



Datasheet

Xitanium 150W 0.7A TWE I250

LED-based light sources are an excellent solution for outdoor environment. They are long-lasting and require low maintenance. However, to get the best out of the LEDs, these light sources require highly reliable and efficient LED Drivers. The new Philips Xitanium Fixed Output and Dimmable (1-10V) LED Outdoor Drivers are specifically designed to deliver reliable performance and protection while meeting the strict performance, approbation and application requirements.

Benefits

Reliability

- Robust design; capable of withstanding harsh outdoor conditions.
- Long lifetime and high survival rate.
- Superior thermal management suitable for outdoor application.
- Backed by 5 year warranty from a company you can trust.
- Consistent waterproof performance through the lifecycle.

Affordable

- Component integration in advanced IC enables cost effective design.
- Proven robustness & reliability secure the lowest luminaire maintenance over time.

Easy to use

- Easy to design-in based on the good thermal management
- Extra EMI margin to support independent use (max. 10 meter extra cable at output side)

Features

- Proven robustness and reliable electronic driver design.
- Achieving highest efficiencies based on advance technology.
- Long lifetime; 50k hrs @Tc max.
- Suitable for Class I isolated luminaires.
- Authorized certificate: ENEC, CB, CE and CCC.

Applications

- Road and street lighting
- Area and flood lighting
- Tunnel lighting
- High-bay lighting

Electrical Input Data

Specification item	Value	Unit	Condition
Nominal Input Voltage	110277	Vac	
Input Voltage AC	102291	Vac	Performance range
Operation Voltage AC	85305	Vac	Safety operation range
Nominal Input Frequency	5060	Hz	
Input Frequency AC	4763	Hz	Maximum permissible range
Nominal Input Current	0.61.5	A	110V277V at full load
Maximum Input Current	1.59	A	At 102V
Nominal Input Power	165	W	At 110V at full load
Power Factor	≥0.95		At 230V at full load
Total Harmonic Distortion	≤10	%	At 230V at full load
Efficiency	92.5	%	At 230V at full load

Electrical Output Data

Specification item	Value	Unit	Condition
Regulation Method	Constant Current		
Output Voltage	90214	Vdc	
Output Voltage Max	250	Vdc	Peak voltage at open circuit
Output Current	700	mA	Performance voltage range
Output Current Tolerance	±5	%	At max. output current
Output Current Ripple LF	5	%	Ripple = peak / average, at<1kHz
Output Power	150	W	At full load
Galvanic Isolation	Yes		Basic; 2U+1000V

Electrical Data Control Input

Specification item	Value	Unit	Condition
Control Method	N/A	V	
Digital Interface	N/A		According 2.0 specifications
Mains Control	N/A		Can be configured via MultiOne
Time-based Integrated Control	N/A		Can be configured via MultiOne
Dimming Range	N/A	%	

Wiring & Connections

Specification item	Value	Unit	Condition
Input Wire Size	1.0	mm²	3-wire cable; 300V/500V rating or higher
Output Wire Size	1.0	mm²	2-wire cable; 300V/500V rating or higher
Input & Output Wire Length	450 ±30	mm	Out of enclosure
Control Wire Size	N/A	mm²	N/A
Control Wire Length	N/A	mm	Out of enclosure

CE Isolation

Basic Isolation: 2U+1000 V	Input Wires	Output Wires	Chassis
Input Wires	N/A	Basic	Basic
Output Wires	Basic	N/A	Basic
Chassis	Basic	Basic	N/A

Operational Temperature and Humidity

Specification item	Value	Unit	Condition
Ambient Temperature	-40+55	°C	
Tcase Maximum	85	°C	Measured at Tc-point
Tcase Life	75	°C	Measured at Tc-point
Tcase Cut-Off	90	°C	Power to LEDs is reduced

Storage Temperature and Humidity

Specification item	Value	Unit	Condition
Ambient Temperature	-40+55	°C	

Lifetime

Specification item	Value	Unit	Condition
Lifetime	100,000	Hours	At Tcase Life; Survival rate = 90%

Programmable Features

Specification item	Value	Remark	Condition
Adjustable Output Current (AOC)	N/A		See Design-In Guide
LED Module Temperature Derating (MTP)	N/A		
Constant Lumen Output (CLO)	N/A		
DC Emergency Dimming (DCEmDIM)	N/A		
Corridor Mode	N/A		
Energy Metering	N/A		
Diagnostics	N/A		

Features

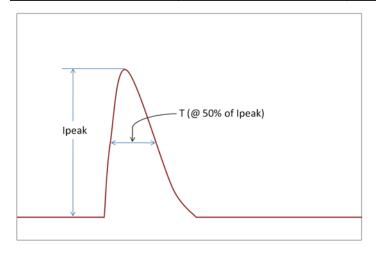
Specification item	Value	Remark	Condition
Open Circuit Protection	Yes		
Short Circuit Protection	Yes		Automatic Recovery
Over Power Protection	Yes		Automatic Recovery
Hot Wiring	N/A		
Suitable for fixtures with Protection Class	Class I		
Input over-voltage	Yes		320Vac@48hrs 350Vac@2hrs

Certificates and Standards

Specification item	Value
Approval Marks	CE / CCC / ENEC / CB
Ingress Protection Rating	IP66/67

Inrush Current

Specification item	Value	Unit	Condition
Inrush Current Ipeak	46	A	At 230Vac
Inrush Current Twidth	480	μs	At 230Vac, measured at 50% Ipeak
Drivers per MCB 16A Type B	≤11	pcs	



Earth Leakage Current

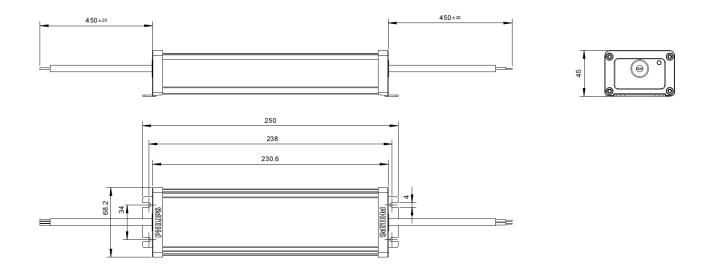
Specification item	Value	Unit	Condition
Typical Leakage Current	≤0.7	mApk	Meets IEC60598; LED module not included

Surge Capability

Specification item	Value	Unit	Condition
Mains Surge Capability Differential Mode	4	KV	L-N,2Ohm
Mains Surge Capability Common Mode	4	KV	L/N-GND,2Ohm

Dimensions

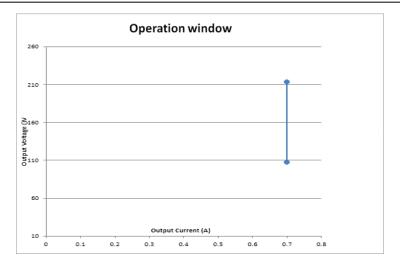
Specification item	Value	Unit	Condition
Length overall	250	mm	
Width overall	68	mm	
Height overall	45	mm	
Mounting Holes Distance	238	mm	
Mounting Holes Width	34	mm	
Mounting Holes Size	4	mm	For M4 with max head diameter of 10mm
Weight	1100	g	



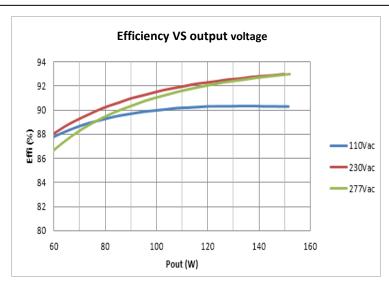
Logistical Data

Specification item	Value
Product Name	Xitanium 150W 0.7A TWE I250
Logistics Code 12NC	9290 014 03080
Pieces per Box	10

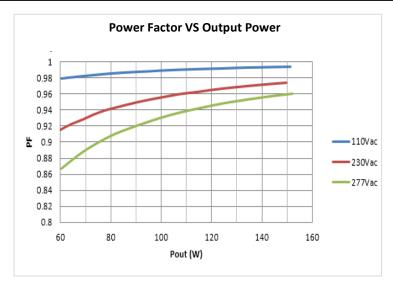
Operating window

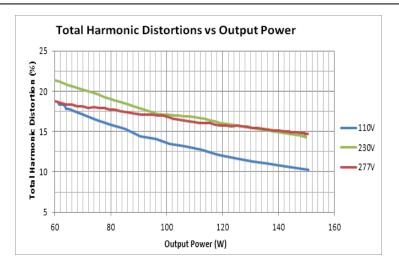


Efficiency (Tcase = 70°C)

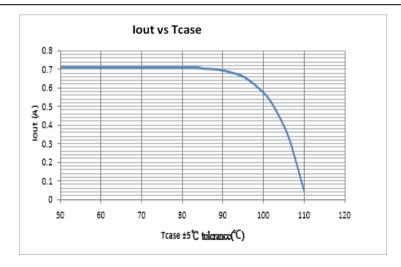


Power Factor (Tcase = 70°C)

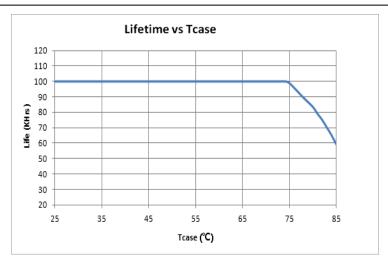




Output Current vs Tcase



Lifetime vs Tcase



- Failure rate information based upon MTTF modeling: 90% survival at end of life @ Tcase <=85°C
- Failure rate information based upon field call rate data: <0.01% per 1K hour @ Tcase <=85°C



@2015 Koninklijke Philips Electronics N.Y.

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the publisher for any consequence of its use. Publication thereof does not convey nor imply any license under patent- or other industrial or intellectual property rights. Data subject to change.

Date of release: April 30, 2015