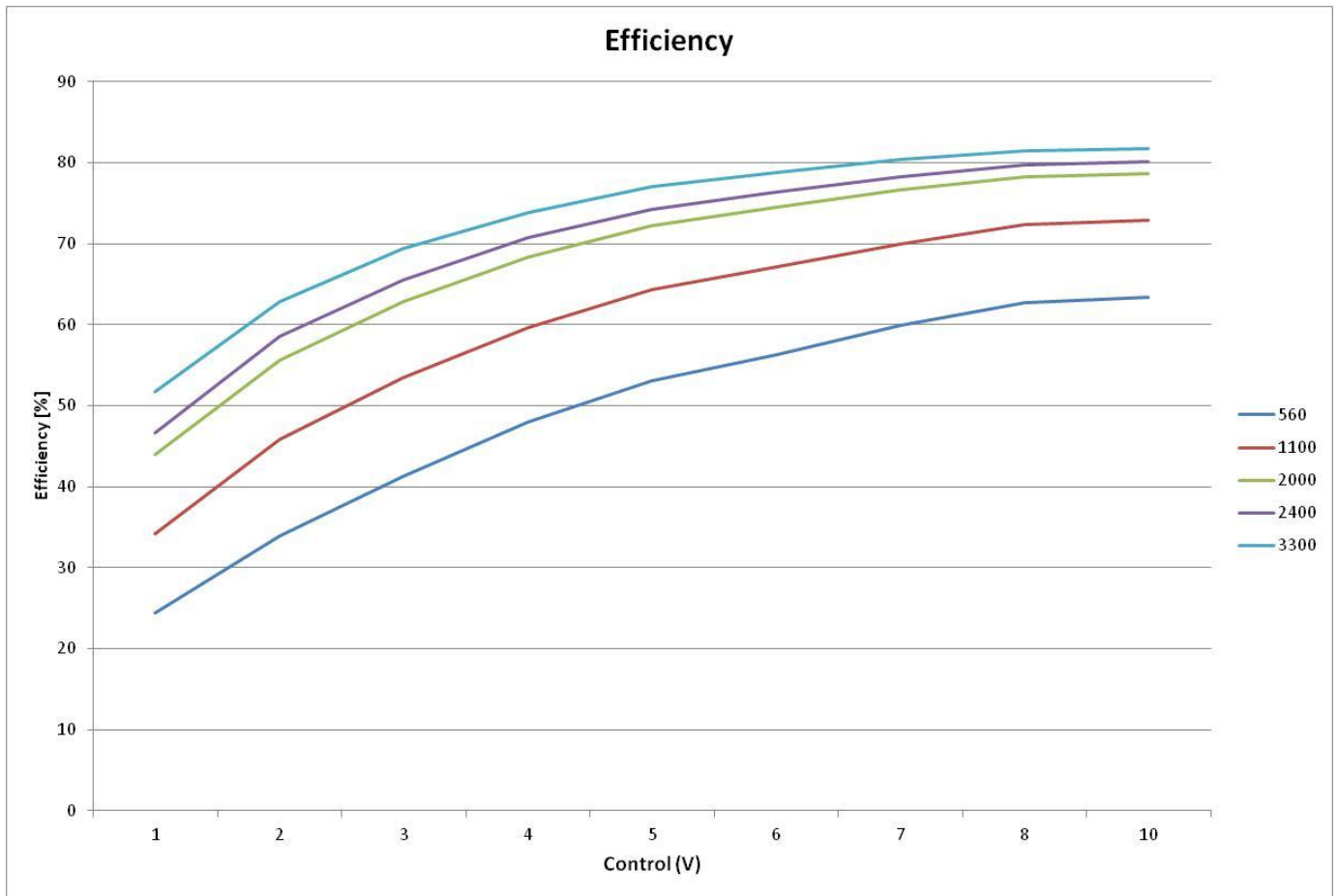
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Electrical Specifications

Efficiency vs. control voltage vs. Rset2 @ Vmains =120V.



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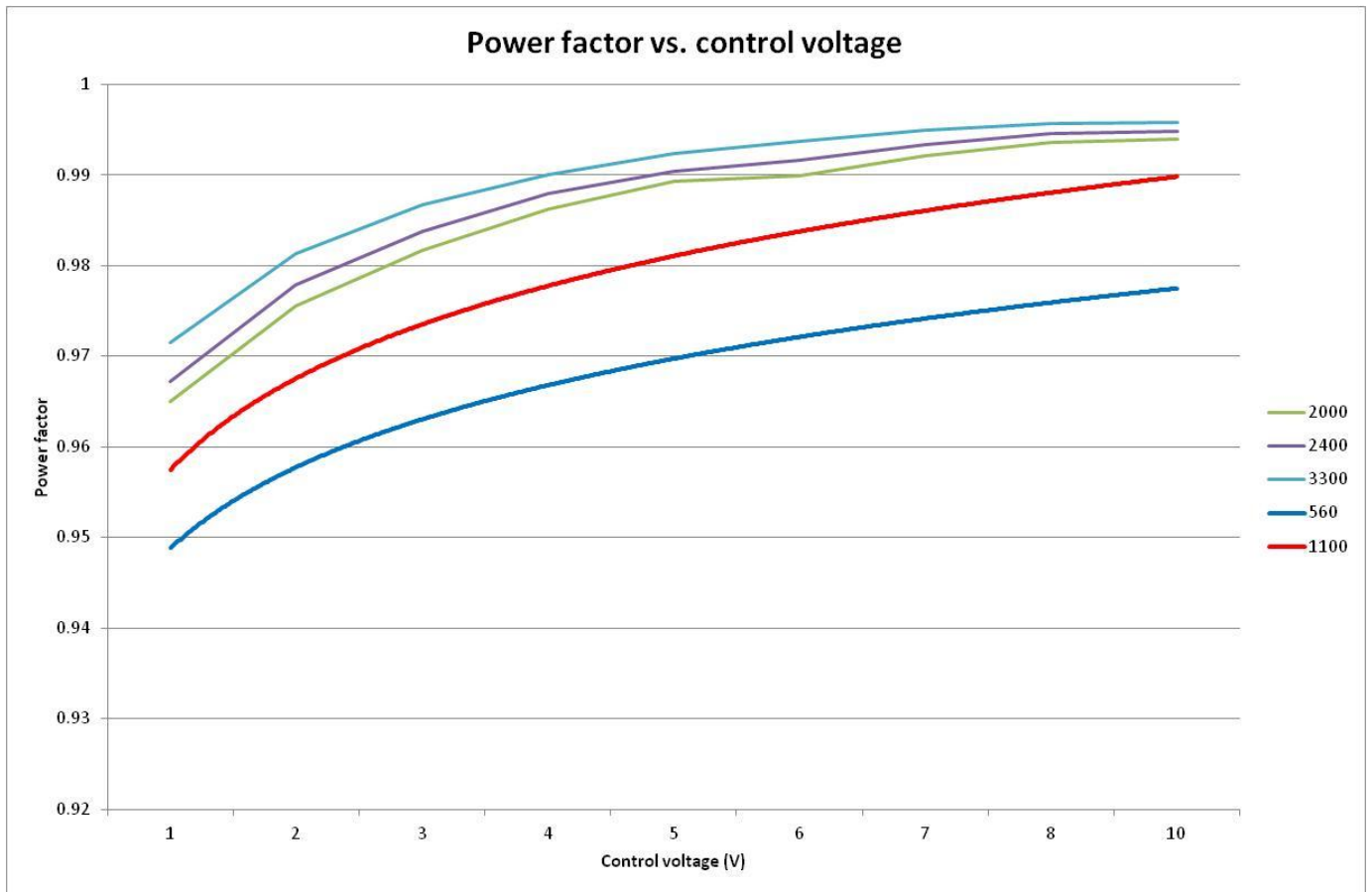
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Electrical Specifications

Power factor vs. control voltage vs. Rset2 @ Vmains =120V.



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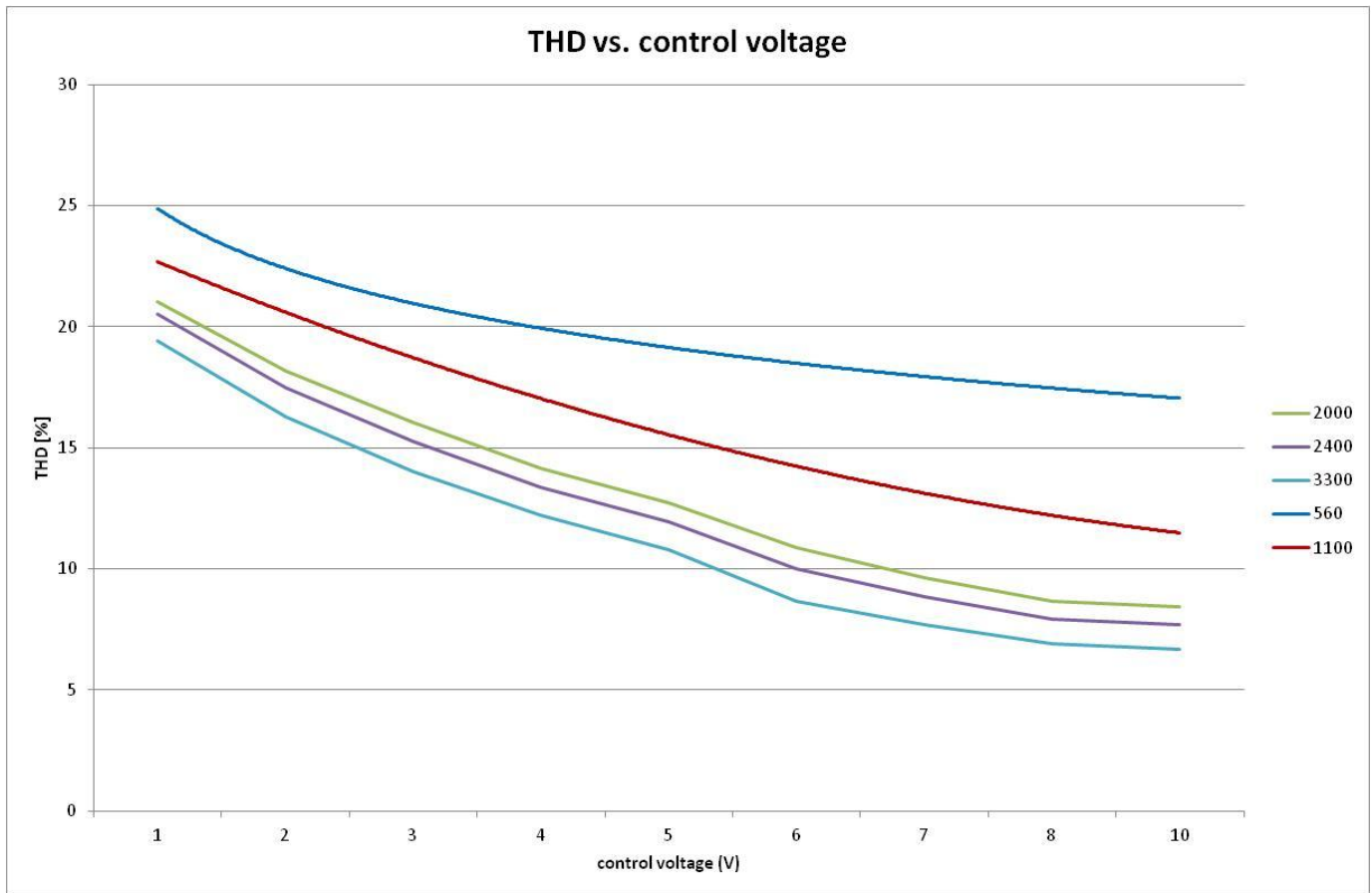


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Electrical Specifications

THD vs. control voltage vs. Rset2 @ Vmains =120V.



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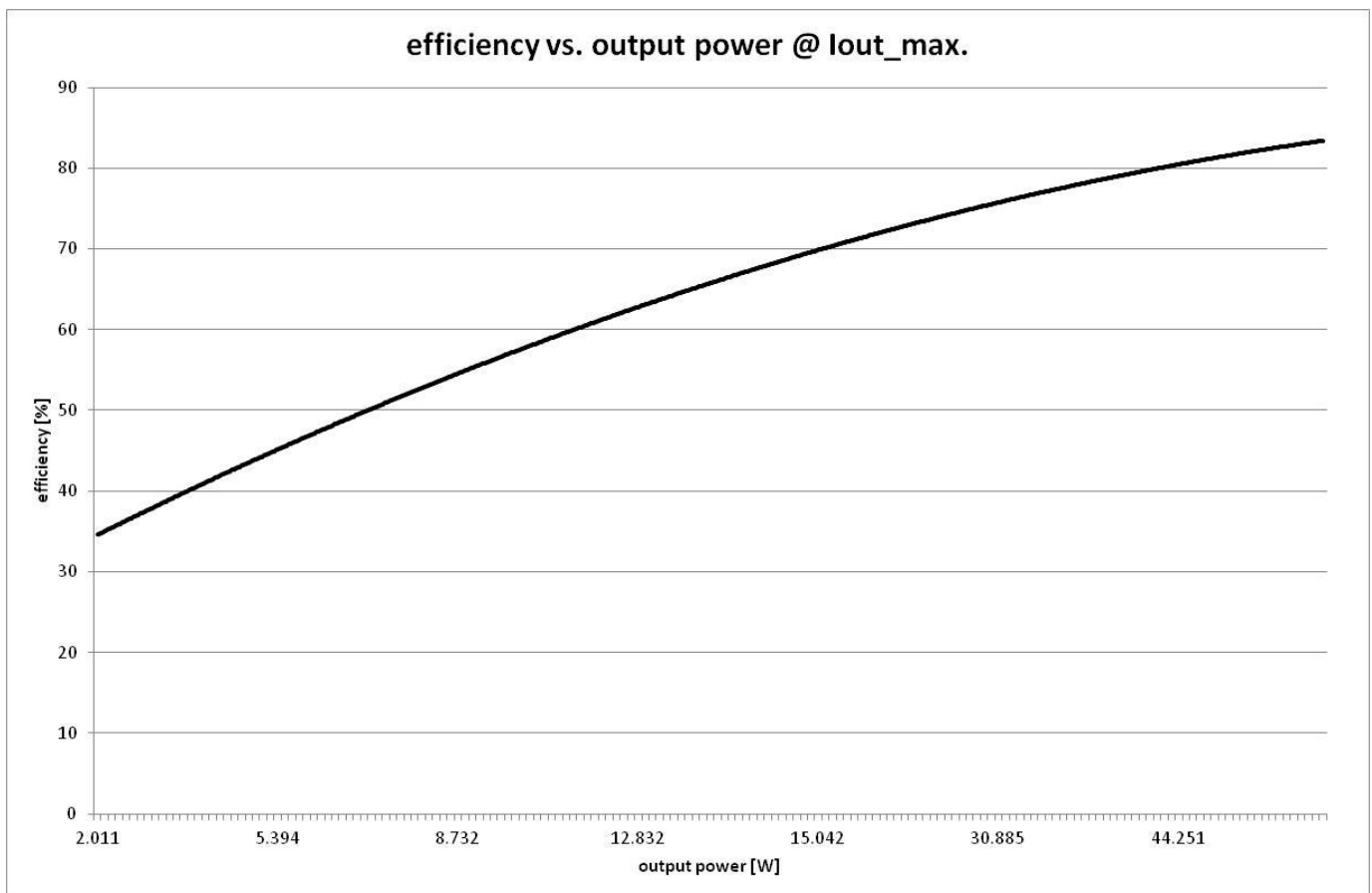
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Electrical Specifications

Overall efficiency vs. output power



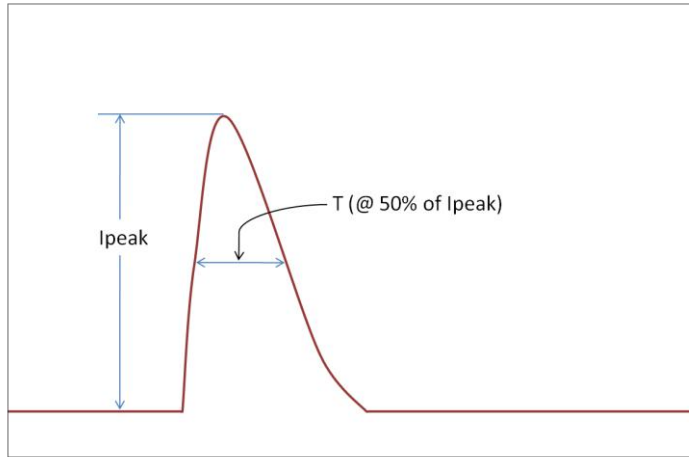
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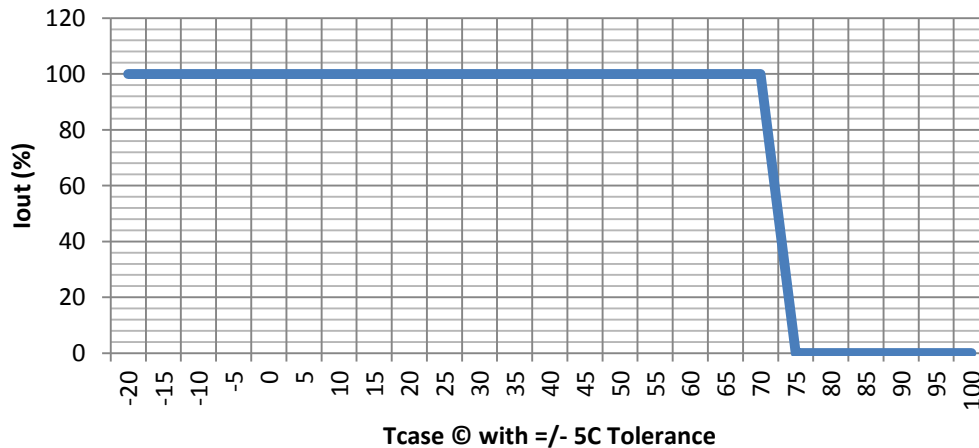
Electrical Specifications

Inrush Current Info:



V_{in}	I_{peak}	T (@ 50% of I_{peak})
120 Vrms	13.5 A	270 μ s

I_{out} (%) vs. T_{case}



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Lifetime vs. Tcase of Driver:

Failure Rate Info:

1. <0.2% per 1 kHr @<= Tcase 75 C

Isolation:

Isolation	Input Wires	Output Wires	0-10v Wires	Chassis
Input Wires	NA	1600	1600	1600
0-10v Wires	1600	1600	NA	1600
Chassis	1600	1600	1600	NA

Dimmer compatibility list	Lightolier ZP260QE (ELV 3-way)
	Lutron DVELV-303P (ELV 3-way)
	Leviton VZE06-1LZ (ELV 3-way)
	Lutron SELV-300P
	Lightolier ZP425QE
	Leviton IPEO4-1LX

Revision History:

Rev No.	Date	Description	Approval	Remarks
1.1	1/23/2012	*Remove graph "Failure rate vs. Tcase	N.T.	
1.2	1/23/2012	*Add Envir. Protection Rating	N.T.	
1.3	2/29/2012	*Update Status from 'Preliminary' to 'Active'	N.T.	
1.4	03/02/2012	*Remove the "M" at the end of part#	N.T.	
1.5	03/05/2012	*Update Rset2 Table	N.T.	

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