PHILIPS

Xitanium

LED driver

Datasheet

Xitanium LED drivers – linear LV isolated

Xitanium 36W 0.3-1A 54V TD 230V

9290 015 03606

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

September 2021

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	0.2	A	@ full output power @ rated input voltage
Rated input power	42	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	87.4	%	@ full output power @ rated input voltage @ max. Iout
Rated input voltage DC range	186…250	V_{dc}	Performance range
Input voltage AC range	198…264	V_{ac}	Operational range
Input frequency AC range	45…66	Hz	Operational range
Input voltage DC range	168…275	V_{dc}	Operational range
Standby Power	0.22	W	
Isolation input to output	SELV		

Electrical output data

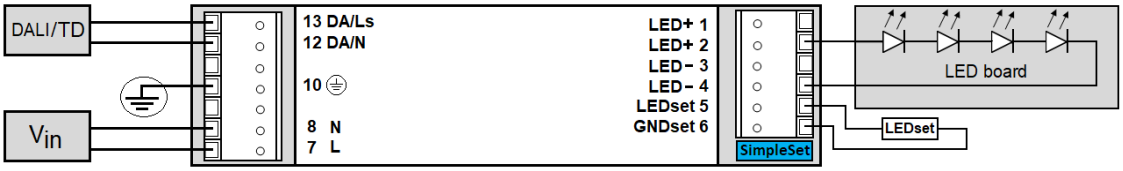
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	27…54	V_{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	0.3…1	A	
Output current tolerance ±	5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 4	%	
Output power	10…36	W	

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Corridor Mode, DALI, Touch & Dim (TD)		
Dimming range	1…100	%	>700mA 1% dimming; < 700mA min. current 7mA
Isolation controls input to output	Double		acc. IEC61347-1

Wiring and Connections

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

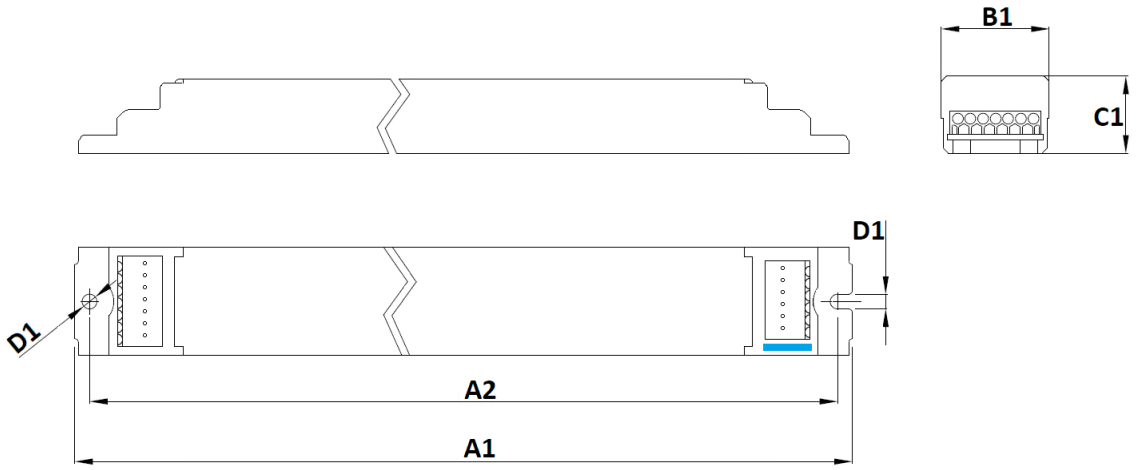


Insulation

Insulation per IEC61347-1	Input	Output+LEDset	DALI	Housing
Input		SELV	Double	Basic
Output+LEDset	SELV		SELV	Basic
DALI	Double	SELV		Basic
Housing	Basic	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	180	gram	



Logistical data

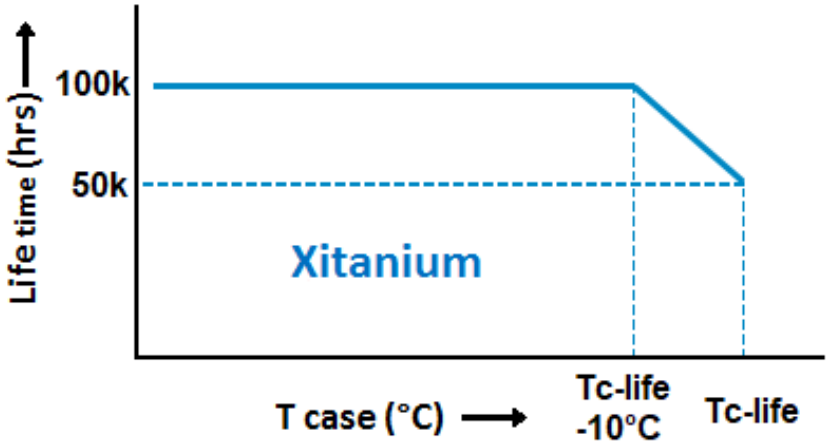
Specification item	Value
Product name	Xitanium 36W 0.3-1A 54V TD 230V
EOC	871869655264300
Logistic code 12NC	9290 015 03606
EAN1 (GTIN)	8718696552643
EAN3 (box)	8718696552650
Pieces per box	24

Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-25…+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	75	°C	Maximum temperature measured at T_{case}-point
Tcase-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

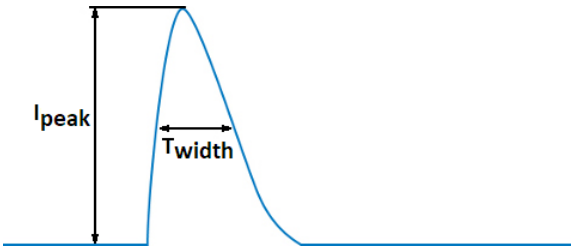
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	LEDset, SimpleSet	300 mA	
Adjustable Light Output (ALO)	Yes	OFF	
Constant Light Output (CLO)	Yes	OFF	
Touch & Dim (TD)	Yes	ON	
Corridor Mode	Yes	ON	Default: T1=55s, T2=12s, T3=30min
Min Dim Level	Yes	1 %	
DC emergency (DCemDim)	Yes	ON	Current output decreased to 15%
OEM Write Protection (OWP)	Yes	OFF	

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
Energy metering (DALI part 252)	Yes		Accuracy 10%
Diagnostics	Yes		

Inrush current

Specification item	Value	Unit	Condition
Inrush current	26	A	Input voltage 230V
Inrush peak width	140	µs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	≤ 36	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

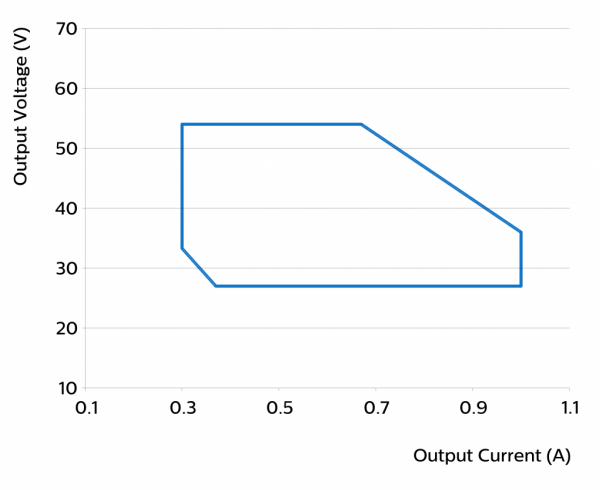
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us
Control surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Control surge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

Application Info

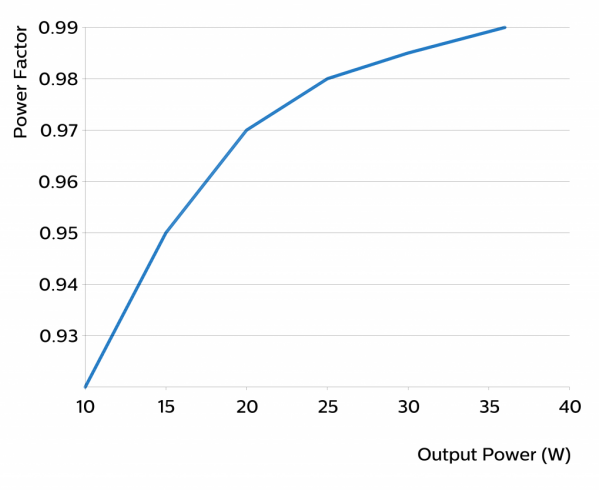
Specification item	Value
Approval marks	BIS / CCC / CE / DALI 2 / EAC / EL / ENEC / F-mark / KC / RCM / SELV / UA
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

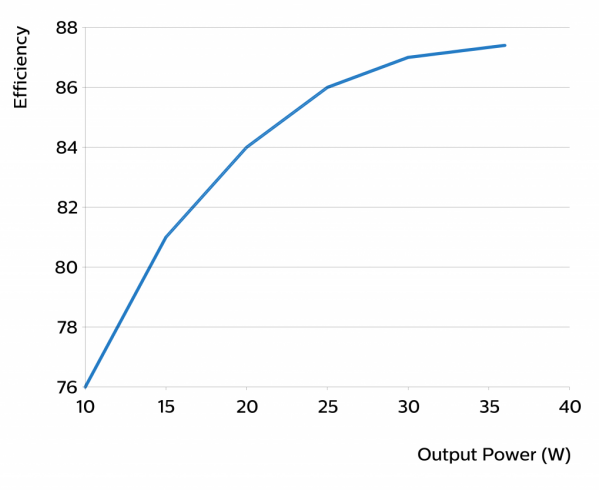
Operating window



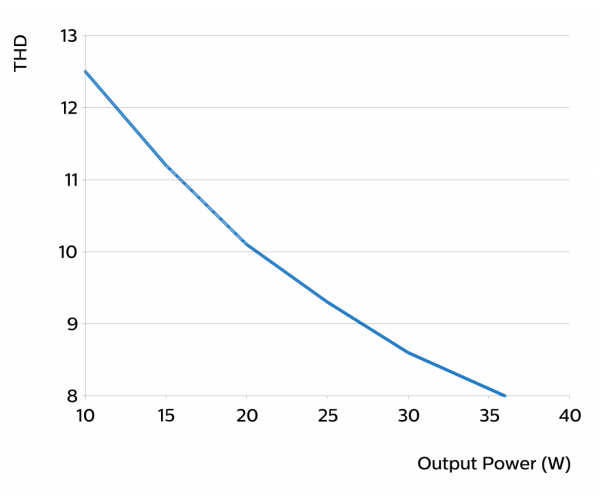
Power factor versus output power



Efficiency versus output power



THD versus output power



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