

Datasheet

Xitanium LED drivers – linear LV isolated

Xitanium 75W 0.7-2A 54V 1-10V 230V

9290 008 63503

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 _{ac}	Performance range
Rated input voltage	230	V _{ac}	
Rated input frequency range	50...60	Hz	Performance range
Rated input current	0.37	A	@ max output power @ rated input voltage
Rated input power	85	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	88	%	@ rated 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

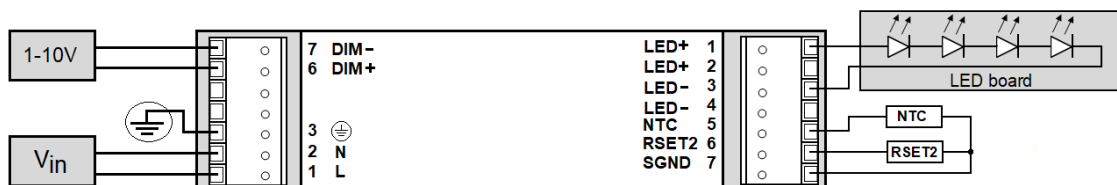
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	27...54	V _{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	0.7...2	A	
Output current tolerance ±	5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output P _{st} ^{LM}	≤ 0.03		Within performance window
Output SVM	≤ 0.08		Within performance window
Output power	21...75	W	

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	1-10V		See design-in guide for more details.
Dimming range	5...100	%	>300mA 1% dimming; < 300mA min. current 14mA
Isolation controls input to output	Basic		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	4	m	Total length of wiring including LED module, one way

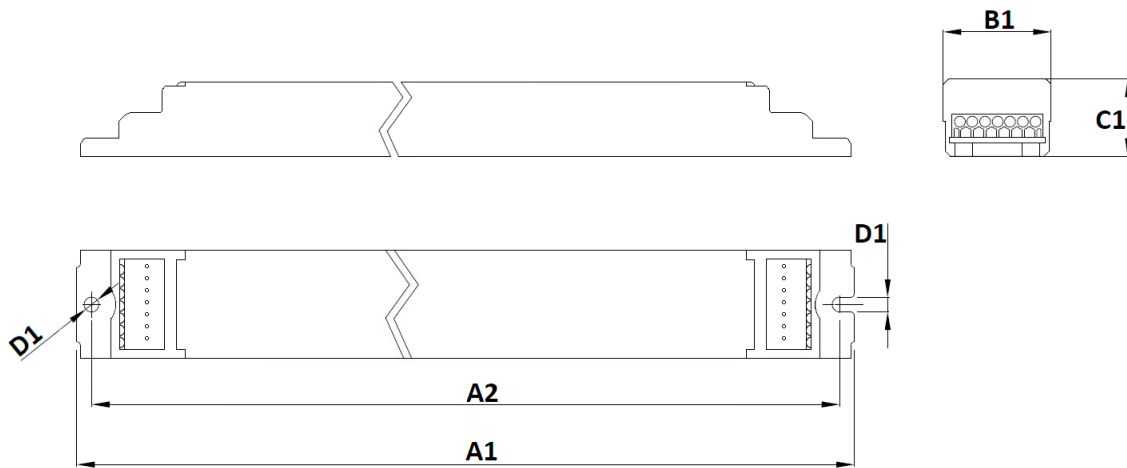


Insulation

Insulation per IEC61347-1	Input	Output+Rset2	1-10V	Housing
Input		SELV	Basic	Basic
Output+Rset2	SELV		Basic	Basic
1-10V	Basic	Basic		Basic
Housing	Basic	Basic	Basic	

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	424	mm	
Mounting hole distance (A2)	415	mm	
Width (B1)	30	mm	
Height (C1)	25.7	mm	
Mounting hole diameter (D1)	4.1	mm	
Weight	379	gram	



Logistical data

Specification item	Value
Product name	Xitanium 75W 0.7-2A 54V 1-10V 230V
EOC	871829169644500
Logistic code 12NC	9290 008 63503
EAN1 (GTIN)	8718291696445
EAN3 (box)	8718291696452
Pieces per box	12

Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	80	°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)	Rset2	700 mA	
LED Module Temperature Protection (MTP)	Yes		
Constant Light Output (CLO)	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		per IEC60598
Energy metering (DALI part 252)	No		
Diagnostics	No		

Inrush current

Specification item	Value	Unit	Condition
Inrush current	19.8	A	Input voltage 230V
Inrush peak width	280	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

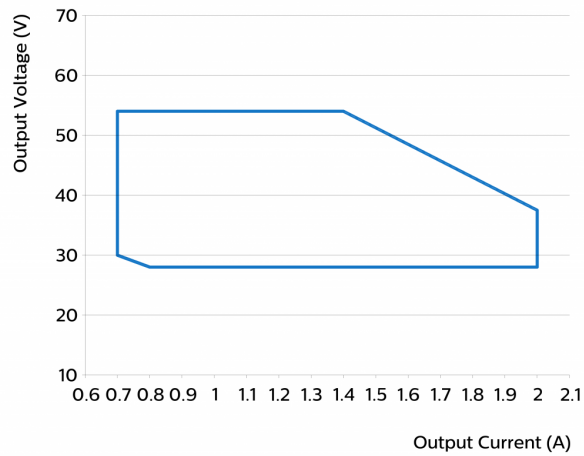
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us
Control surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Control surge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

Application Info

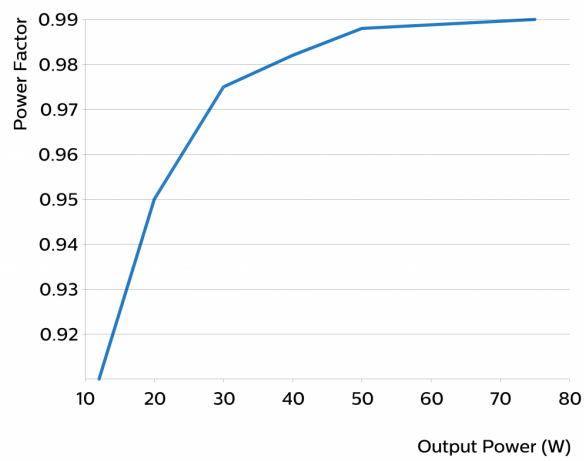
Specification item	Value
Approval marks	CCC / CE / EAC / EL / ENEC / KS / RCM / SELV / TISI
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

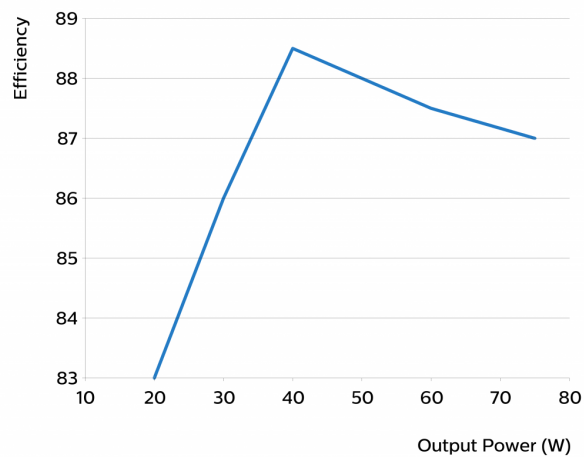
Operating window



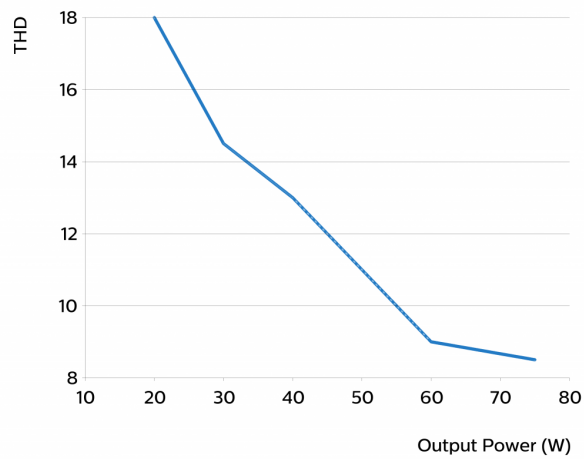
Power factor versus output power



Efficiency versus output power



THD versus output power



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