

Xitanium LED drivers – linear HV non-isolated

Xitanium 75W 0.12A-0.4A 220V 230V

February 13, 2015



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 down lighting and spot/accent lighting.

Reliability is enhanced by specific features that protect the connected LED module, e.g. hot wiring, reduced ripple current and thermal de-rating. 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.

2015 Innovations

Xitanium LED drivers for general lighting applications were first introduced in 2009 and are now being upgraded in 2015. The improved specifications will further strengthen the flexibility and reliability of these LED drivers. These improvements will include:

- **Philips SimpleSet®** new wireless programming technology, which allows luminaire manufacturers to quickly and easily program Xitanium LED drivers at any stage during the manufacturing process, without a connection to mains power, offering great flexibility. As a result you can meet orders faster, while reducing costs and inventory. (From March 2015 onwards)
- **Low ripple output current** to assure camera and scanner friendly performance. (From Jan 2015 onwards)
- **LEDset** addressing the new interface standard for LED modules and LED drivers. (From Jan 2015 onwards)
- **Miniaturization** enabling greater design freedom. Linear LED drivers with 21mm height and where possible drivers with reduced length. Point LED drivers with an identical footprint to the PrimaVision mini drivers for CDM lamps. (From Jan 2015 onwards)
- **Amplitude dimming (AM)** of Touch and DALI LED drivers for flicker free and noise free dimming.

Benefits

- High reliability underpinned by 5 year warranty
- Future-proof flexibility - application-oriented operating windows enable LED generation and complexity management
- Compatibility - adjustable output current enables operation of various LED solutions from different manufacturers or OEMs' own designs
- More robust LED drivers for industry applications

Product features

- Up to 95% efficiency, lowest cost and smallest dimensions
- Operating windows - output current can be adjusted via the Philips MultiOne configurator (TD drivers) or with a resistor outside the driver
- Industry (iXt) driver with longer life time (100khrs), improved surge and burst (4kV) and Tambient (-35°C to +60°C) specifications



PHILIPS

Electrical input data

Specification item	Value	Unit	Condition
Nominal input voltage	220...240	V _{ac}	
Nominal input frequency	50...60	Hz	
Nominal input current	0.35	A	Input voltage 220 V _{ac} , full load
Nominal input power	80	W	Input voltage 220 V _{ac} , full load
Power factor	≥ 0.9		Input voltage 220 V _{ac} , full load
Total harmonic distortion	≤ 20	%	Input voltage 220 V _{ac} , full load
Efficiency	92	%	Input voltage 220 V _{ac} , full load, maximum output power
Nominal input voltage DC	186...250	V _{dc}	
Nominal input current DC	0.37	A	Input voltage 220 V _{dc} , full load
Input voltage AC	202...254	V _{ac}	Performance range
Input frequency AC	47.5...63	Hz	Maximum permissible range
Input voltage DC	168...275	V _{dc}	Maximum permissible range

Electrical output data

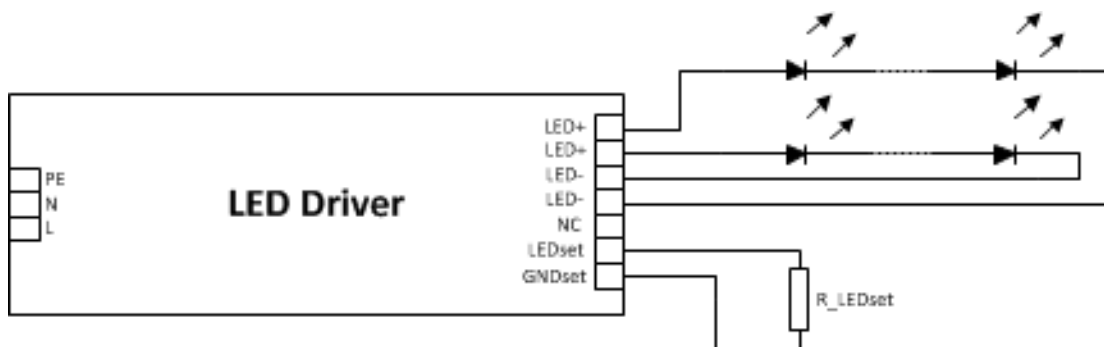
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	100...220	V _{dc}	
Output voltage max.	420	V	Peak voltage at open load
Output current	0.12...0.4	A	Full output current setting
Output current tolerance	± 5	%	
Output current ripple	≤ 4	%	Ripple (100Hz) = peak / average
Output power	21...75	W	Full output
Galvanic isolation	No		Lamp to mains

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		

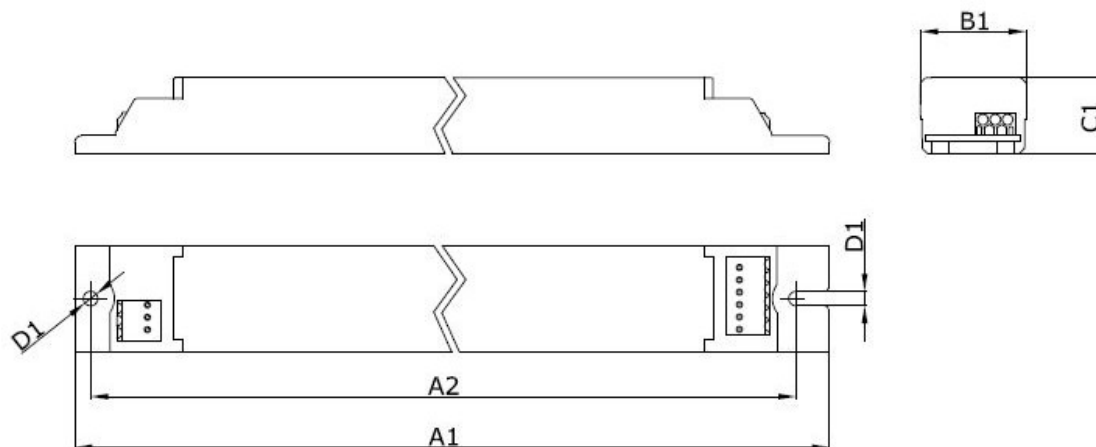
Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.5...1.5	mm ²	WAGO744, solid wire
	16...20	AWG	WAGO744, solid wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5	mm ²	WAGO744, solid wire
	16...20	AWG	WAGO744, solid wire
Output wire strip length	8...9	mm	
Maximum cable length	4000	mm	Total length of wiring including LED module, one way



Dimensions and weight

Specification item	Value	Unit	Condition
Length (A1)	280	mm	
Width (B1)	30	mm	
Height (C1)	21	mm	
Fixing hole diameter (D1)	4.1	mm	
Fixing hole distance (A2)	265	mm	
Weight	185	gram	



Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	
T _{case-max}	75	°C	Maximum temperature measured at T _c -point
T _{case-life}	75	°C	Measured at T _c -point
Maximum housing temperature	110	°C	In case of a failure
Relative humidity	10...90	%	Non-condensing

Storage temperature and humidity

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

Lifetime

Specification item	Value	Unit	Condition
Driver lifetime	50,000	hours	Measured temperature at T _c -point is T _{case-life} . Maximum failures = 10%

Programmable features

Specification item	Value	Remark	Condition
Set output current (AOC)	LEDset	See Design-in guide. Default output current: 0.12 A	
LED module temperature derating (MTP)	No		
Constant Lumen Over Lifetime (CLO)	No		
DC emergency dimming (DCemDIM)	No		
Corridor mode	No		
Energy metering	No		
Diagnostics	No		

Features

Specification item	Value	Remark	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		

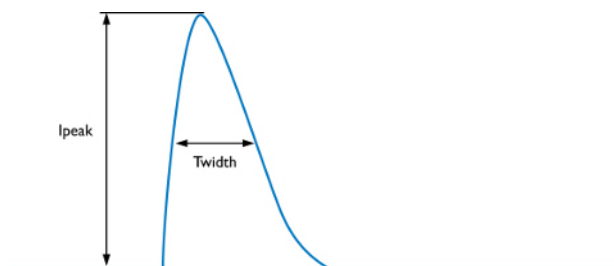
Certificates and standards

Specification item	Value	Unit	Condition
Approval marks	CE / CE / CE / ENEC		
Ingress Protection classification	20		

Additional information

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	19	A	Input voltage 220V
Inrush current T_{width}	280	μs	Input voltage 220V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 24	pcs	



Earth leakage current

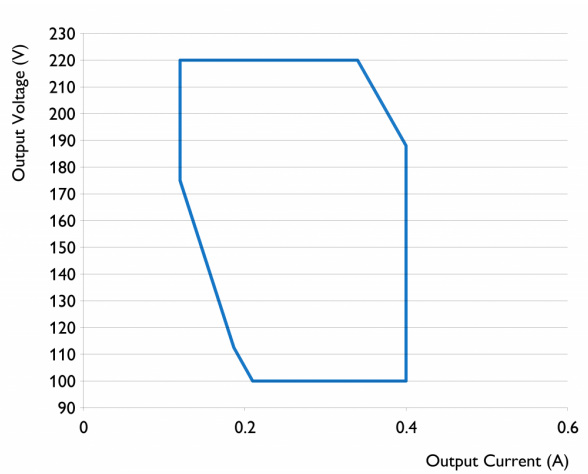
Specification item	Value	Unit	Condition
Earth leakage current	0.3	mA _{pk}	LED module contribution not included

Surge capability

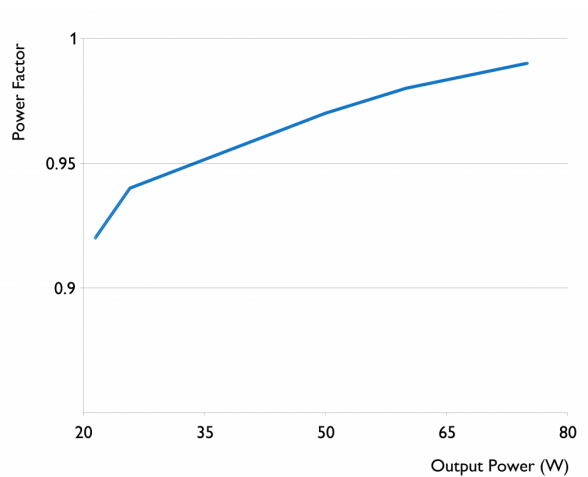
Specification item	Value	Unit	Condition
Mains surge capability (L-N)	1	kV	
Mains surge capability (L/N-Ground)	2	kV	

Graphs

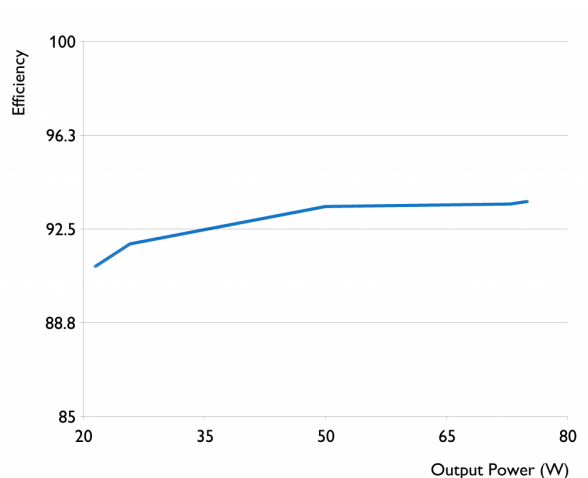
Operating window



Power factor versus output power



Efficiency versus output power



Logistical data

Specification item	Value
Product name	Xitanium 75W 0.12A-0.4A 220V 230V
Order code	871869644002500
Logistic code 12NC	9290 009 50706
EAN3	8718696440032
Pieces per box	24



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www.philips.com/xitanium