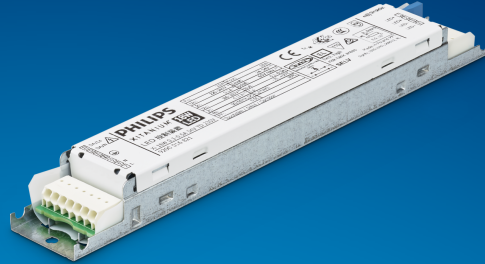


PHILIPS

Xitanium

LED driver



Datasheet

Xitanium isolated Fixed Output (SimpleSet)

Xitanium 18W 0.1-0.5A 54V S 230V

9290 014 87906

Xitanium isolated Fixed Output drivers are ideal for Low Voltage (LV) linear systems.

They offer ease of design-in and make the approbation process easier. The Xitanium range is built on three pillars: quality of light, reliability and flexibility. By using Xitanium LED drivers in your luminaires, you can be sure to offer your customers high quality of light without visual flicker and stroboscopic effects. The reliability of your complete lighting system is enhanced as our drivers offer specific features that protect the connected LED module, including reduced ripple current and thermal de-rating. Finally, application-oriented operating windows offer the flexibility required to provide the stable lumen output and light quality levels that lighting specifiers and architects demand.

Benefits

- High quality of light
- High reliability
- Future-proof flexibility

Features

- High efficiency
- Wide operating windows - output current can be adjusted via SimpleSet (NFC)
- Reduced ripple current for increased reliability
- SELV
- Suitable for Class I luminaires

Application

- Offices
- Retail: supermarkets, shopping malls

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	0.1	A	@ rated output power @ rated input voltage
Rated input power	21	W	@ rated output power @ rated input voltage
Power factor	0.98		@ maximum output power @ rated input voltage
Total harmonic distortion	9	%	@ maximum output power @ rated input voltage
Efficiency	87	%	@ maximum output power @ rated input voltage @ max. lout
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	47.5...63	Hz	Operational range
Input voltage DC range	168...275	V _{dc}	Operational range
Isolation input to output	SELV		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	24...54	V _{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	0.1...0.5	A	
Output current tolerance ±	5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output P _{st} ^{LM}	≤ 0.05		Within performance window
Output SVM	≤ 0.07		Within performance window
Output power	6...18	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 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	
Maximum cable length	2	m	Total length of wiring including LED module, one way

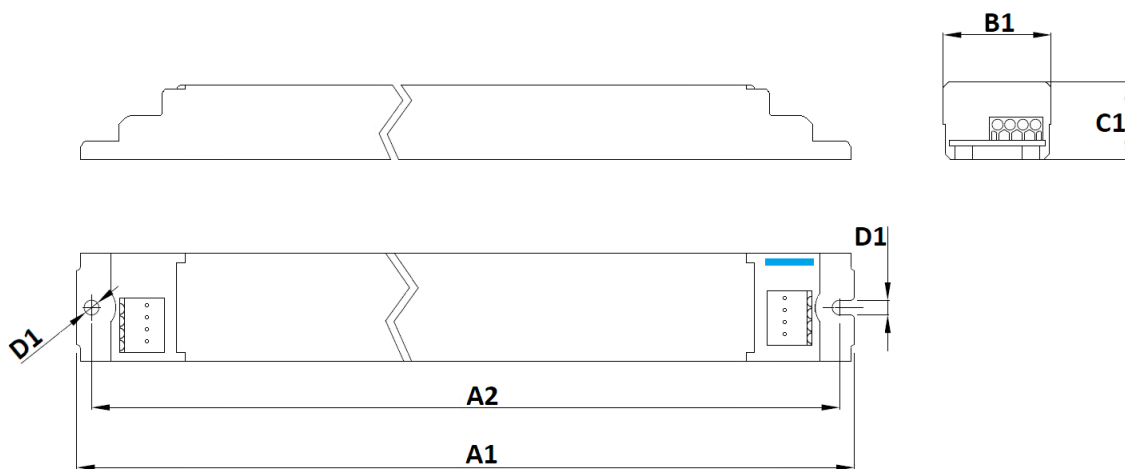


Insulation

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)	210	mm	
Mounting hole distance (A2)	198.4	mm	
Width (B1)	30	mm	
Height (C1)	21	mm	
Mounting hole diameter (D1)	4.1	mm	
Weight	220	gram	



Logistical data

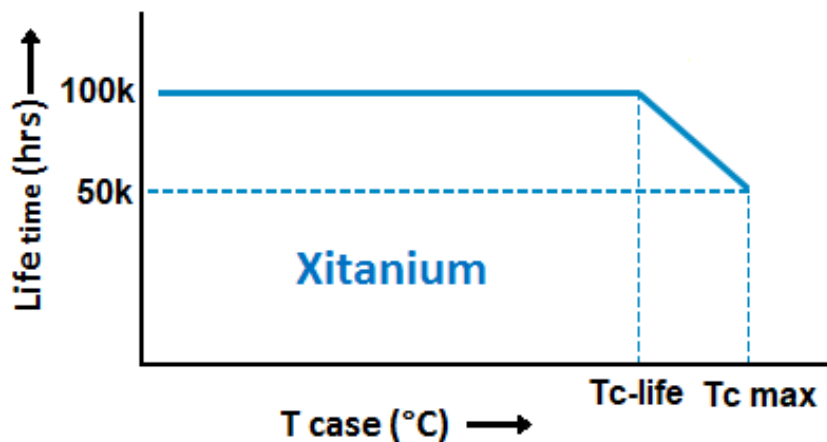
Specification item	Value
Product name	Xitanium 18W 0.1-0.5A 54V S 230V
EOC	871869969838600
Logistic code 12NC	9290 014 87906
EAN1 (GTIN)	8718699698386
EAN3 (box)	8718699698393
Pieces per box	20

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	Life time 50khrs;
Tcase-life	65	°C	Life time 100khrs; measured at T _c -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	100,000	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

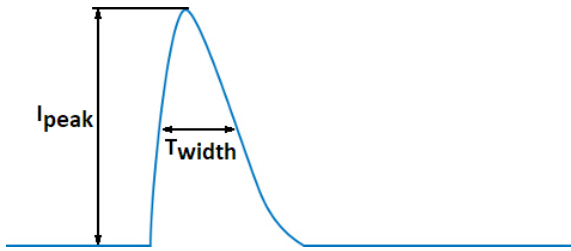
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	SimpleSet	100 mA	
DC emergency (DCemDim)	No		EOFx = 100%
OEM Write Protection (OWP)	Yes	OFF	
Luminaire Info (DALI part 251)	Yes	—	

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)	No		
Diagnostics	No		

Inrush current

Specification item	Value	Unit	Condition
Inrush current	20.4	A	Input voltage 230V
Inrush peak width	195	μs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	≤ 24	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

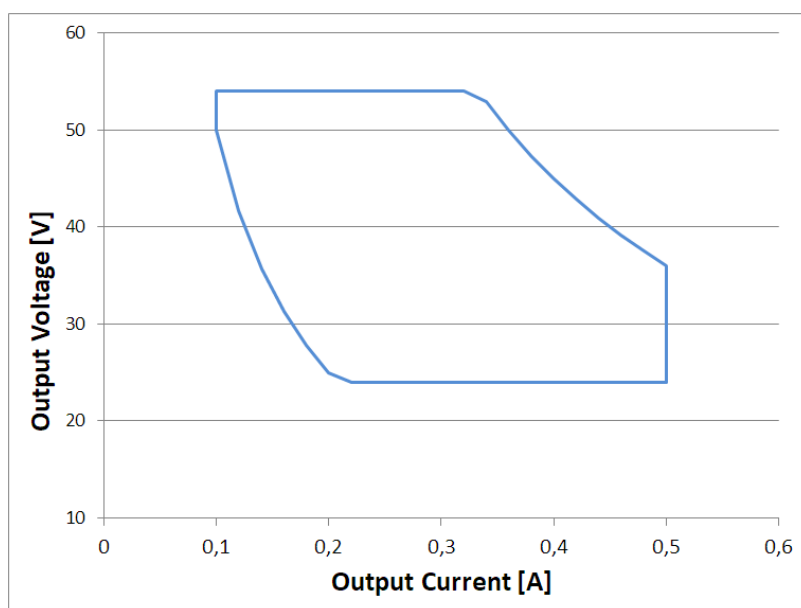
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info

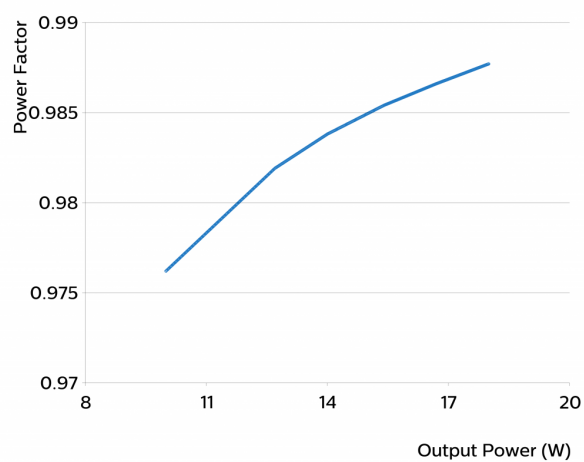
Specification item	Value
Approval marks	CCC / CE / EL / ENEC / RCM / SELV
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

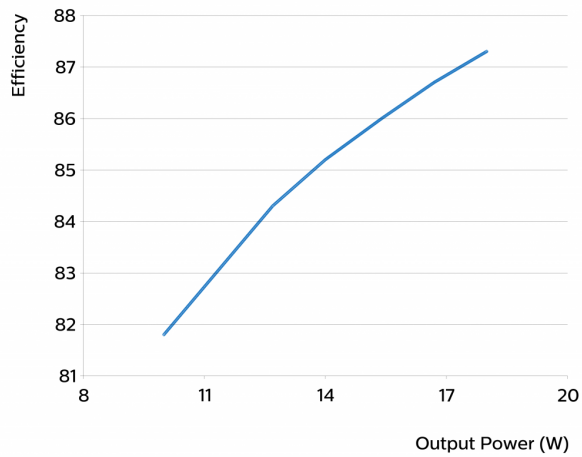
Operating window



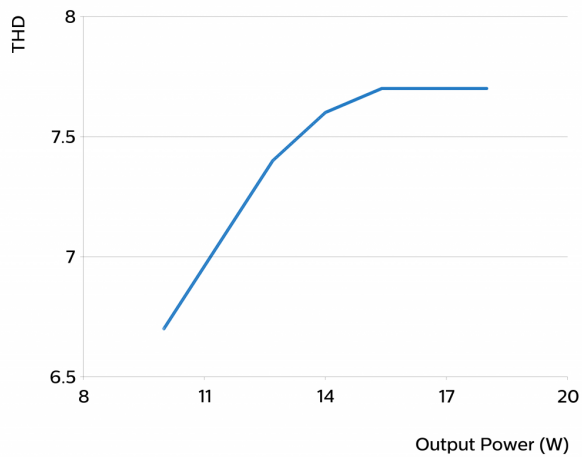
Power factor versus output power



Efficiency versus output power



THD versus output power



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