

PHILIPS

Xitanium

LED driver



Datasheet

Xitanium LED Panel drivers

Xitanium 44W 0.7-1.05A 42V 1-10V 230V I

9290 028 82280

Optimizing Performance

Xitanium LED drivers are designed to operate LED solutions for general lighting applications such as linear lighting in offices, public buildings as well as industrial and retail environments. Xitanium LED drivers with single current output offer industry leading performance and reliability at optimized cost. They are ideal for high volume applications while delivering to specific requirements. These drivers offer the same level of performance as Xitanium adjustable-current linear drivers to ensure high quality of light but, with a specific current setting. In addition, the isolated drivers offer ease of design-in and simpler approbation process.

Xitanium LED drivers are based on Philips experience and knowledge from conventional fluorescent technology. The reliability of the LED solution is further enhanced by specific features that protect the connected LED module, such as reduced ripple current.

Benefits

- High reliability underpinned by 5 year warranty
- Assurance of camera-friendly performance
- Optimized performance at specific output current setting
- Enable simple approbation process to luminaires

Features

- Low output current tolerance
- Long lifetime 50,000 hours lifetime
- Low ripple output current (4%)

Application

- Offices and industry

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	0.23	A	@ full output power @ rated input voltage
Rated input power	49	W	@ full output power @ rated input voltage
Power factor	0.9C		@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	88	%	@ rated output power @ rated input voltage @max. U _{out}
Input voltage AC range	202...254	V _{ac}	Operational range
Input frequency AC range	47.5...63	Hz	Operational range
Standby Power	0.48	W	
Isolation input to output	SELV		

Electrical output data

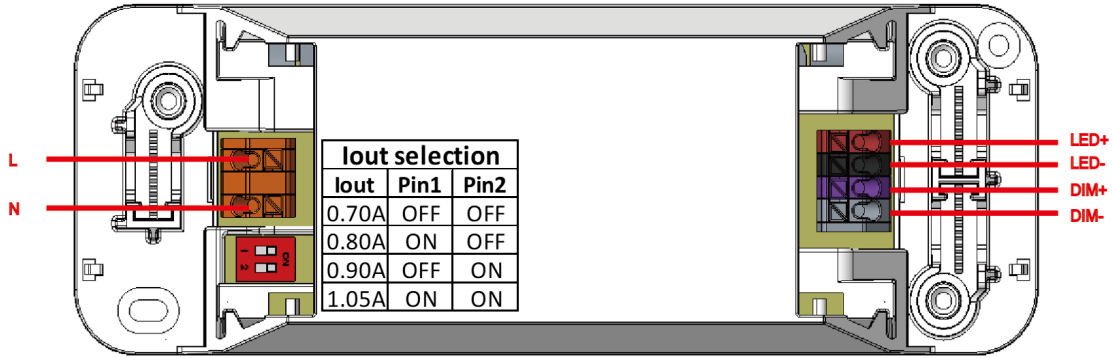
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...42	V _{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	0.7 / 0.8 / 0.9 / 1.05	A	
Output current min dimming	30	mA	
Output current tolerance ±	5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 15	%	
Output P _{st} ^{LM}	≤ 1		In entire operating window
Output SVM	≤ 1.6		In entire operating window
Output power	21...44	W	

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	1-10V		
Dimming range	5...100	%	Default range
Isolation controls input to output	Basic		acc. IEC61347-1

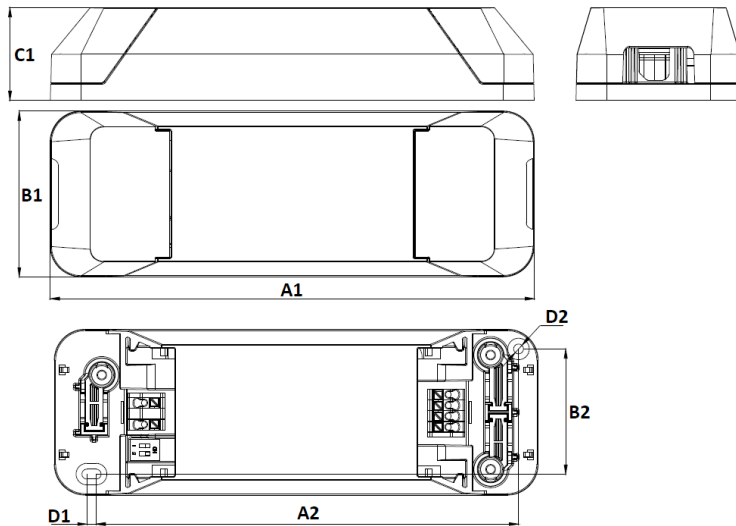
Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.75...1.5 / 18...16	mm ² / AWG	WAGO250 (pitch 3.5 mm), solid / stranded wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.75...1.5 / 18...16	mm ² / AWG	WAGO250 (pitch 3.5 mm), solid / stranded wire
Output wire strip length	8...9	mm	
Control wire cross-section	0.75...1.5 / 18...16	mm ² / AWG	WAGO250 (pitch 3.5 mm), solid / stranded wire
Control wire strip length	8...9	mm	
Maximum cable length	0.6	m	Total length of wiring including LED module, one way



Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	157	mm	± 0.5
Mounting hole distance (A2)	137	mm	± 0.5
Width (B1)	53.6	mm	± 0.3
Width (B2)	40.5	mm	± 0.3
Height (C1)	30	mm	± 0.5
Mounting hole diameter (D1)	3	mm	± 0.1
Mounting hole diameter (D2)	3.2	mm	± 0.1
Weight	154	gram	
Housing material	Plastic		



Logistical data

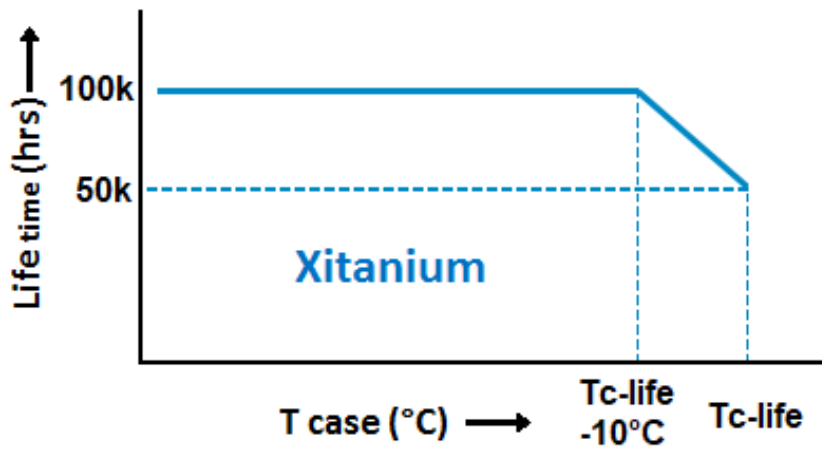
Specification item	Value
Product name	Xitanium 44W 0.7-1.05A 42V 1-10V 230V I
Logistic code 12NC	9290 028 82280
Pieces per box	24

Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+45	°C	Higher ambient temperature allowed as long as T _{case-max} is not exceeded
T _{case-max}	85	°C	Maximum temperature measured at T _{case-point}
T _{case-life}	75	°C	Measured at T _{case-point}
Maximum housing temperature	110	°C	In case of a failure, inherent by design
Relative humidity	10...90	%	Non-condensing

Lifetime

Specification item	Value	Unit	Condition
Driver lifetime	50,000	hours	Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10%



Storage temperature and humidity

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

Programmable features

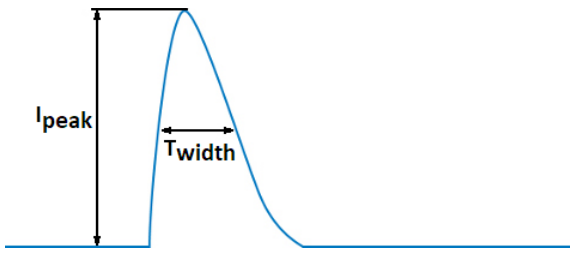
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)		1050 mA	
LED Module Temperature Protection (MTP)	No		
Constant Light Output (CLO)	No		
1-10V	Yes		
DC emergency (DCemDim)	No		

Features

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

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	15.6	A	Input voltage 230V
Inrush current T_{width}	281	μ s	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 25	pcs	Indicative value



MCB	Rating	Relative number of LED drivers
B	4A	25%
B	6A	40%
B	10A	63%
B	13A	81%
B	16A	100% (stated in datasheet)
B	20A	125%
B	25A	156%
B	32A	200%
B	40A	250%
C	4A	42%
C	6A	63%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%
C	32A	340%
C	40A	415%

Driver touch current / protective conductor current

Specification item	Value	Unit	Condition
Typical Touch Current (ins. Class II)	0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

Surge immunity

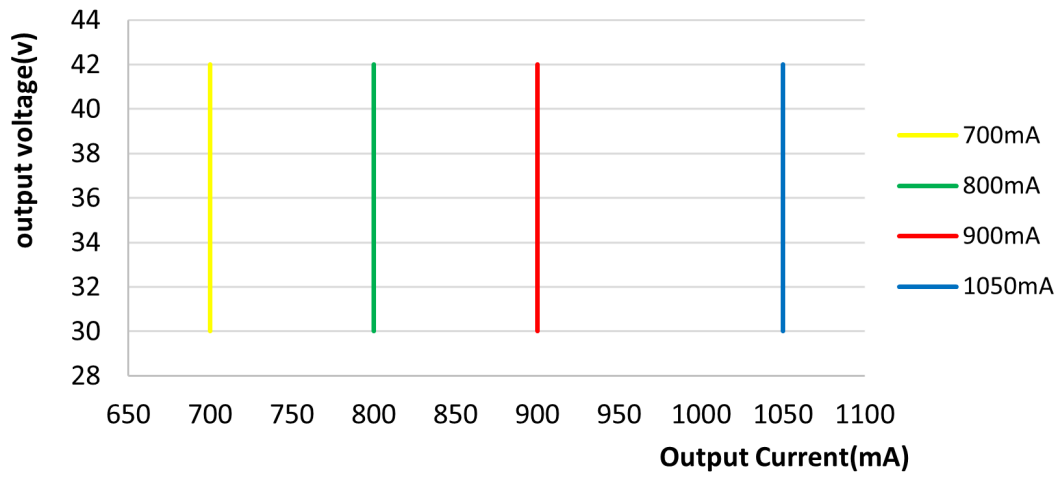
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us

Application Info

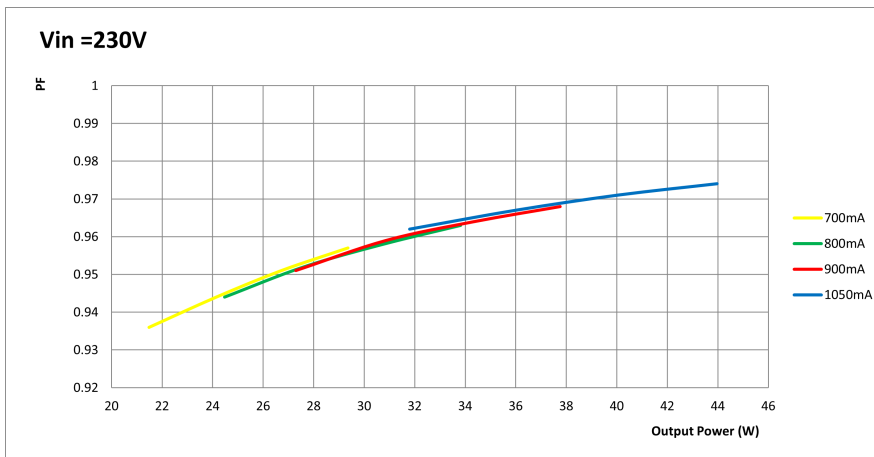
Specification item	Value
Approval marks	CB / CCC / CE / ENEC / RCM / TISI / UKCA
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in / Independent

Graphs

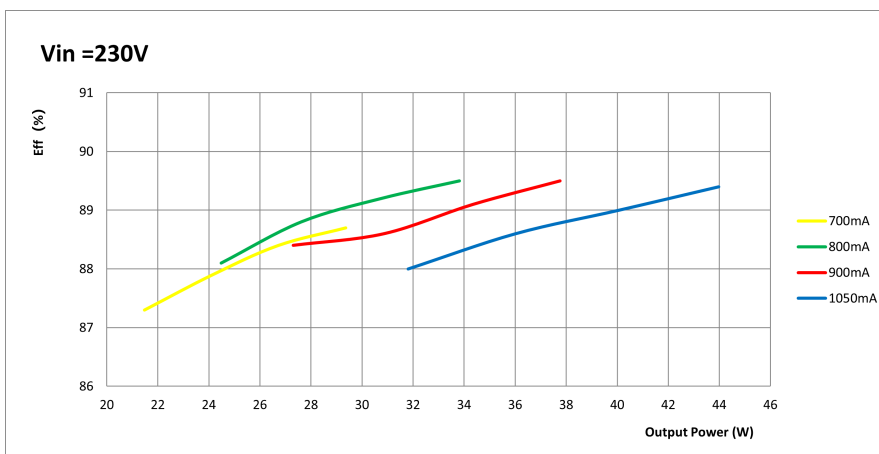
Operating window



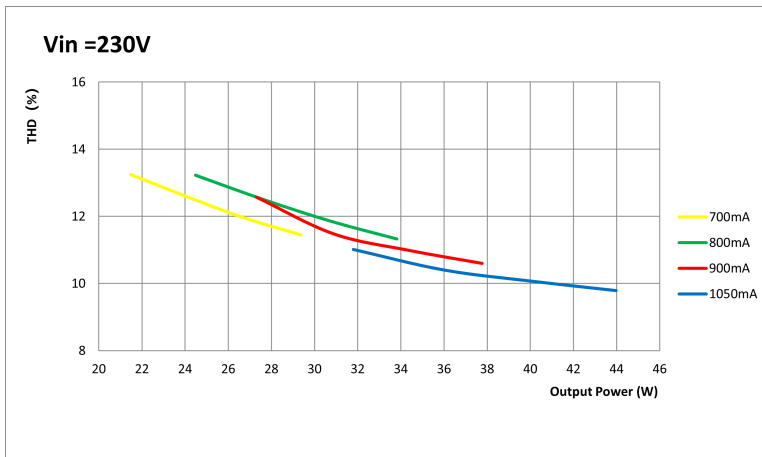
Power factor versus output power



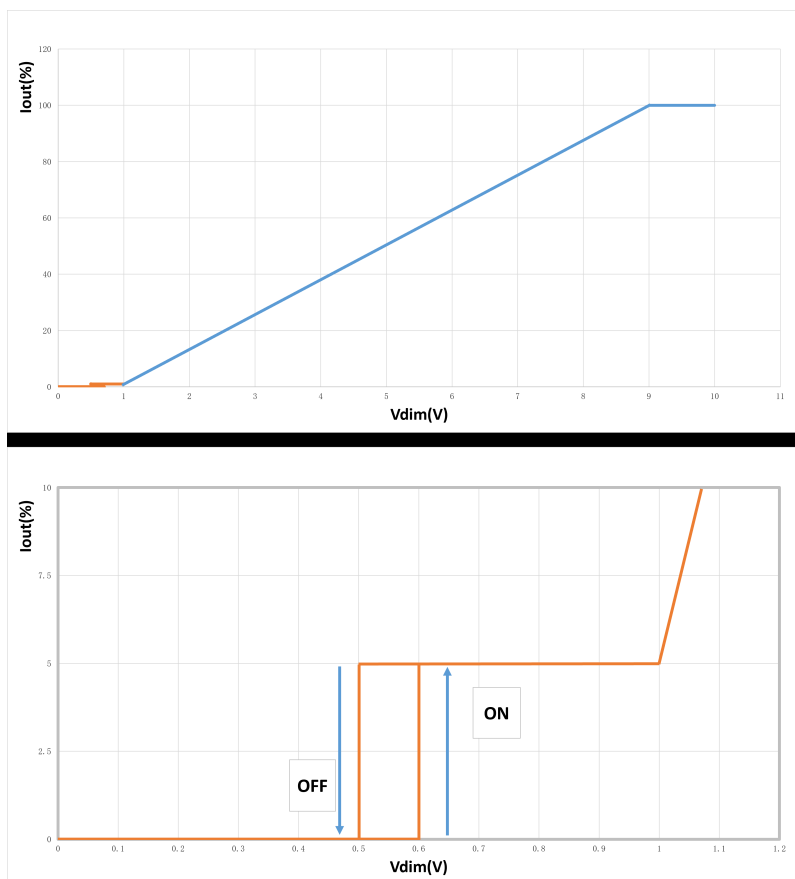
Efficiency versus output power



THD versus output power



I_{out} as function of 1-10V interface



Note: to avoid dim to off state, please keep dimming voltage >0.8V.



©2021 Signify Holding, IBRS 10461, 5600 VB, NL. All rights reserved.
UK importer address: Signify Commercial UK Limited, 3, Guildford Business Park, GU2 8XG.

The information provided herein is subject to change without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

Philips and the Philips Shield Emblem are registered trademarks of Koninklijke Philips N.V. All other trademarks are owned by Signify Holding or their respective owners.

Date of release: August 31, 2021

www.philips.com/oem