PHILIPS

Xitanium

LED driver

Datasheet

Xitanium High Bay LED Drivers GL Independent

Xi 150W 0.52-0.84A 100-277V RI132S

9290 028 45280

LED-based light sources are an excellent solution for highbay industrial applications.

They are long-lasting and require low maintenance. However, to get the best out of the LEDs, these light sources require highly reliable and efficient LED Drivers. Philips Xitanium LED Outdoor Drivers are specifically designed to deliver reliable performance and protection while meeting the strict approbation and application requirements.

Benefits

- Able to reliably operate anywhere around the world
- Reliable and robust design, capable of withstanding the harsh industrial operating conditions
- Wide flexibility by adjusting light output and output current
- Extremely long lifetime, fitting with high bay industrial applications
- Peace of mind. Backed by a 5-year warranty from a company you can trust

Features

- 100-277V (Global) versions
- Independent/IP65 rated
- Adjustable output current
- High ambient temperature rating
- Approbations: CE, ENEC, CB, CCC, UL
- 50,000 hours lifetime

Application

- Highbay industrial lighting
- Warehouse lighting
- Big-box retail store lighting

Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	100...277	V_{ac}	Performance range
Rated input voltage	230	V_{ac}	
Rated input frequency range	50...60	Hz	Performance range
Rated input current	0.69	A	@ rated output power @ rated input voltage
Rated input power	158	W	@ rated output power @ rated input voltage
Power factor	0.95		@ rated output power @ rated input voltage
Total harmonic distortion	10	%	@ rated output power @ rated input voltage
Efficiency	95	%	@ rated output power @ rated input voltage
Input voltage AC range	85...305	V_{ac}	Operational range
Input frequency AC range	47.5...63	Hz	Operational range

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	160...260	V_{dc}	
Output voltage max.	300	V	Maximum output voltage (rms)
Output current	0.52...0.84	A	
Output current tolerance	± 5	%	
Output current ripple LF	≤ 5	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 5	%	
Output power	105...150	W	

Wiring and Connections

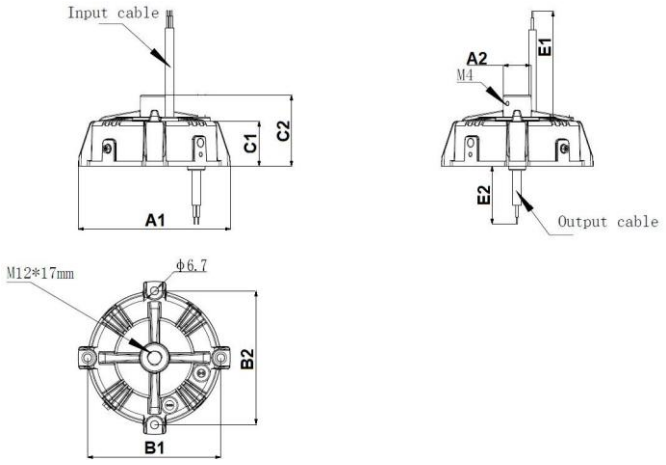
Specification item	Value	Unit	Type
Input wire cross-section	1.04 / 17	mm^2 / AWG	3-wire cable, AWG17
Output wire cross-section	1.04 / 17	mm^2 / AWG	2-wire cable, AWG17
Maximum cable length	2	m	Total length of wiring including LED module, one way

Insulation

Insulation per IEC61347-1	Mains	Output	Ground
Mains		Non	Basic
Output	Non		Basic
Ground	Basic	Basic	

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	129	mm	
Mounting hole distance (A2)	24	mm	
Width (B1)	113	mm	
Width (B2)	113	mm	
Height (C1)	38	mm	
Height (C2)	60	mm	
Input cable length (E1)	300	mm	
Output cable length (E2)	300	mm	
Weight	840	gram	



Logistical data

Specification item	Value
Product name	Xi 150W 0.52-0.84A 100-277V RI132S
Logistic code 12NC	9290 028 45280
Pieces per box	10

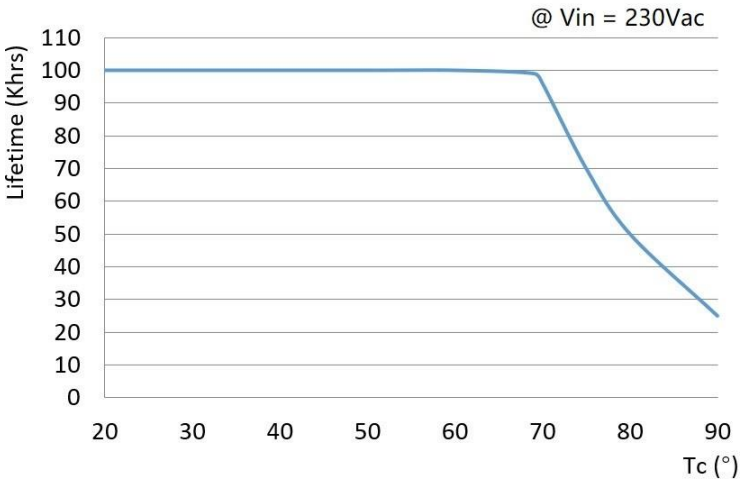
Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-40...+60	ºC	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	80	ºC	Maximum temperature measured at T_{case}-point
Tcase-life	70	ºC	Measured at T_{case}-point
Maximum housing temperature	110	ºC	In case of a failure, inherent by design
Relative humidity	10...90	%	Non-condensing

* Note: Tc max = 75°C, Tc life = 65°C @Vin<120Vac

Lifetime

Specification item	Value	Unit	Condition
Driver lifetime	50,000	hours	Measured temperature at Tcase-point is Tcase-max. Maximum failures = 10%



Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-40...+85	ºC	
Relative humidity	5...95	%	Non-condensing

Programmable features

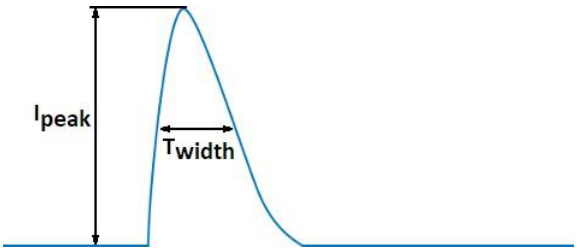
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)		577 mA	

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
Overtemperature protection	Yes		Automatic recovering

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	55	A	Input voltage 230V
Inrush current T_{width}	214	µs	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 9	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 Protective Conductor Current (ins. Class I)	2	mA rms	Acc. IEC60598-1. LED module contribution not included

Surge immunity

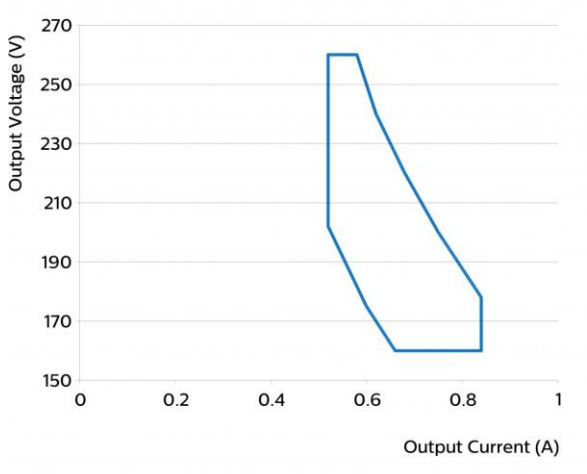
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	6	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	6	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info

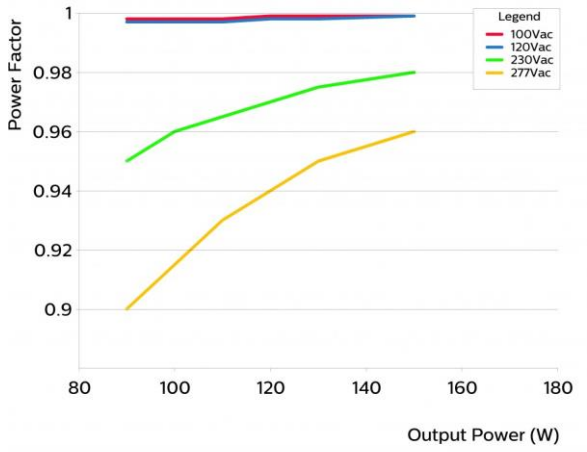
Specification item	Value
Approval marks	CB / CCC / CE / ENEC / RCM / RU
Ingress Protection classification (IP)	65

Graphs

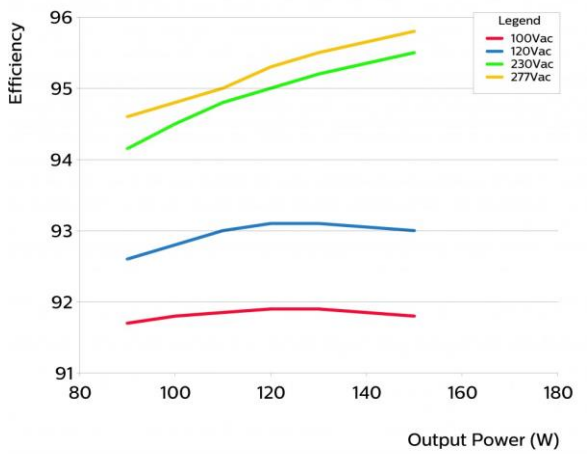
Operating window



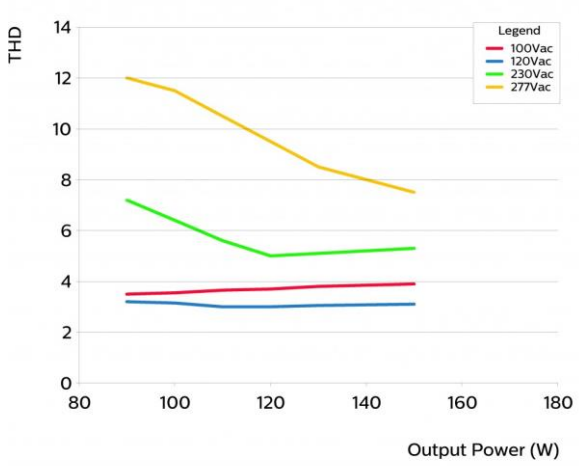
Power factor versus output power



Efficiency versus output power



THD versus output power



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Date of release: July 15, 2020 v1

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