

# PHILIPS

## Xitanium

### LED driver



## Datasheet

### Xitanium LED drivers – linear LV isolated Dual Output

Xitanium 25W 0.5/0.6A 42V 13 230V

9290 014 25380

#### Enabling future-proof LED technology

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 and scanner-friendly performance
- Optimized performance at specific output current settings
- Enabling simple approbation process for luminaires

#### Features

- Low output current tolerance
- Long lifetime at high operating temperature
- Low output ripple current
- Dual output current, easy to use by selecting different output channels

#### Application

- Office and industry
- IEC Insulation Class I luminaires

## Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	202...254	V <sub>ac</sub>	Performance range
Rated input voltage	230	V <sub>ac</sub>	
Rated input frequency range	47...63	Hz	Performance range
Rated input current	0.11	A	@ rated output power @ rated input voltage
Rated input power	29	W	@ rated output power @ rated input voltage
Power factor	0.92		@ rated output power @ rated input voltage
Total harmonic distortion	15	%	@ rated output power @ rated input voltage
Efficiency	85.1	%	@ rated output power @ rated input voltage @ max. I <sub>out</sub>
Input voltage AC range	198...264	V <sub>ac</sub>	Safety operational range
Input frequency AC range	45...66	Hz	Safety operational range
Isolation input to output	SELV		

## Electrical output data

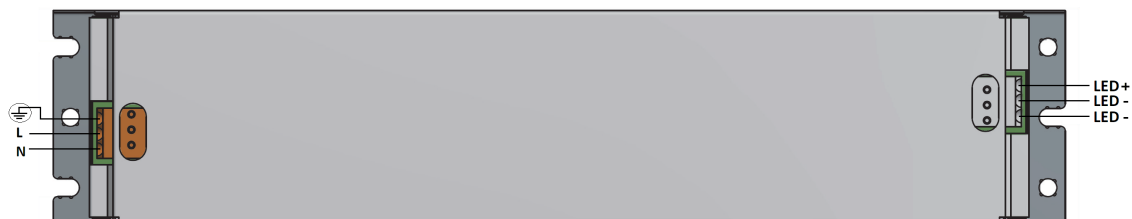
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...42	V <sub>dc</sub>	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	0.5 / 0.6	A	Depends on the selected output LED- wire
Output current tolerance ±	8	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 15	%	
Output P <sub>st</sub> <sup>LM</sup>	≤ 0.06		
Output SVM	≤ 0.07		
Output power	15...25	W	depends on the selected output current

## Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		

## Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.5...1.5 / 20...16	mm <sup>2</sup> / AWG	WAGO744, solid wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm <sup>2</sup> / AWG	WAGO744, solid wire
Output wire strip length	8...9	mm	
Maximum cable length	0.6	m	Total length of wiring including LED module, one way

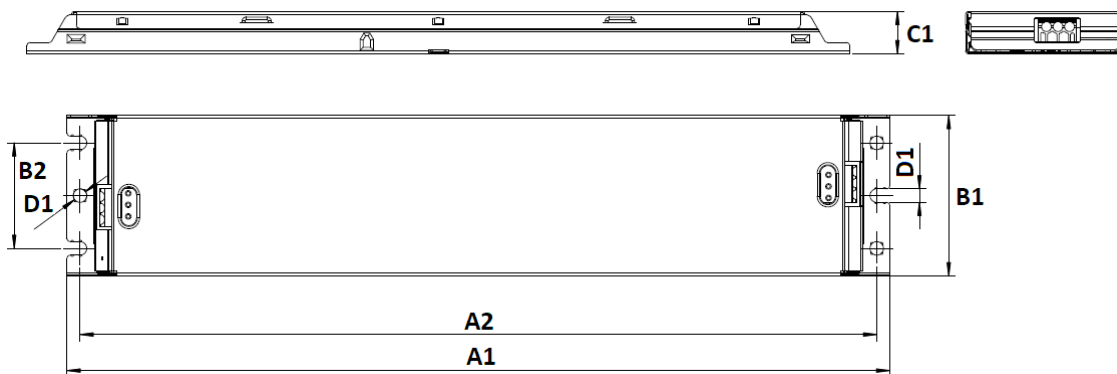


## Insulation

Insulation per IEC61347-1	Input	Output	Housing
Input		SELV	Basic
Output	SELV		Basic
Housing	Basic	Basic	

## Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	250	mm	
Mounting hole distance (A2)	242	mm	
Width (B1)	48.6	mm	
Width (B2)	32	mm	
Height (C1)	13	mm	
Mounting hole diameter (D1)	4.1	mm	
Weight	250	gram	



## Logistical data

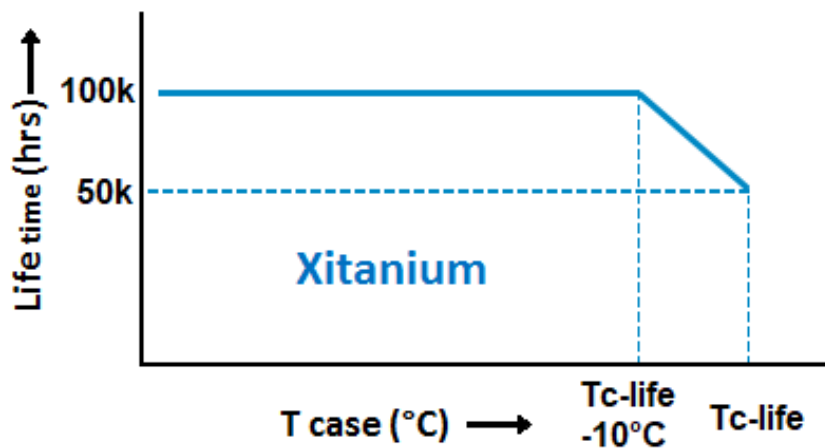
Specification item	Value
Product name	Xitanium 25W 0.5/0.6A 42V 13 230V
EOC	694793914481500
Logistic code 12NC	9290 014 25380
EAN1 (GTIN)	6947939144815
EAN3 (box)	6947939144822
Pieces per box	25

## Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as T <sub>case</sub> -max is not exceeded
T <sub>case</sub> -max	75	°C	Maximum temperature measured at T <sub>case</sub> -point
T <sub>case</sub> -life	75	°C	Measured at T <sub>case</sub> -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)	Manual	500 mA	Select the output current by wiring the right output connector (LED-)
LED Module Temperature Protection (MTP)	No		
Constant Light Output (CLO)	No		
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		Automatic recovering
Hot wiring	No		
Suitable for fixtures with protection class	I		per IEC60598
Overtemperature protection	No		
Overheating protection	No		

## Inrush current

Specification item	Value	Unit	Condition
Inrush current	18	A	Input voltage 230V
Inrush peak width	240	μs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	≤ 28	pcs	Indicative value



Please refer to the driver design in guide if you use other MCB-types.

## Driver touch current / protective conductor current

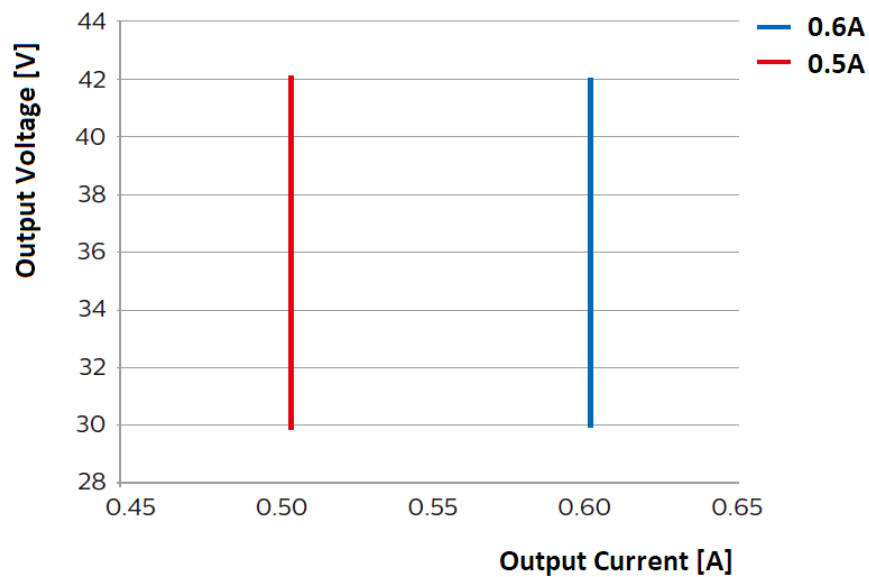
Specification item	Value	Unit	Condition
Typical Protective Conductor Current (ins. Class I)	0.7	mA rms	Acc. IEC60598-1. LED module contribution not included

## Surge immunity

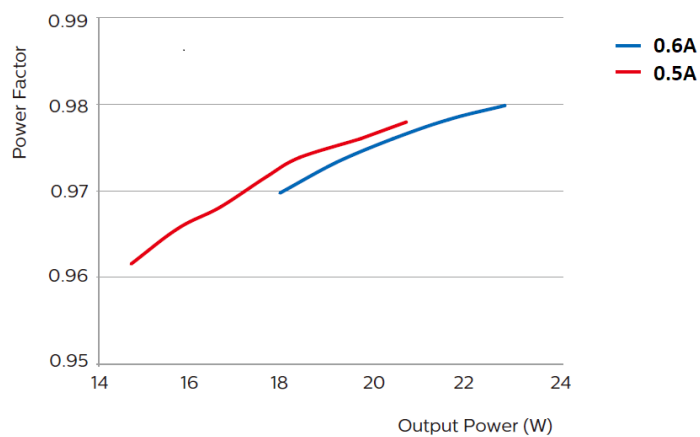
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us

## Application Info

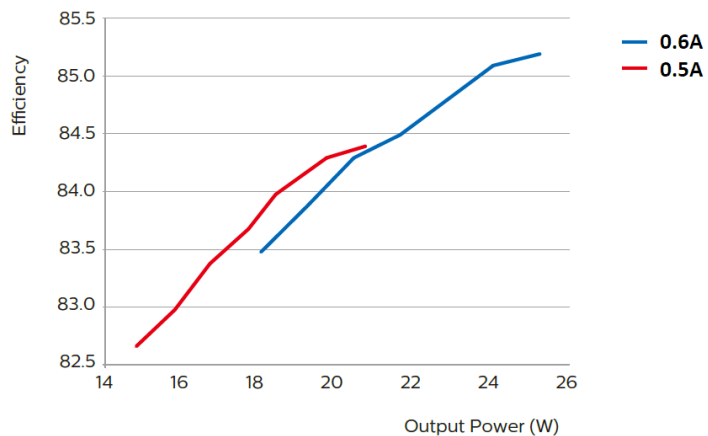
Specification item	Value
Approval marks	CCC / CE / ENEC / KC / KS / RCM / SELV / TISI
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in



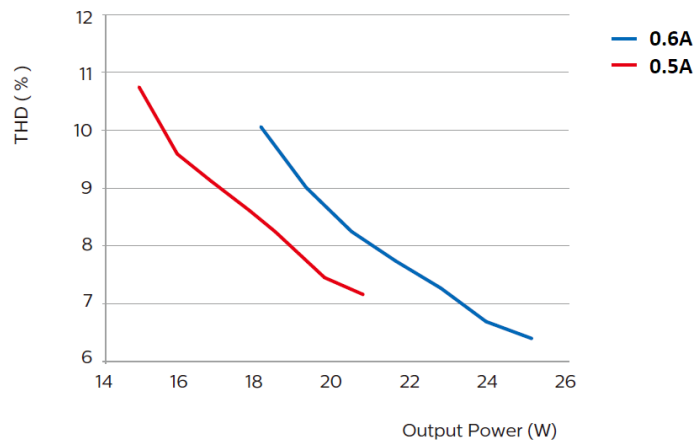
#### Power factor versus output power



#### Efficiency versus output power



## THD versus output power



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