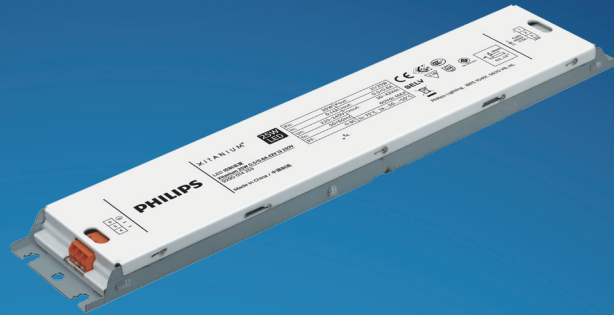


PHILIPS

Xitanium

LED driver



Datasheet

Xitanium LED drivers – linear LV isolated

Xitanium 25W 0.5/0.6A 42V 13 230V

Optimizing Performance

Xitanium LED drivers are designed to operate LED solutions for general lighting applications such as linear lighting in offices, public buildings as well as industrial and retail environments. Xitanium LED drivers with single current output offer industry leading performance and reliability at optimized cost. They are ideal for high volume applications while delivering to specific requirements. These drivers offer the same level of performance as Xitanium adjustable-current linear drivers to ensure high quality of light but, with a specific current setting. In addition, the isolated drivers offer ease of design-in and simpler approbation process.

Xitanium LED drivers are based on Philips experience and knowledge from conventional fluorescent technology. The reliability of the LED solution is further enhanced by specific features that protect the connected LED module, such as reduced ripple current.

Benefits

- High reliability underpinned by 5 year warranty
- Assurance of camera and scanner -friendly performance
- Optimized performance at specific output current setting
- Enable simple approbation process to luminaires

Features

- Low output current tolerance
- Long lifetime 50,000 hours lifetime at Tc max 75°C
- Low ripple output current (4%)
- Dual output currents, easy to use by selecting different output channels

Application

- Offices and industry
- For luminaires of protection Class I

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	0.11/0.13	A	@ full output power @ rated input voltage
Rated input power	25/29	W	@ rated output power @ rated input voltage
Power factor	≥ 0.9		@ full output power @ rated input voltage
Total harmonic distortion	≤ 15	%	@ rated output power @ rated input voltage
Efficiency	85	%	@ rated output power @ rated input voltage
Input voltage AC range	202...254	V _{ac}	Safety operational range
Input frequency AC range	47.5...63	Hz	Safety operational range
Isolation input to output	SELV		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...42	V _{dc}	
Output voltage max.	60	V	Peak voltage at open load
Output current	0.5/0.6	A	Full output current setting
Output current tolerance	± 8	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average
Output power	15...21/18...25	W	Full output

Electrical data controls input

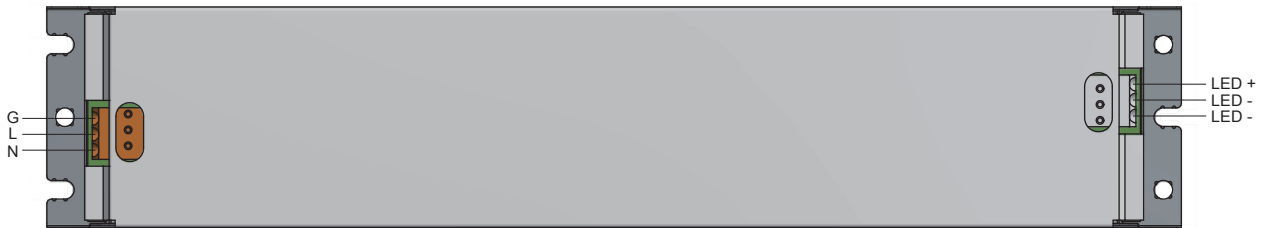
Specification item	Value	Unit	Condition
Control method	Fixed		
Galvanic Isolation	No		

Logistical data

Specification item	Value
Product name	Xitanium 25W 0.5/0.6A 42V 13 230V
Logistic code 12NC	9290 014 25380
Pieces per box	25

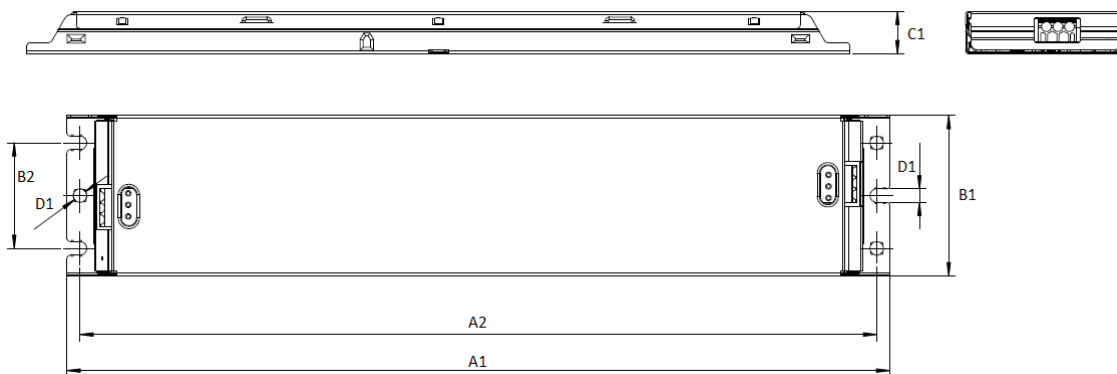
Wiring & Connections

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	600	mm	Total length of wiring including LED module, one way



Dimensions and weight

Specification item	Value	Unit	Condition
Length (A1)	250	mm	
Width (B1)	48.6	mm	
Width (B2)	32	mm	
Height (C1)	13	mm	
Fixing hole distance (D1)	4.1	mm	
Fixing hole distance (A2)	242	mm	
Weight	250	gram	



Operational temperatures and humidity

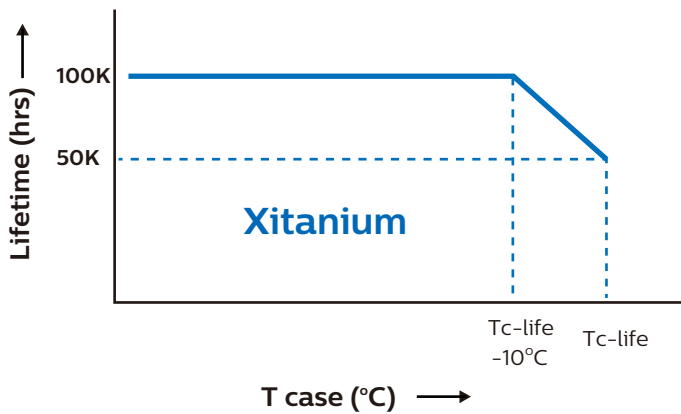
Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as $T_{case-max}$ is not exceeded.
$T_{case-max}$	75	°C	Maximum temperature measured at $T_{case-point}$
$T_{case-life}$	75	°C	Measured at $T_{case-point}$
Maximum housing temperature	110	°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 $T_{case-point}$ is $T_{case-life}$. Maximum failures = 10%



Programmable features

Specification item	Value	Remark	Condition
Set output current (AOC)		See Design-in guide.	Default output current: = 500/600 mA
LED module temperature derating (MTP)	No		
Constant Lumen Over Lifetime (CLO)	No		
DC emergency dimming (DCemDIM)	No		

Features

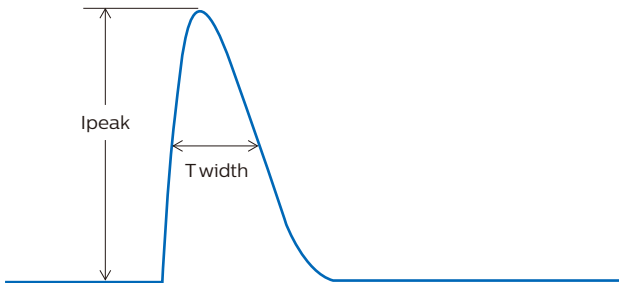
Specification item	Value	Remark	Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	No		
Suitable for fixtures with protection class	I		per IEC60598
Over temperature protection driver	No		Automatic recovering
Overheating protection	No		Automatic recovering

Certificates and standards

Specification item	Value
Approval marks	CB / CCC / CE / ENEC / RCM / KC / KS
Ingress Protection classification	20

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	18	A	Input voltage 230V
Inrush current T_{width}	240	μ s	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	28	pcs	



MCB	Rating	Relative number of LED drivers
B	10A	63%
B	13A	81%
B	16A	100% (stated in datasheet)
B	20A	125%
B	25A	156%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%

Driver touch current / protective conductor current

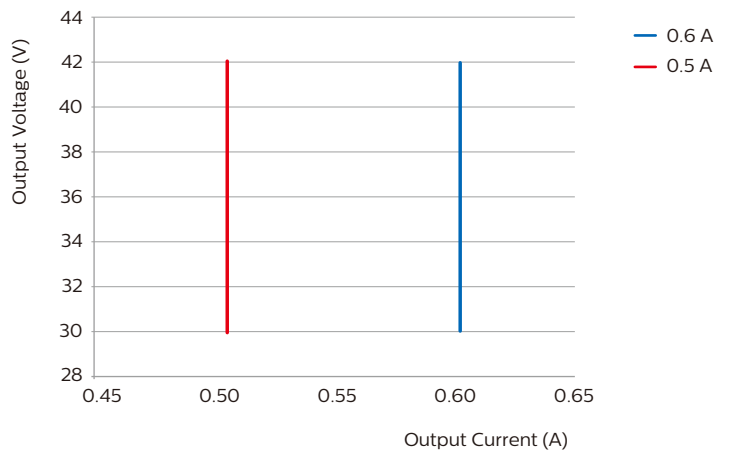
Specification item	Value	Unit	Condition
Typical touch current (ins. Class II)	< 0.7	mA rms	Acc. IEC61347-1. LED module contribution not included

Surge immunity

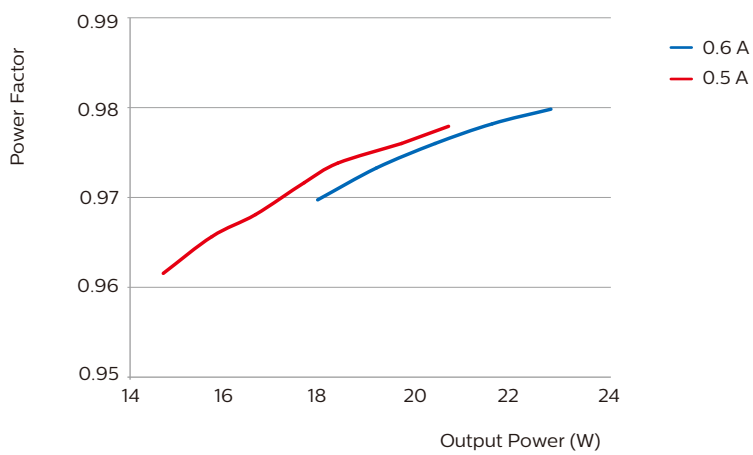
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm 1.2/50us, 8/20us

Graphs

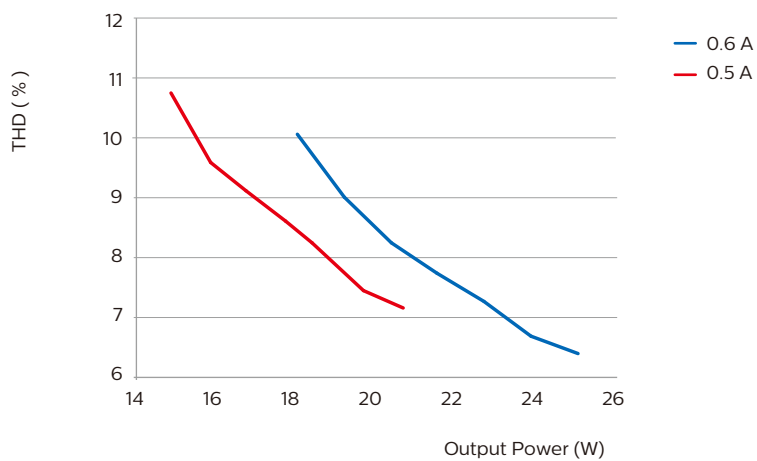
Operating window



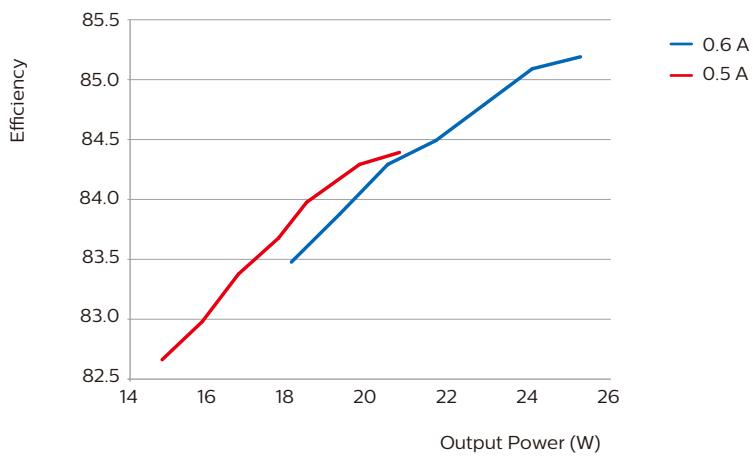
Power factor versus output power



Total Harmonic Distortion



Efficiency versus output power



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