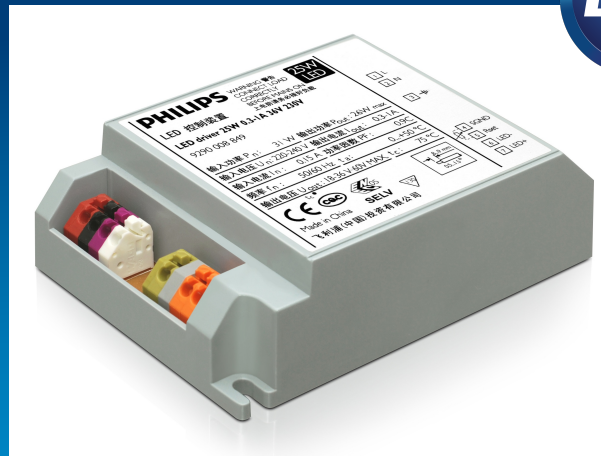


PHILIPS

Xitanium

LED driver



Datasheet

Xitanium LED drivers – spot- and downlight

Xitanium LED Driver 50W 0.7-1.5A 44V 230V

Enabling future-proof LED technology

Xitanium LED drivers are designed to operate LED solutions for general lighting applications. With Xitanium LED drivers, flexibility in luminaire design is assured thanks to an adjustable output current. Application-oriented operating windows offer stable lumen output and light quality levels that specifiers and architects demand. The adjustable output current also enables operation of various LED PCB solutions from different manufacturers.

Benefits

- High reliability underpinned by 5 year warranty
- Future-proof flexibility - application-oriented operating windows enable LED generation and complexity management
- Compatibility - can also be used for other manufacturers' modules or OEMs' own PCB designs

Features

- Operating windows - output current can be adjusted via a resistor outside the driver
- Housing for down- and spotlighting, in build-in and independent (with strain relief) versions

Application

- Retail

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	0.28	A	@ rated output power @ rated input voltage
Rated input power	57	W	@ rated output power @ rated input voltage
Power factor	≥ 0.9		@ rated output power @ rated input voltage
Total harmonic distortion	≤ 30	%	@ rated output power @ rated input voltage
Efficiency	≥ 86	%	@ 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	18...44	V _{dc}	
Output voltage max.	55	V	Peak voltage at open load
Output current	0.7...1.5	A	Full output current setting
Output current tolerance	± 8	%	
Output current ripple LF	≤ 30	%	Ripple = peak / average
Output power	14...50	W	Full output

Electrical data controls input

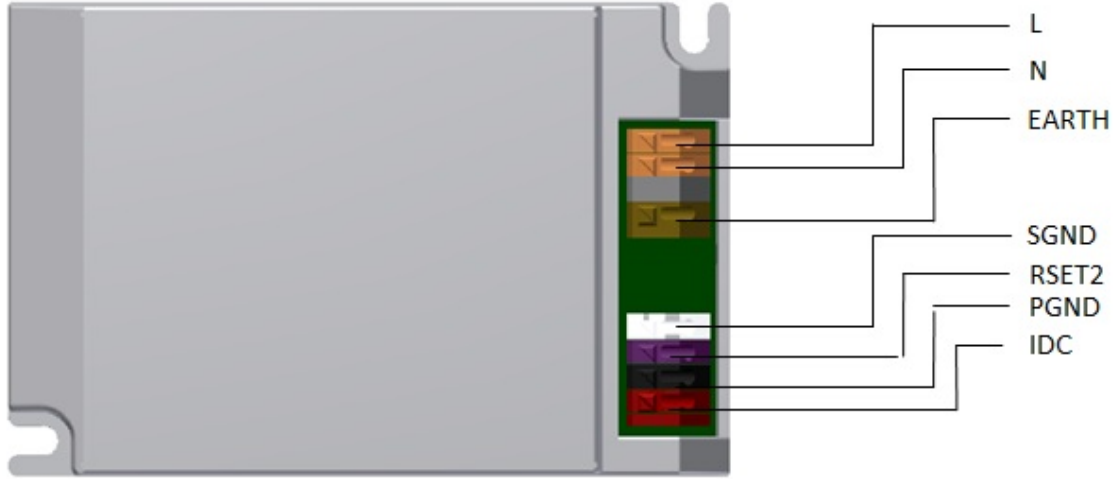
Specification item	Value	Unit	Condition
Control method	Fixed		

Logistical data

Specification item	Value
Product name	Xitanium LED Driver 50W 0.7-1.5A 44V 230V
Order code	
Logistic code 12NC	9290 008 71908
EAN3	
Pieces per box	12

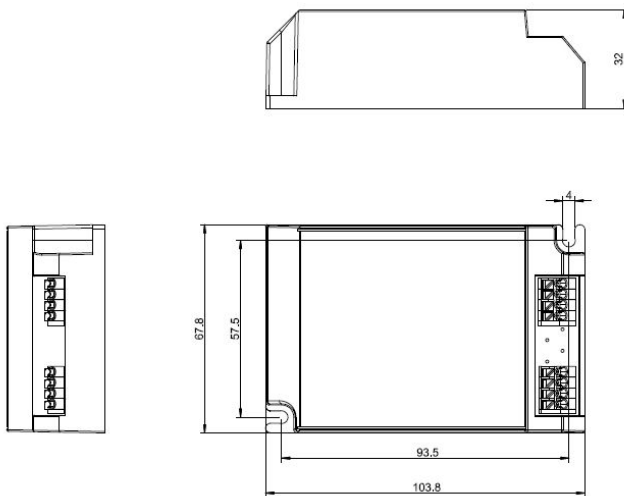
Wiring & Connections

Specification item	Value	Unit	Condition
Input wire cross-section	0.2...1.5	mm ²	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	
Maximum cable length	600	mm	Total length of wiring including LED module, one way



Dimensions and weight

Specification item	Value	Unit	Condition
Length (A1)	104	mm	
Width (B1)	68	mm	
Height (C1)	32	mm	
Fixing hole diameter (D1)	4	mm	
Fixing hole distance (A2)	93.5	mm	
Weight	146	gram	



Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	+0...+50	°C	Higher ambient temperature allowed as long as T _{case-max} is not exceeded.
T _{case-max}	75	°C	Maximum temperature measured at T _{case-point}
T _{case-life}	65	°C	Measured at T _{case-point}
Maximum housing temperature	130	°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)	Rset2	See Design-in guide.	Default output current: = 1500 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		

Features

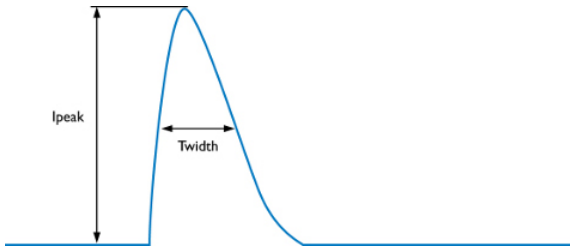
Specification item	Value	Remark	Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	No		
Suitable for fixtures with protection class	I and II		per IEC60598

Certificates and standards

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

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	23	A	Input voltage 230V
Inrush current T_{width}	280	μ s	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 19	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

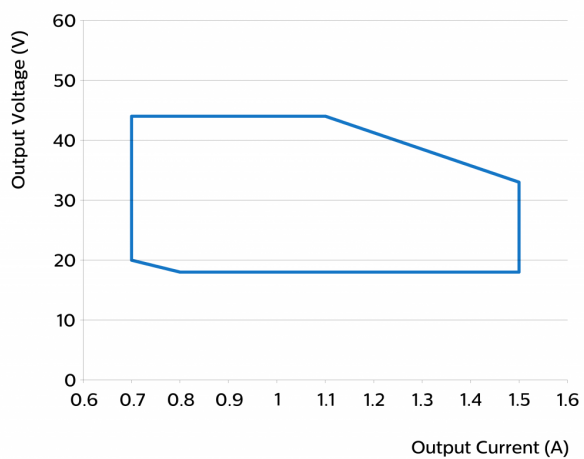
Specification item	Value	Unit	Condition
Typical touch current	< 0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

Surge immunity

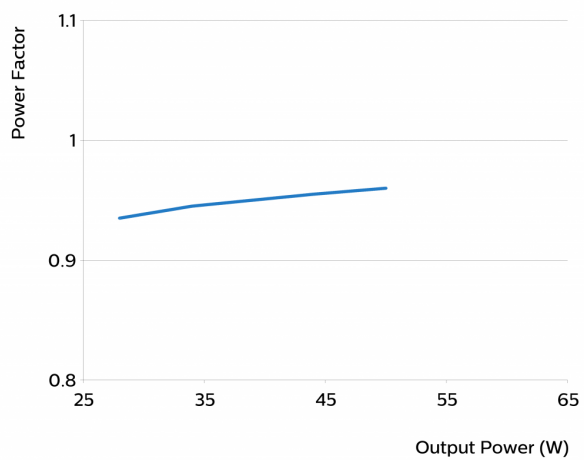
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Graphs

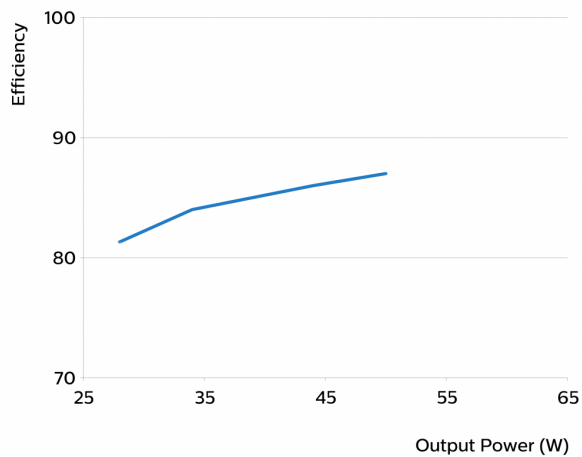
Operating window



Power factor versus output power



Efficiency versus output power



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