PHILIPS

Xitanium

LED driver

Datasheet

Xitanium Spot / Downlight LED Drivers Single Current

Xitanium 14W 0.35A 40V TE SC 230V

Single current LED drivers for enhanced lighting performance

Reliable and cost effective Xitanium single current drivers enable luminaires to deliver high quality light over an industry standard lifetime of 50,000 hours. Specifically designed with low ripple current to address luminaire flickering issues - making this optimal for camera, scanner, and barcode operation. These drivers provide assured reliability, safety, and long-term energy savings.

Benefits

- Designed to operate solutions based on Chip On Board (COB) or mid-power LEDs
- Various power wattage Drivers that are related to the lumen packages/applications
- Independent-version housing design for stand-alone installations

Features

- Small,compact dimensions
- Fixed, SELV output
- Low ripple, low THD
- Specific current and voltage
- Fast Time to Market
- 50,000 hours lifetime

Application

- Public buildings (airports, cinemas,theaters, exhibition halls)
- Retail (supermarkets, shops)
- Office

Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220...240	V_{ac}	Performance range
Rated input voltage	230	V_{ac}	
Rated input frequency range	50...60	Hz	Performance range
Rated input current	0.072	A	@ rated output power @ rated input voltage
Rated input power	16	W	@ rated output power @ rated input voltage
Power factor	≥ 0.9		@ rated output power @ rated input voltage
Total harmonic distortion	≤ 20	%	@ rated output power @ rated input voltage
Efficiency	≥ 82	%	@ rated output power @ rated input voltage
Input voltage AC range	202...254	V_{ac}	Operational range
Input frequency AC range	47.5...63	Hz	Operational range
Isolation input to output	SELV		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	29...40	V_{dc}	
Output voltage max.	60	V	Peak voltage at open load
Output current	0.35	A	Full output current setting
Output current tolerance	± 5	%	
Output current ripple LF	≤ 15	%	Ripple = peak / average
Output power	10.15...14	W	Full output

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	TE		
Dimming range	5...100	%	Default range

Logistical data

Specification item	Value
Product name	Xitanium 14W 0.35A 40V TE SC 230V
Logistic code 12NC	9290 014 21306
Pieces per box	50

Wiring & Connections

Specification item	Value	Unit	Condition
Input wire cross-section	0.2...1.5	mm²	WAGO250 (3.5 mm), solid / stranded wire
	16...24	AWG	WAGO250 (3.5 mm), solid / stranded wire
Input wire strip length	8.5...9.5	mm	
Output wire cross-section	0.2...1.5	mm²	WAGO250 (3.5 mm), solid / stranded wire
	16...24	AWG	WAGO250 (3.5 mm), solid / stranded wire
Output wire strip length	8.5...9.5	mm	
Maximum cable length	600	mm	Total length of wiring including LED module, one way
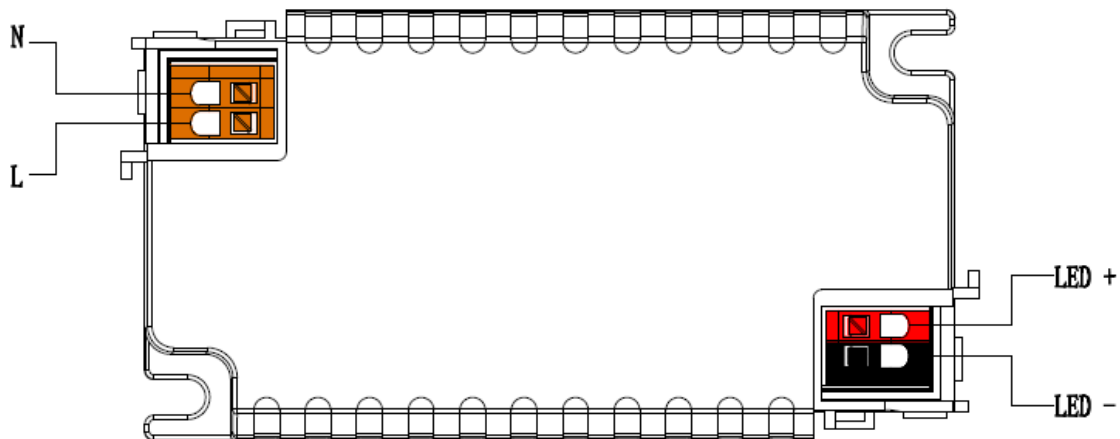
Dimensions and weight

Specification item	Value	Unit	Condition
Length (A1)	100	mm	
Width (B1)	50	mm	
Width (B2)	40	mm	
Height (C1)	19	mm	
Fixing hole distance (A2)	84.4	mm	
Weight	105	gram	
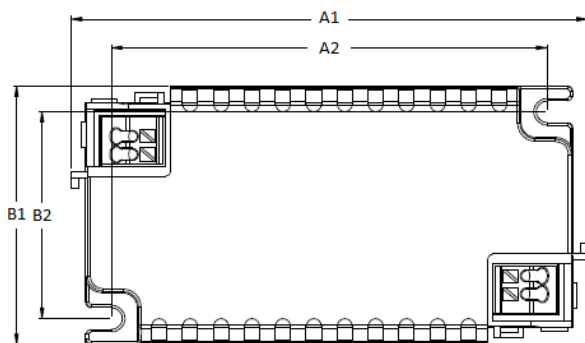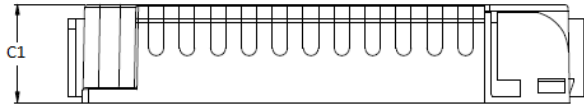
Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded.
Tcase-max	80	°C	Maximum temperature measured at T_{case}-point
Tcase-life	70	°C	Measured at T_{case}-point
Maximum housing temperature	110	°C	In case of a failure
Relative humidity	10...90	%	Non-condensing

Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-25...+85	°C	
Relative humidity	5...95	%	Non-condensing

Lifetime

Specification item	Value	Unit	Condition
Driver lifetime	50,000	hours	Measured temperature at T_{case}-point is T_{case}-life. Maximum failures = 10%
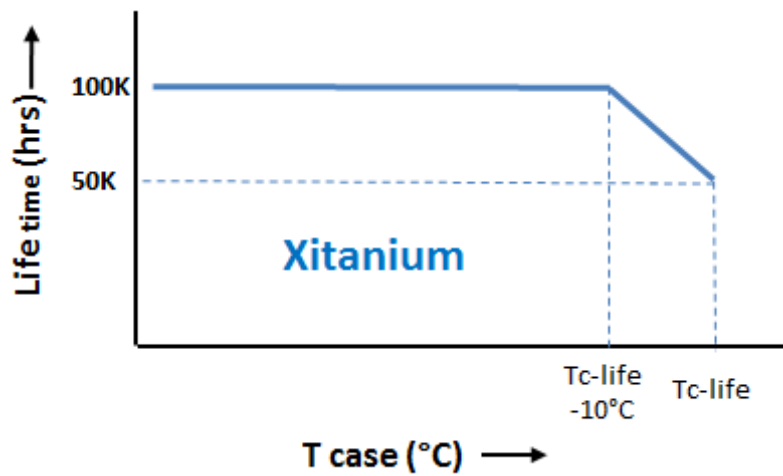
Programmable features

Specification item	Value	Remark	Condition
Set output current (AOC)	No	See Design-in guide.	Default output current: = 350 mA
LED module temperature derating (MTP)	No		
Constant Lumen Over Lifetime (CLO)	No		
DC emergency dimming (DCemDIM)	No		
Corridor mode	No		
Energy metering	No		
Diagnostics	No		
Adjustable Light Output ALO	No		

Features

Specification item	Value	Remark	Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	No		
Suitable for fixtures with protection class	II		per IEC60598

Certificates and standards

Specification item	Value
Approval marks	CB / CCC / CE / ENEC
Ingress Protection classification	20

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	1.87	A	Input voltage 230V
Inrush current T_{width}	48	µs	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 155	pcs	
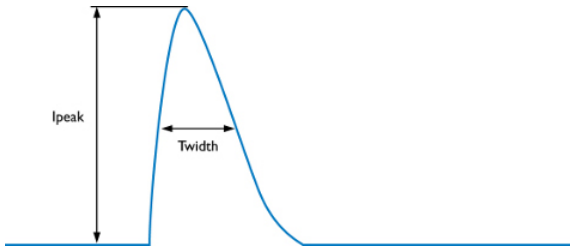
MCB	Rating	Relative number of LED drivers
B	10A	63%
B	13A	81%
B	16A	100% (stated in datasheet)
B	20A	125%
B	25A	156%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%

Driver touch current / protective conductor current

Specification item	Value	Unit	Condition
Typical touch current (ins. Class II)	< 0.35	mA peak	Acc. IEC61347-1. LED module contribution not included

Surge immunity

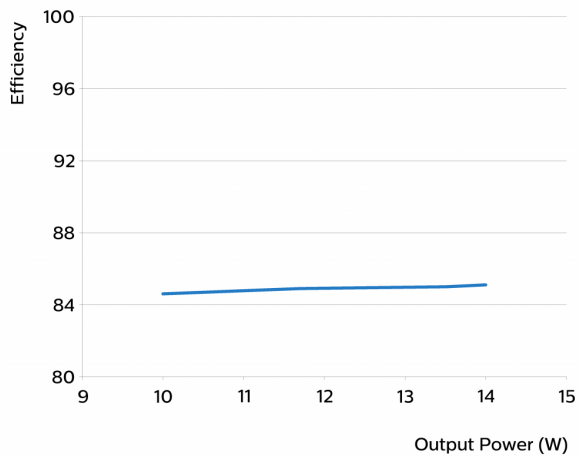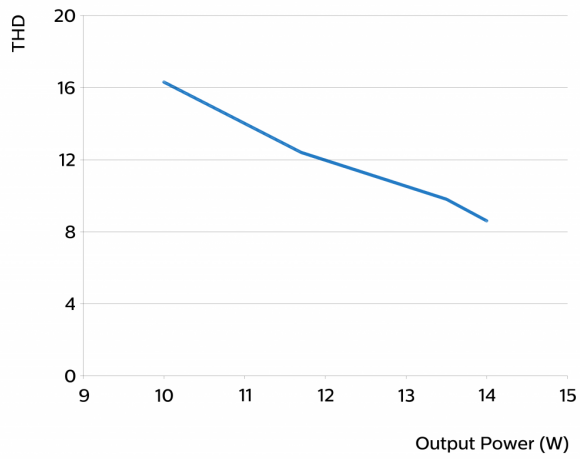| Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Graphs

Operating window
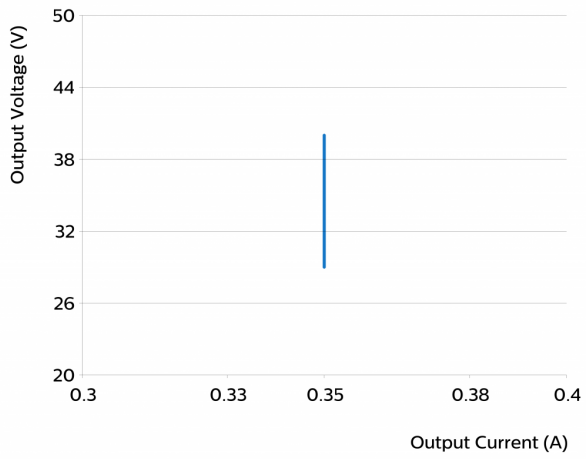
Power factor versus output power
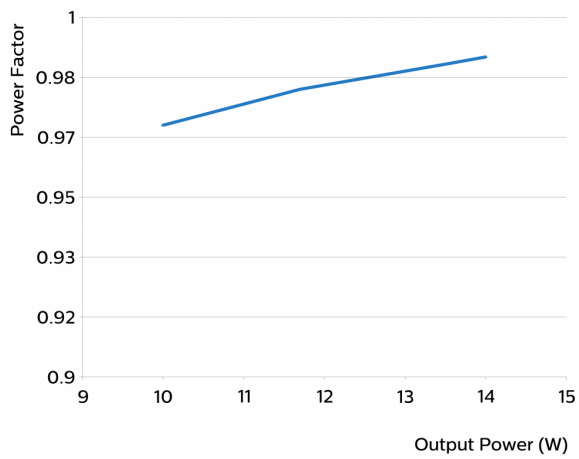
Efficiency versus output power

    Xitanium 14W 0.35A 40V TE SC 230V   September 2017

THD versus output power