

# PHILIPS

## Xitanium

### LED driver



## Datasheet

### Xitanium LED drivers – linear LV isolated

Xitanium 65W 0.5-1.4A 54V S 230V

9290 015 71506

#### Enabling future-proof LED technology

Xitanium LED drivers are designed to operate LED solutions for general lighting applications such as linear lighting, as well as downlighting and spot/accent lighting.

High reliability underpinned by 5 year warranty, enhanced by specific features that protect the connected LED module, e.g. hot wiring, reduced ripple current and thermal derating. Most drivers feature central DC operation.

In the coming years LEDs will continue to increase in efficiency, creating generation and complexity challenges for OEMs. With Xitanium LED drivers, flexibility in luminaire design is assured thanks to an adjustable output current. Application-oriented operating windows offer the flexibility required to provide the stable lumen output and light quality levels that lighting specifiers and architects demand. And 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
- Flicker and noise free dimming with all Touch and DALI LED drivers due to amplitude dimming (AM)

#### Features

- Simpler approval process and easy design-in
- Operating windows - output current configurable via DALI or SimpleSet by means of Philips MultiOne software or via a resistor (LEDset)
- Reduced ripple current and thermal derating for increased reliability
- Power ratings: 36W, 65W and 75W
- DALI dimmable & programmable, 1-10V dimmable, and fixed-output versions

#### Application

- Offices
- Industry
- Supermarkets / Retail

## Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220...240	V <sub>ac</sub>	Performance range
Rated input voltage	230	V <sub>ac</sub>	
Rated input frequency range	50...60	Hz	Performance range
Rated input current	0.32	A	@ full output power @ rated input voltage
Rated input power	74	W	@ full 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	88	%	@ full output power @ rated input voltage @ max. I <sub>out</sub>
Rated input voltage DC range	186...250	V <sub>dc</sub>	Performance range
Input voltage AC range	198...264	V <sub>ac</sub>	Operational range
Input frequency AC range	47.5...63	Hz	Operational range
Input voltage DC range	168...275	V <sub>dc</sub>	Operational range
Standby Power	0.3	W	
Isolation input to output	SELV		

## Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	27...54	V <sub>dc</sub>	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	0.5...1.4	A	
Output current tolerance ±	5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 4	%	
Output power	18.5...65	W	

## Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		AOC configurable via SimpleSet. See design-in guide for more details.

## 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	2	m	Total length of wiring including LED module, one way. For longer wiring please double check EMI behavior of luminaire

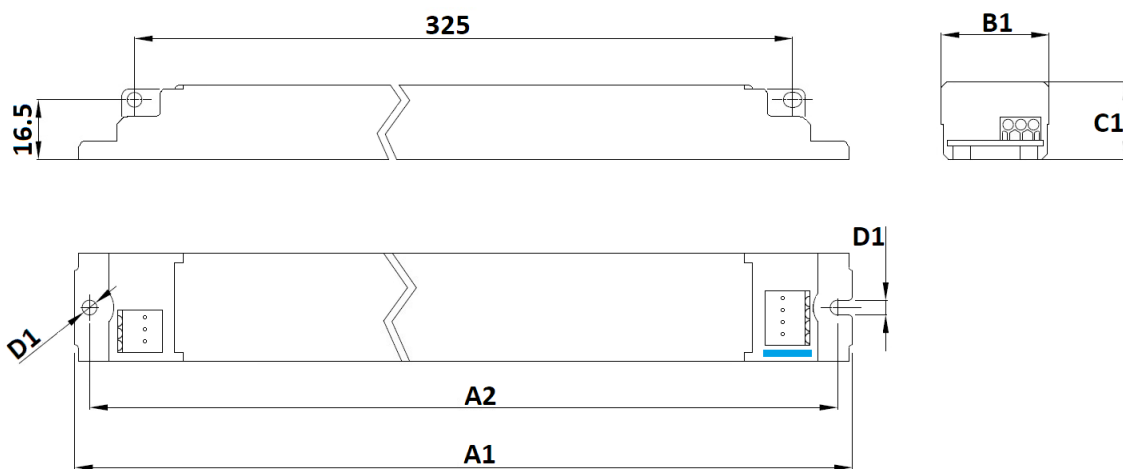


## Insulation

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)	360	mm	
Mounting hole distance (A2)	350	mm	
Width (B1)	30	mm	
Height (C1)	21	mm	
Mounting hole diameter (D1)	4.1	mm	
Weight	250	gram	



## Logistical data

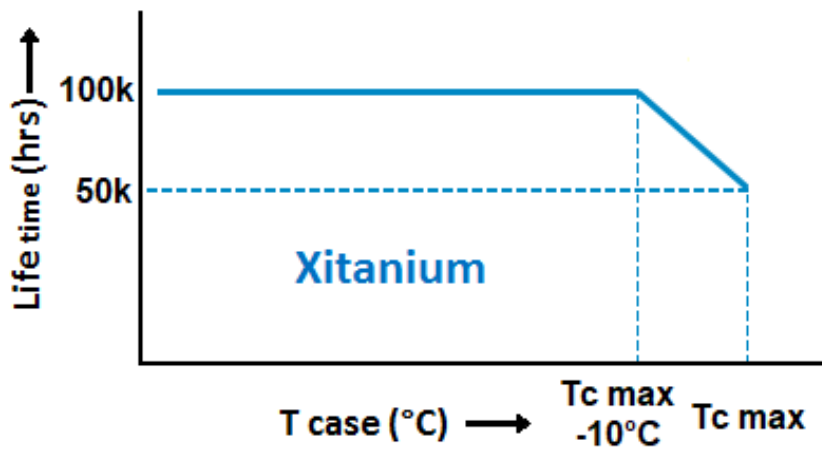
Specification item	Value
Product name	Xitanium 65W 0.5-1.4A 54V S 230V
EOC	871869671416400
Logistic code 12NC	9290 015 71506
EAN1 (GTIN)	8718696714164
EAN3 (box)	8718696714171
Pieces per box	24

## Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-25...+50	°C	Higher ambient temperature allowed as long as T <sub>case-max</sub> is not exceeded
T <sub>case-max</sub>	75	°C	Maximum temperature measured at T <sub>case-point</sub>
T <sub>case-life</sub>	65	°C	Measured at T <sub>case-point</sub>
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	100,000	hours	Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10%
Mains switching cycles	> 100,000	switches	See Design-in guide for detailed explanation



## Storage temperature and humidity

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

## Programmable features

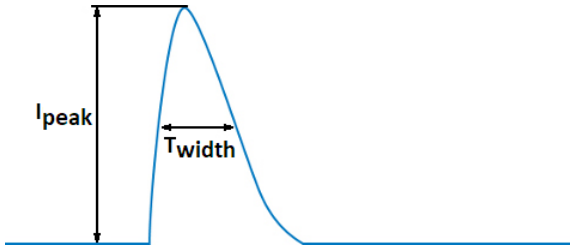
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	SimpleSet	1050 mA	
Adjustable Light Output (ALO)	No		
Corridor Mode	No		
DC emergency (DCemDim)	No		

## 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 and II	per IEC60598
Energy metering (DALI part 252)	No	
Diagnostics	No	

## Inrush current

Specification item	Value	Unit	Condition
Inrush current	14.6	A	Input voltage 230V
Inrush peak width	273	μs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	≤ 31	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)	0.4	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

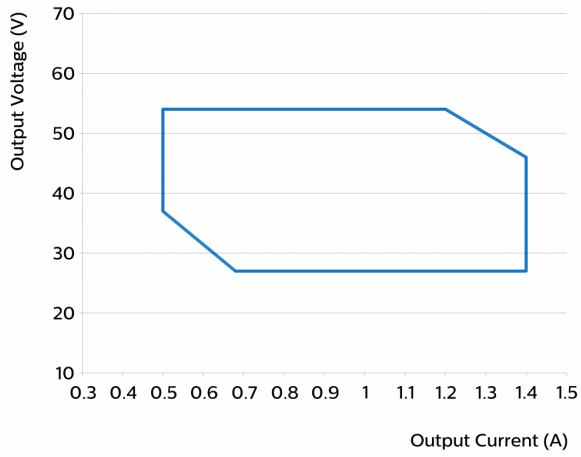
## Application Info

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

## Graphs

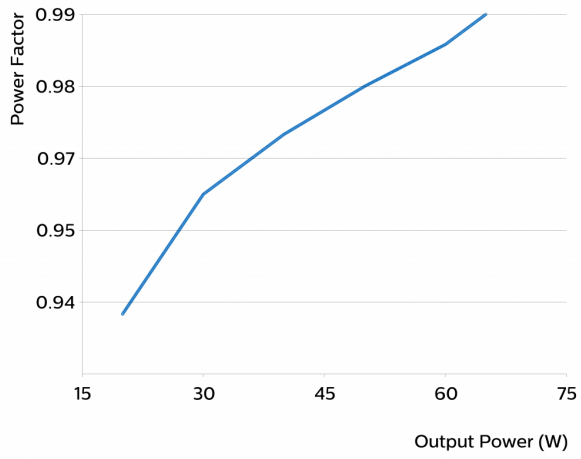
### Operating window

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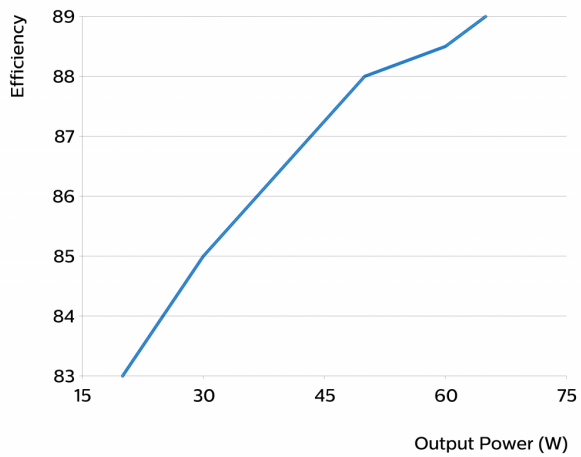
### Power factor versus output power

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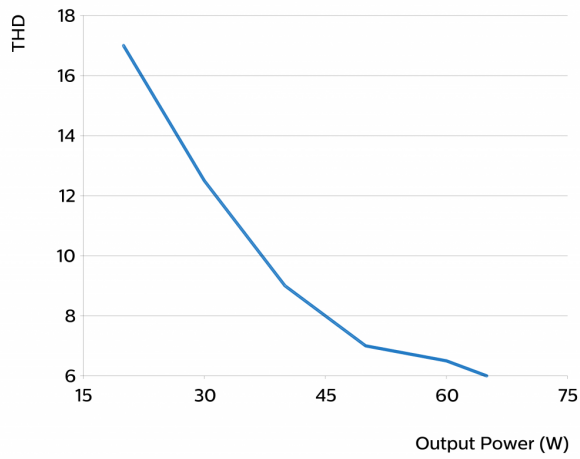
### Efficiency versus output power

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## THD versus output power

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Date of release: August 12, 2021 v6

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