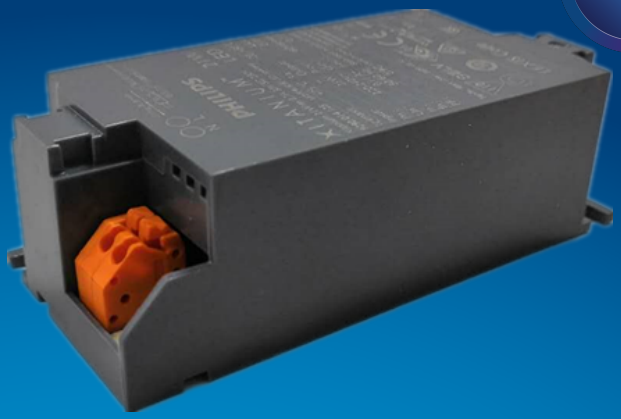
PHILIPS

Xitanium

LED driver



Datasheet

Xitanium Spot / Downlight LED Drivers Single Current

Xitanium 34W/m 0.8A 42V SC 230V

9290 021 05206

Single current LED drivers for enhanced lighting performance

Reliable and cost effective Xitanium single current drivers enable luminaires to deliver high quality light over an industry standard lifetime of 50,000 hours. Specifically designed with low ripple current to address luminaire flickering issues - making this optimal for camera, scanner, and barcode operation. These drivers provide assured reliability, safety, and long-term energy savings.

Benefits

- Designed to operate solutions based on Chip On Board (COB) or mid-power LEDs
- Various power wattage Drivers that are related to the lumen packages/applications
- Independent-version housing design for stand-alone installations

Features

- Small,compact dimensions
- Fixed, SELV output
- Low ripple, low THD
- Specific current and voltage
- Fast Time to Market
- 50,000 hours lifetime

Application

- Public buildings (airports, cinemas,theaters, exhibition halls)
- Retail (supermarkets, shops)
- Office

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	0.18	A	@ rated output power @ rated input voltage
Rated input power	39	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	89	%	@ rated output power @ rated input voltage
Input voltage AC range	198…264	V_{ac}	Safety operational range
Input frequency AC range	47.5…63	Hz	Safety operational range
Standby Power	0.3	W	
Isolation input to output	SELV		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30…42	V_{dc}	-10% operational tolerance on the minimum output voltage
Output voltage max.	60	V	Peak voltage at open load
Output current	0.8	A	
Output current tolerance	± 8	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average
Output current ripple HF	≤ 15	%	
Output power	24…34	W	

Electrical data controls input

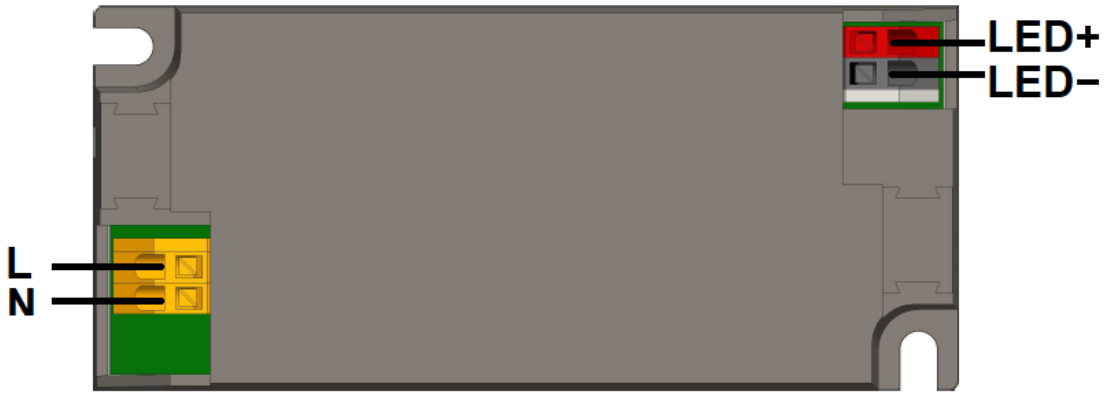
Specification item	Value	Unit	Condition
Control method	Fixed		

Logistical data

Specification item	Value
Product name	Xitanium 34W/m 0.8A 42V SC 230V
Logistic code 12NC	9290 021 05206
Pieces per box	50

Wiring & Connections

Specification item	Value	Unit	Condition
Input wire cross-section	0.5…1.5	mm^2	Type250, solid / stranded wire
	16…20	AWG	Type250, solid / stranded wire
Input wire strip length	8…9	mm	
Input wire cross-section	0.75…1.5	mm^2	Type250 (Independent), solid / stranded wire
	13…20	AWG	Type250 (Independent), solid / stranded wire
Input wire strip length	8…9	mm	
Output wire cross-section	0.5…1.5	mm^2	Type250, solid / stranded wire
	16…20	AWG	Type250, solid / stranded wire
Output wire strip length	8…9	mm	
Output wire cross-section	0.75…1.5	mm^2	Type250 (Independent), solid / stranded wire
	13…20	AWG	Type250 (Independent), solid / stranded wire
Output wire strip length	8…9	mm	
Maximum cable length	600	mm	Total length of wiring including LED module, one way

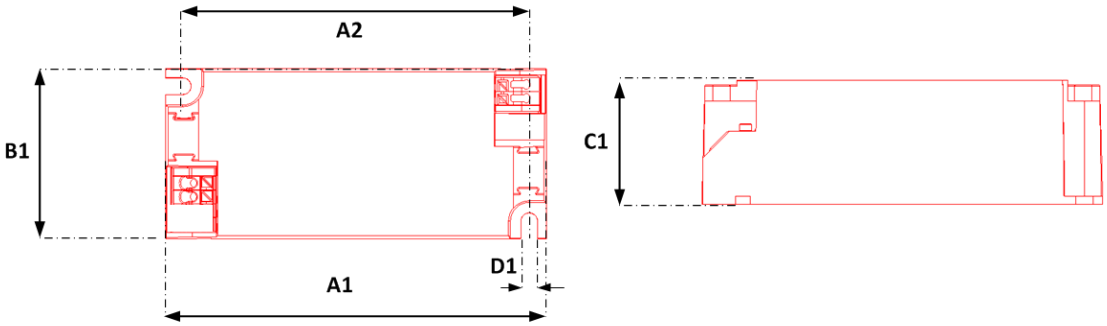


Insulation

Insulation	Input	Output
Input		SELV
Output	SELV	

Dimensions and weight

Specification item	Value	Unit	Condition
Length (A1)	97.2	mm	
Width (B1)	43	mm	
Height (C1)	30	mm	
Fixing hole diameter (D1)	4.2	mm	
Fixing hole distance (A2)	88.5	mm	
Weight	80	gram	

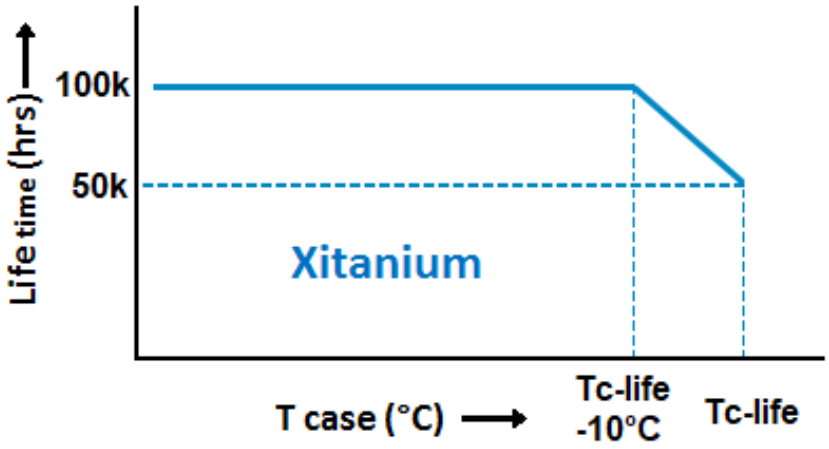


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20…+45	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	75	°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
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	Value	Remark	Condition
Set Adjustable Output Current (AOC)	No	See Design-in guide.	Default output current: = 800 mA
LED Module Temperature Protection (MTP)	No		
Constant Lumen Over Lifetime (CLO)	No		
DC emergency Dimming (DCemDim)	No		
Corridor mode	No		
Energy metering	No		
Diagnostics	No		
Adjustable Light Output (ALO)	No		

Features

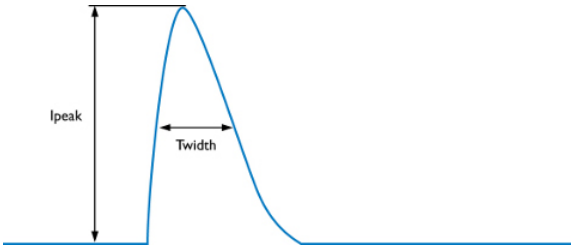
Specification item	Value	Remark	Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	No		
Suitable for fixtures with protection class	I and II		per IEC60598

Certificates and standards

Specification item	Value
Approval marks	C-tick / CCC / CE / ENEC
Ingress Protection classification (IP)	20

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	11	A	Input voltage 230V
Inrush current T_{width}	250	µs	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 49	pcs	Indicative value



MCB	Rating	Relative number of LED drivers
B	4A	25%
B	6A	40%
B	10A	63%
B	13A	81%
B	16A	100% (stated in datasheet)
B	20A	125%
B	25A	156%
B	32A	200%
B	40A	250%
C	4A	42%
C	6A	63%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%
C	32A	340%
C	40A	415%

Driver touch current / protective conductor current

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

Surge immunity

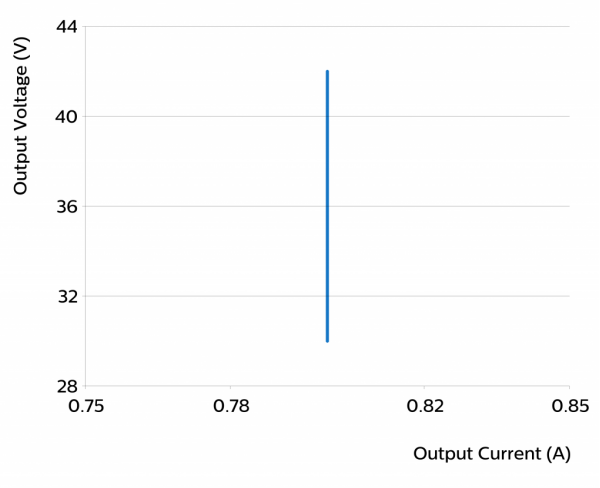
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Factory default settings

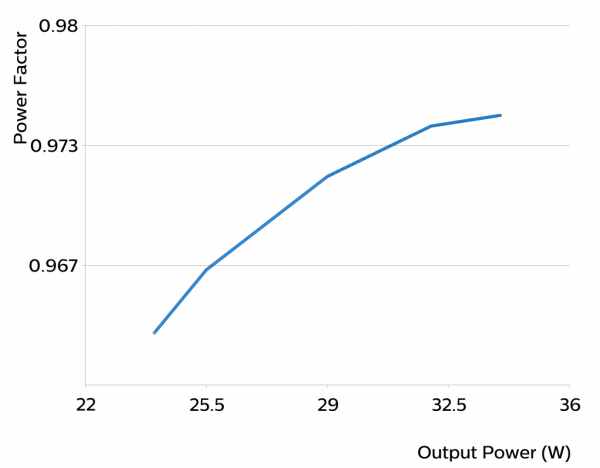
Specification item	Default setting	Remark	Condition
AOC	800	mA	

Graphs

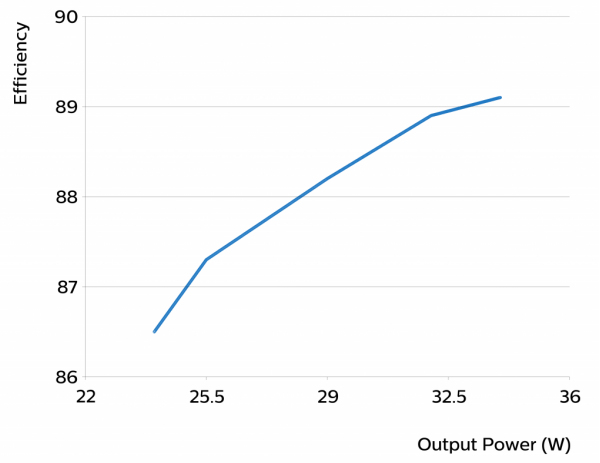
Operating window



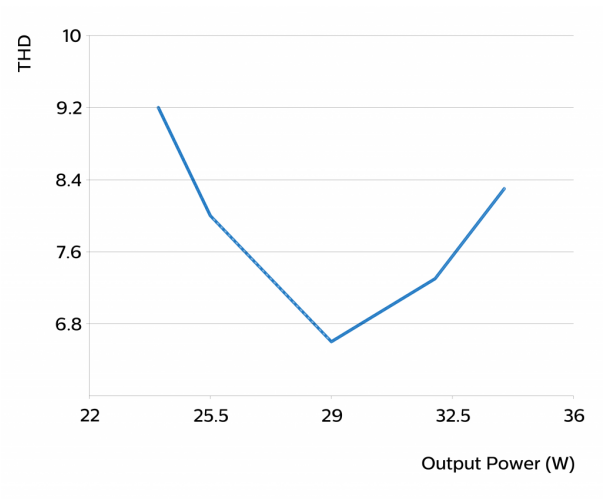
Power factor versus output power



Efficiency versus output power



THD versus output power



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