Xitanium

Datasheet

Xitanium Spot / Downlight LED Drivers Single Current

Xitanium 23W/m 0.5A 46V SC 230V
9290 021 04906

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

Logistical data

Specification item	Value
Product name	Xitanium 23W/m 0.5A 46V SC 230V
EOC	871869970219900
Logistic code 12NC	9290 021 04906
EAN1 (GTIN)	8718699702199
EAN3 (box)	8718699702205
Pieces per box	50
Strain Relief 12NCccc	929001461680 / For China use: 929001461880
Weight	64 gram

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	50...60	Hz	Performance range
Rated input current	0.12	A	@ rated output power @ rated input voltage
Rated input power	27.0	W	@ rated output power @ rated input voltage
Power factor performance range	≥ 0.90 C		@ rated output power @ rated input voltage@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	87.8	%	@ rated output power @ rated input voltage
Input voltage AC	198...264	V_{ac}	Safety operational range
Input frequency AC	45...66	Hz	Safety operational range
Isolation input to output	SELV		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	31...46	V_{dc}	-10% operational tolerance on the minimum output voltage
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	500	mA	
Output current tolerance ±	8	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output P_{st}^{LM}	≤ 0.1		
Output SVM	≤ 0.3		
Output power	15.5...23.0	W	

Control interfaces

Specification item	Value	Unit	Condition
Control method	Fixed		

Wiring and Connections

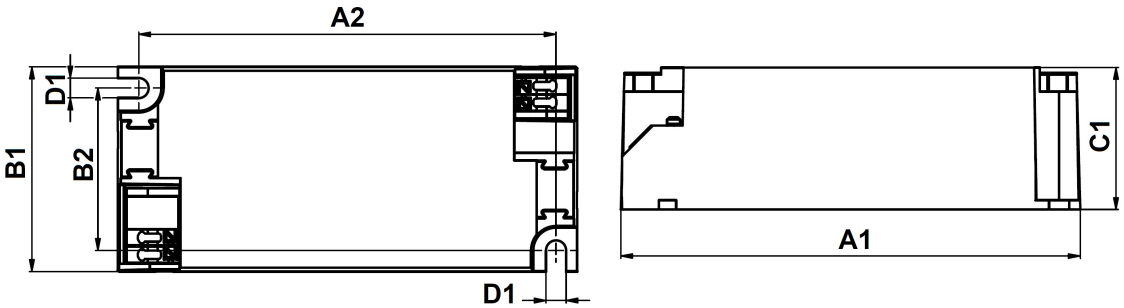
Specification item	Value	Unit	Type
Input wire cross-section	0.75...1.5 / 18...16	mm² / AWG	solid / stranded wire
Input wire strip length	8.5...9.5	mm	
Input wire cross-section	0.5...1.5 / 20...16	mm² / AWG	solid / stranded wire
Input wire strip length	8.5...9.5	mm	
Output wire cross-section	0.75...1.5 / 18...16	mm² / AWG	solid / stranded wire
Output wire strip length	8.5...9.5	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm² / AWG	solid / stranded wire
Output wire strip length	8.5...9.5	mm	
Maximum cable length	0.6	m	Total length of wiring including LED module, one way

Isolation

Insulation per IEC61347-1	Input	Output
Input	-	SELV
Output	SELV	-

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	97.2	mm	
Mounting hole distance (A2)	88.5	mm	
Width (B1)	43	mm	
Width (B2)	34	mm	
Height (C1)	30	mm	
Mounting hole diameter (D1)	4.2	mm	
Weight	64	gram	

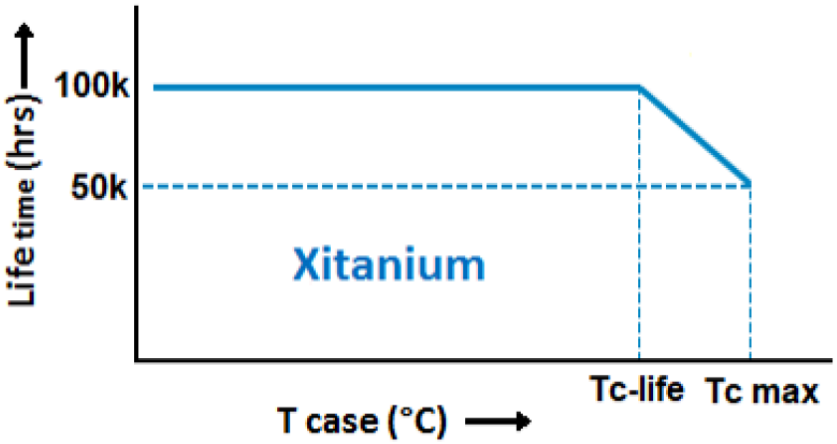


Operational temperatures and humidity

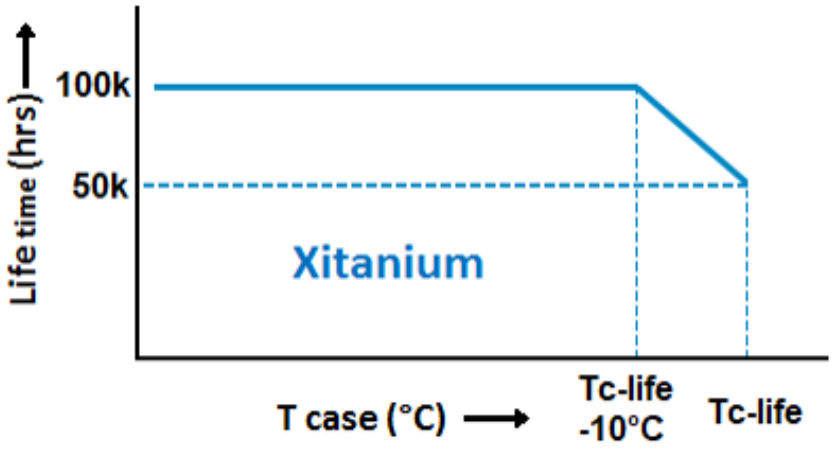
Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	75	°C	Maximum temperature measured at T_{case}-point
Tcase-life	75	°C	Measured at T_{case}-point
Maximum housing temperature	110	°C	In case of a failure, 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%



Maximum failures = 10%



Maximum failures = 10%

Temperature [°C]	Lifetime	Unit	Condition
75	50000	hr	Temperature measured @Tc point
70	>50000	hr	
65	>50000	hr	

Storage temperature and humidity

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

Programmable features

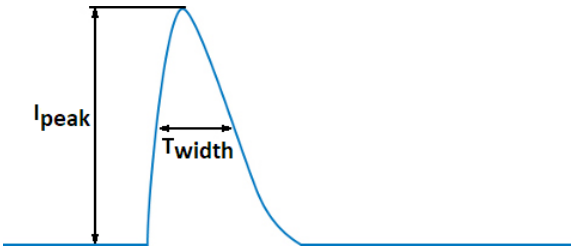
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	No	500 mA	Fixed output current
Adjustable Light Output (ALO)	No		
DC emergency (DCemDim)	No		

Non-programmable 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 and II	per IEC60598

Inrush current

Specification item	Value	Unit	Condition
Inrush current	9.92	A	Input voltage 230V
Inrush peak width	230	µs	Input voltage 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 65	pcs	Input voltage 230V



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

If several mini circuit breakers are used directly side-by-side (without distance pieces

a correction factor of 80% has to be applied to the rated current

Driver touch current / protective conductor current / earth leakage 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

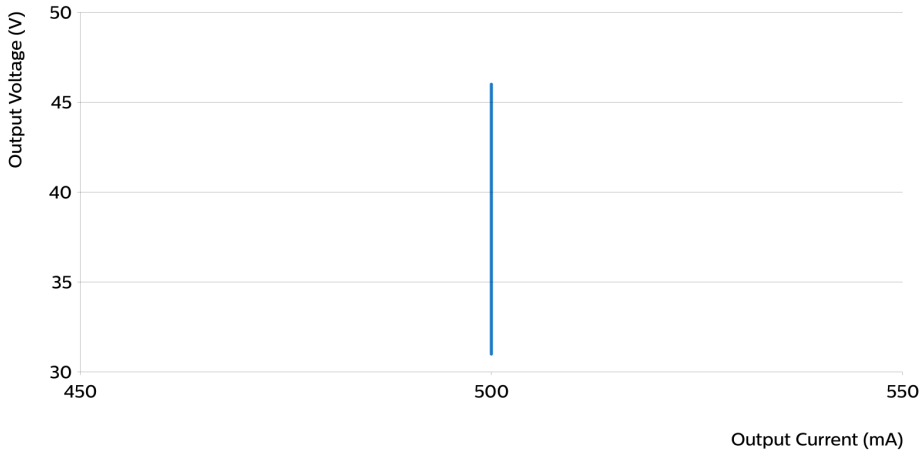
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info (Approbation)

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

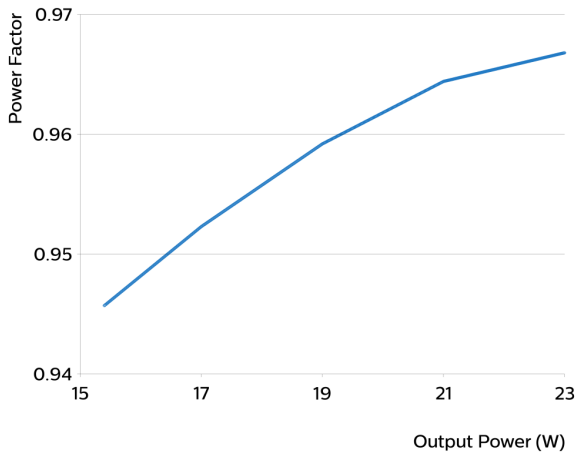
Graphs

Operating window

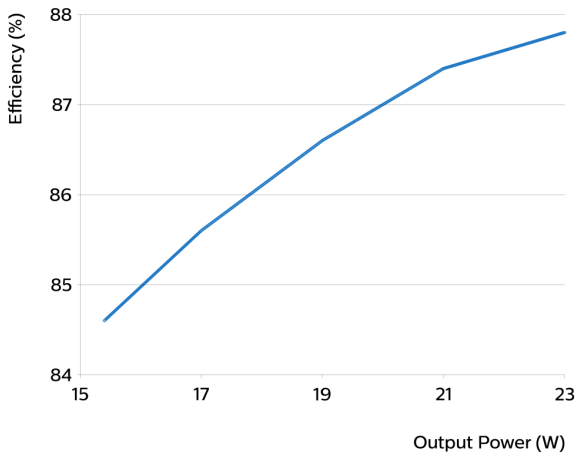


Type	Output current (mA)	Min. output voltage (V)	Max. output voltage (V)	Max. output power (W)
Xitanium 23W/m 0.5A 46V SC 230V	500	31	46	23
Xitanium 23W/m 0.5A 46V SC 230V	500	31	46	23

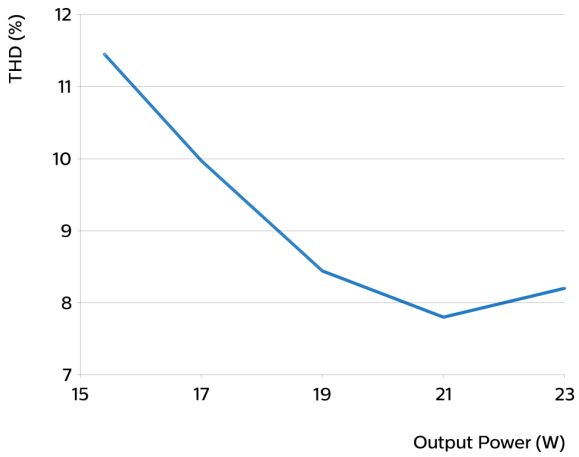
Power factor versus output power



Efficiency versus output power



THD versus output power



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