PHILIPS

Xitanium

LED driver



Datasheet

Xitanium non-iso Fixed Output with LEDset

Xitanium 60W 0.08-0.35A 300V 21 230V

9290 016 94406

Xitanium non-isolated Fixed Output drivers stand 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. 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
- Easy design-in due to standard housing dimensions and excellent thermal performance
- Flexible current setting with LEDset

Features

- High efficiency
- Wide operating windows - output current can be adjusted via LEDset (resistor)
- Low output ripple current

Application

- Offices
- Industry
- Retail: supermarkets, shopping malls

November 2022

Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220…240	V_{ac}	Nominal range
Rated input voltage	230	V_{ac}	
Rated input frequency range	50…60	Hz	Nominal range
Rated input current	0.3	A	@ max output power @ rated input voltage
Rated input power	66	W	@ max output power @ rated input voltage
Minimum Power factor	0.98		@ max output power @ rated input voltage
Total harmonic distortion	11	%	@ max output power @ rated input voltage
Efficiency	93	%	@ max output power @ rated input voltage @ max. Uout
Rated input voltage DC range	186…250	V_{dc}	Nominal 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
Isolation input to output	No		

Electrical output data

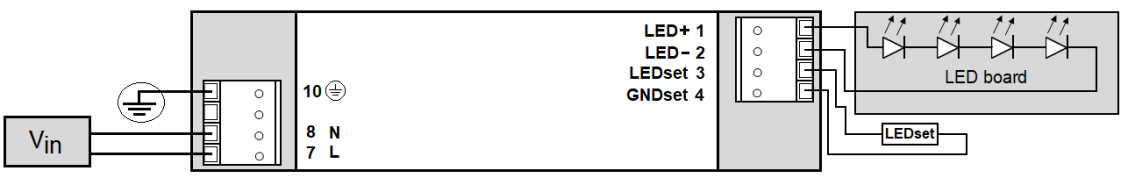
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	100…300	V_{dc}	
Output voltage max.	330	V	Maximum output voltage (rms)
Output current	0.08…0.35	A	Set output current via LEDset
Output current tolerance ±	5	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output P_{st}^{LM}	≤ 0.02		cfr. IEC TR 61547-1:2017
Output SVM	≤ 0.07		cfr. IEC TR 63518:2018
Output power	17…60	W	

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^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	1.5	m	Total length of wiring including LED module, one way. For longer wiring please double check EMI behavior of luminaire.

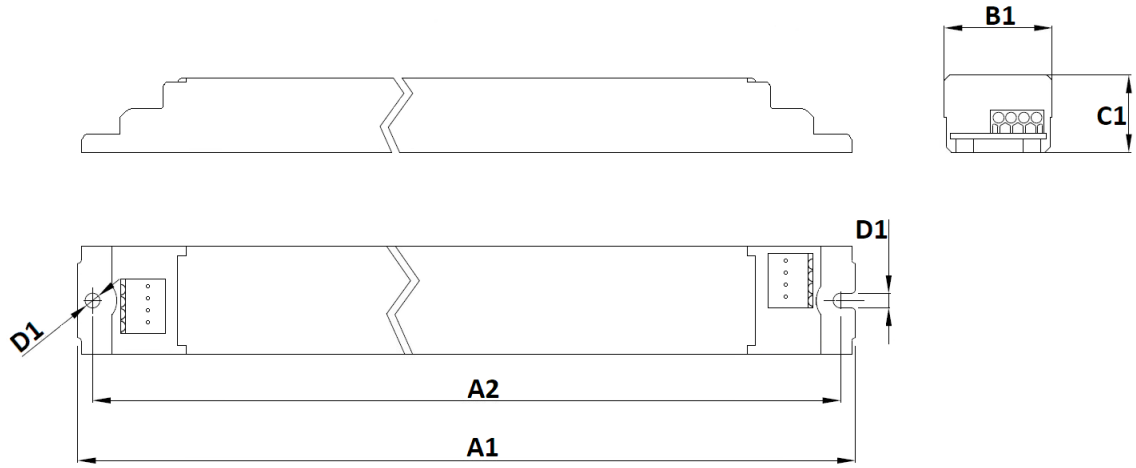


Isolation

Insulation per IEC61347-1	Input	Output+LEDset	Housing
Input	-	No	Basic
Output+LEDset	No	-	Basic
Housing	Basic	Basic	-

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	280	mm	
Mounting hole distance (A2)	270	mm	
Width (B1)	30	mm	
Height (C1)	21	mm	
Mounting hole diameter (D1)	4.1	mm	
Weight	187	gram	



Logistical data

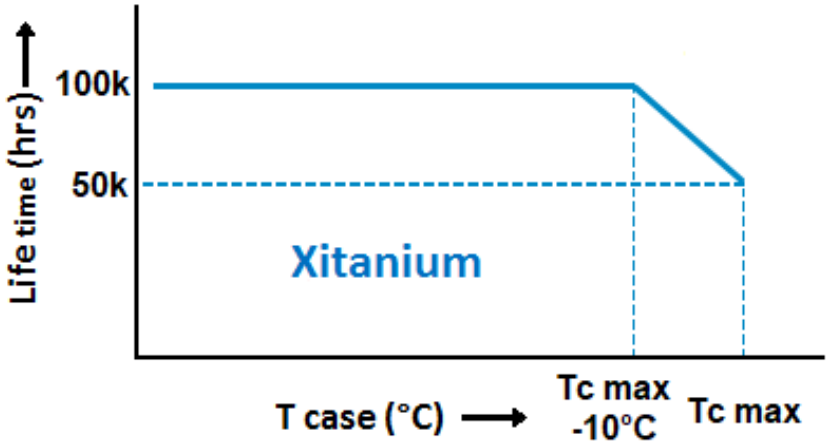
Specification item	Value
Product name	Xitanium 60W 0.08-0.35A 300V 21 230V
EOC	871951425389600
Logistic code 12NC	9290 016 94406
EAN1 (GTIN)	8719514253896
EAN3 (box)	8719514253902
Pieces per box	24

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	lifetime 50khrs;
Tcase-life	65	°C	lifetime 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%
Mains switching cycles	> 100,000	switches	See Design-in guide for detailed explanation



Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-40...+85	°C	
Relative humidity	5...95	%	Non-condensing

Programmable features

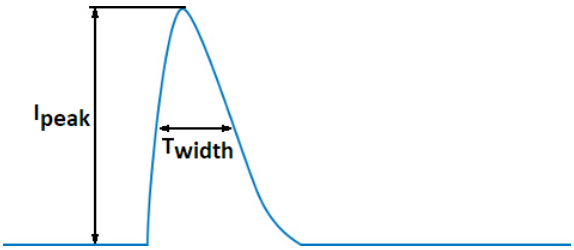
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	LEDset	80 mA	Set the output current via LEDset, do not leave open / short-circuit. See Design-In Guide for resistor value table.
DC emergency (DCemDim)	No		Light output is 100% when operated at DC mains

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

Inrush current

Specification item	Value	Unit	Condition
Inrush current	20	A	Input voltage 230V
Inrush peak width	284	µs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	≤ 23	pcs	Indicative value at 230V



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

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

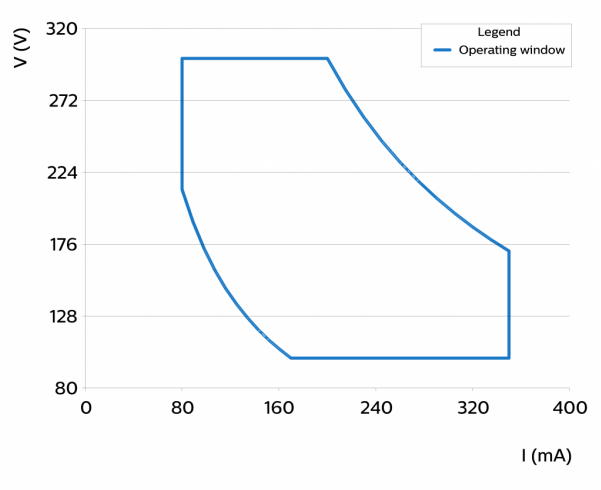
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info

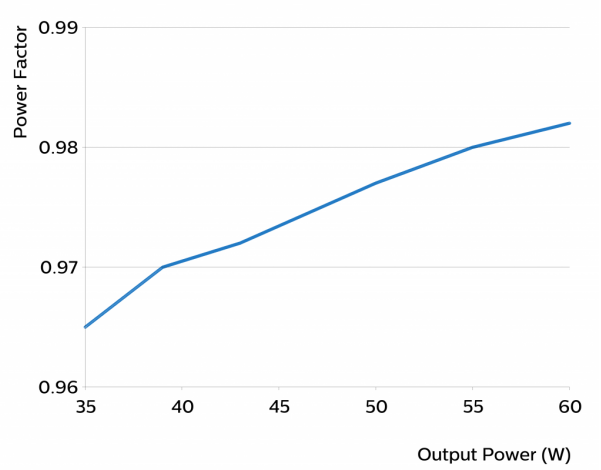
Specification item	Value
Approval marks and Certifications	CCC / CE / EAC / EL / ENEC / RCM / UA / UKCA
Ingress Protection classification (IP)	20
Noise and hum dB(A)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

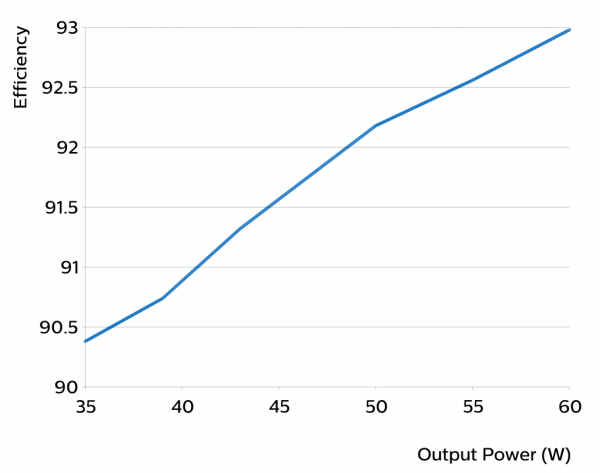
Operating window



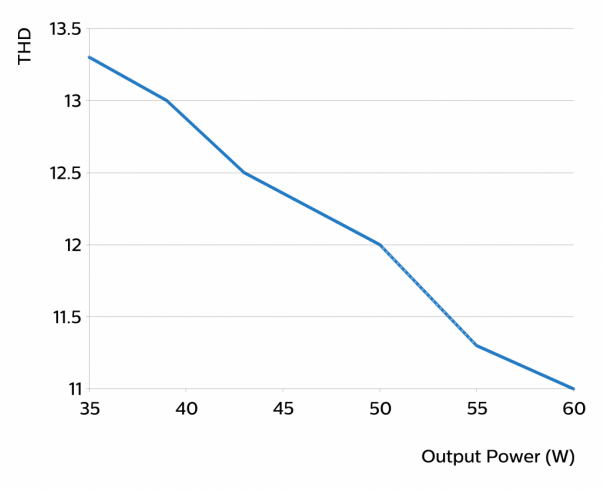
Power factor versus output power



Efficiency versus output power



THD versus output power



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