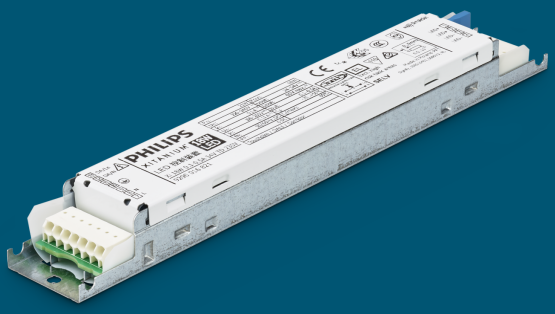
Xitanium

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

Application

- Offices
- Retail: supermarkets, shopping malls

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

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
Weight	220 gram

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	50...60	Hz	Performance range
Rated input current	0.1	A	@ rated output power @ rated input voltage
Rated input power	21.0	W	@ rated output power @ rated input voltage
Power factor performance range	≥ 0.98		@ maximum output power @ rated input voltage@ rated output power @ rated input voltage
Total harmonic distortion	9	%	@ maximum output power @ rated input voltage
Efficiency	87.3	%	@ maximum output power @ rated input voltage @ max. Iout
Rated input voltage DC	186...250	V_{dc}	Performance range
Rated input current DC	≤ 0.12	A_{dc}	Performance range
Input voltage AC	198...264	V_{ac}	Operational range
Input frequency AC	45...66	Hz	Operational range
Input voltage DC	168...275	V_{dc}	Operational range
Isolation input to output	SELV		

Electrical output data

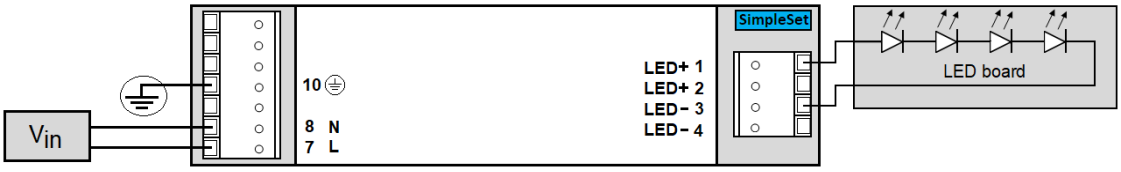
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	24...54	V_{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	100...500	mA	
Output current tolerance ±	5	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output P_{st}^{LM}	≤ 0.3		Within performance window
Output SVM	≤ 0.3		Within performance window
Output power	6.0...18.0	W	

Control interfaces

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	mm² / AWG	WAGO744, solid wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm² / 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

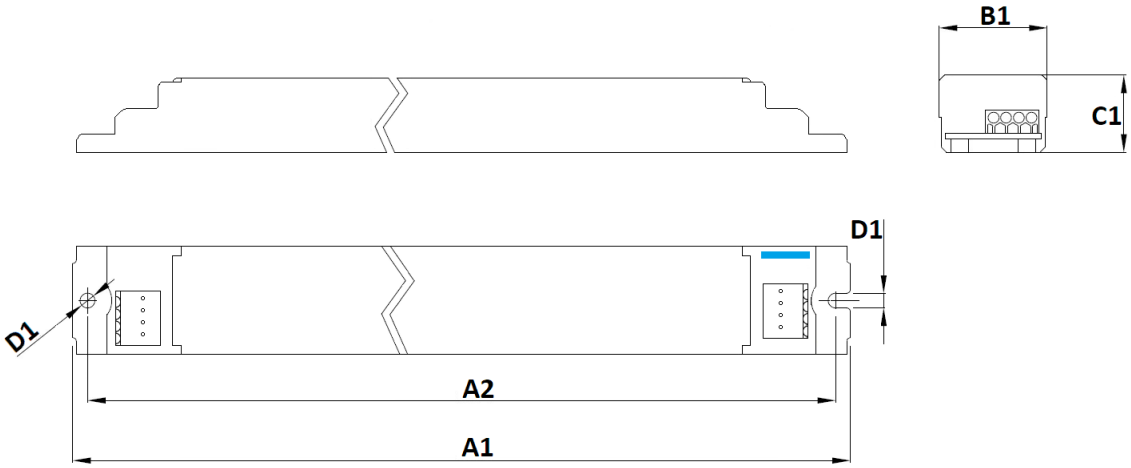


Isolation

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	

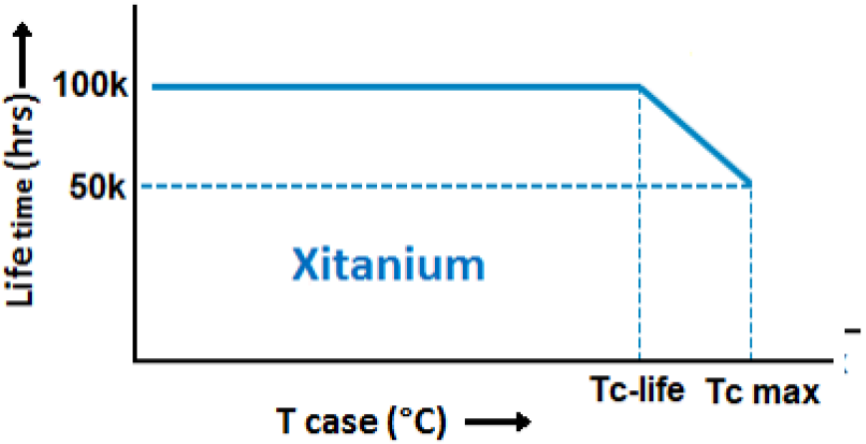


Operational temperatures and humidity

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%



Maximum failures = 10%

Temperature [°C]	Lifetime	Unit	Condition
75	50000	hr	
70	71000	hr	
65	100000	hr	Temperature measured @Tc point
60	>100000	hr	
55	>100000	hr	

Storage temperature and humidity

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

Programmable features

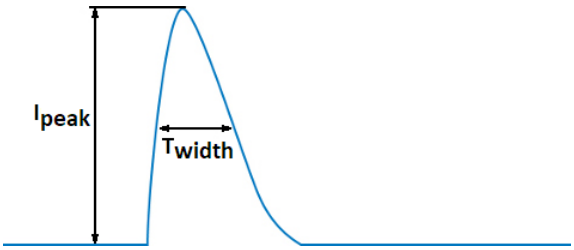
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	SimpleSet	100 mA	
DC emergency (DCemDim)	No		EOFx = 100%
OEM Write Protection (OWP)	Yes	OFF	
Luminaire Info (DALI part 251)	Yes		

Non-programmable 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 via Signify tool	No	

Inrush current

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



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

If several mini circuit breakers are used directly side-by-side (without distance pieces

a correction factor of 80% has to be applied to the rated current

Driver touch current / protective conductor current / earth leakage 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

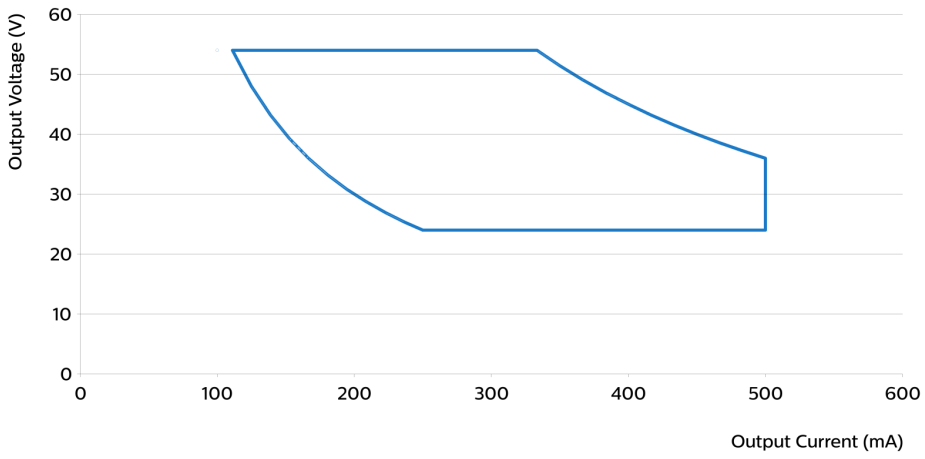
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info (Approbation)

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

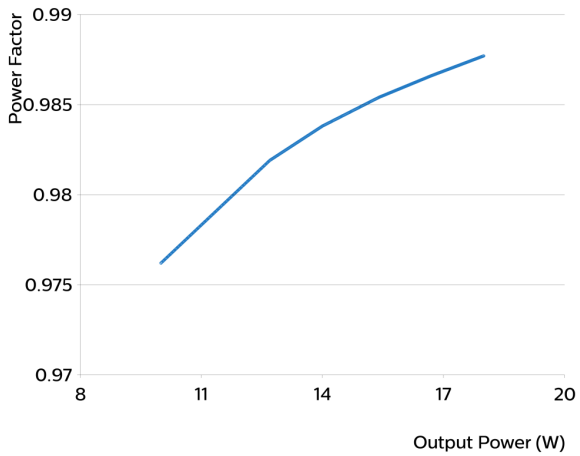
Graphs

Operating window

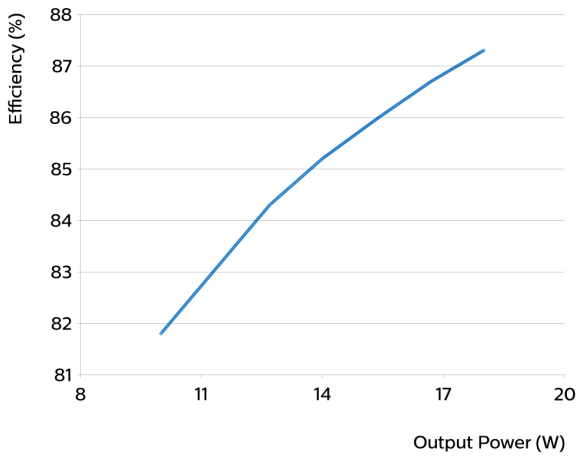


Type	Output current (mA)	Min. output voltage (V)	Max. output voltage (V)	Max. output power (W)
Xitanium 18W 0.1-0.5A 54V S 230V	100	60	54	5.4
Xitanium 18W 0.1-0.5A 54V S 230V	150	40	54	8.1
Xitanium 18W 0.1-0.5A 54V S 230V	200	30	54	10.8
Xitanium 18W 0.1-0.5A 54V S 230V	250	24	54	13.5
Xitanium 18W 0.1-0.5A 54V S 230V	300	24	54	16.2
Xitanium 18W 0.1-0.5A 54V S 230V	350	24	51	18
Xitanium 18W 0.1-0.5A 54V S 230V	400	24	45	18
Xitanium 18W 0.1-0.5A 54V S 230V	450	24	40	18
Xitanium 18W 0.1-0.5A 54V S 230V	500	24	36	18

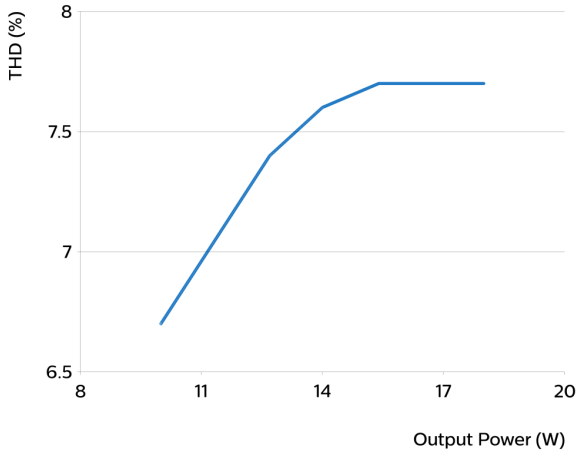
Power factor versus output power



Efficiency versus output power



THD versus output power



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