

PHILIPS

Xitanium LED driver

Connected by
WiZ Pro



Datasheet

Xitanium LED drivers – WiZ Pro

Xitanium 44W 0.7-1.05A 42V WiZ TW 230V

9290 028 90106

Enabling connected lighting for welcoming spaces

WiZ wireless LED drivers are designed to operate LED solutions for general lighting applications. They enable simple, cost effective wireless lighting system for energy saving and comfort. Advanced design of the wireless drivers helps to build a reliable, scalable and standardized connected lighting with different functionalities from simple wireless dimming to cloud based operations.

These drivers can be configured via WiZ app on a Wi-Fi network or via WiZ Pro Setup app in a Bluetooth mesh network. Flexibility in luminaire design is assured according to the Adjustable Output Current (AOC) features by dip switch. The adjustable output current also enables operation of various LED PCB solutions from different manufacturers.

Benefits

- Easy wireless dimming and scheduling for energy saving and convenience
- Connecting to Wi-Fi for cloud-based control and remote access. No gateway needed
- Future-proof flexibility, support OTA (Over-The-Air) firmware update
- Large array of integrations to work with major home assistant systems
- High reliability underpinned by 5-year warranty

Features

- Wi-Fi + Bluetooth protocols will be upgraded to Wi-Fi + Bluetooth mesh protocols to support multiple networking options in the future
- Include WiZ Pro software suite:
 - WiZ Pro Dashboard for building managers to perform advanced settings, get actionable usage insights for predictive maintenance and energy optimization
 - WiZ app for end users to control and automate with ease
 - WiZ Pro Setup for installers to conduct effortless commissioning and non-connected installations, upon market
- Wide range of power ratings
- WiZ Pro software to install: pro.wizconnected.com
WiZ Pro software to install for China: pro.wizconnected.cn

Application

- Residential
- Hospitality
- Restaurant
- Retail
- School
- Leisure places

Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220...240	V _{ac}	Performance range
Rated input voltage range	198...264	V _{ac}	Operational safety range
Rated input voltage	230	V _{ac}	
Rated input frequency range	50...60	Hz	Performance range
Rated input current	0.23	A	@ full output power @ rated input voltage
Max. input current	0.25	A	@ rated output power @ minimum performance input voltage
Rated input power	51.2	W	@ full 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	≥ 86	%	@ full output power @ rated input voltage
Input frequency AC range	47.5...63	Hz	Performance range
Standby Power	0.5	W	
Isolation input to output	SELV		

Electrical output data

Data below applies to each separate output channel

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...42	V _{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	0.7/0.8/0.9/1.05	A	
Output current min programmable	70	mA	
Output current min dimming	70	mA	
Output current tolerance	± 5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 15	%	
Output power	21...44.1	W	
Number of output channels	2		

RF data

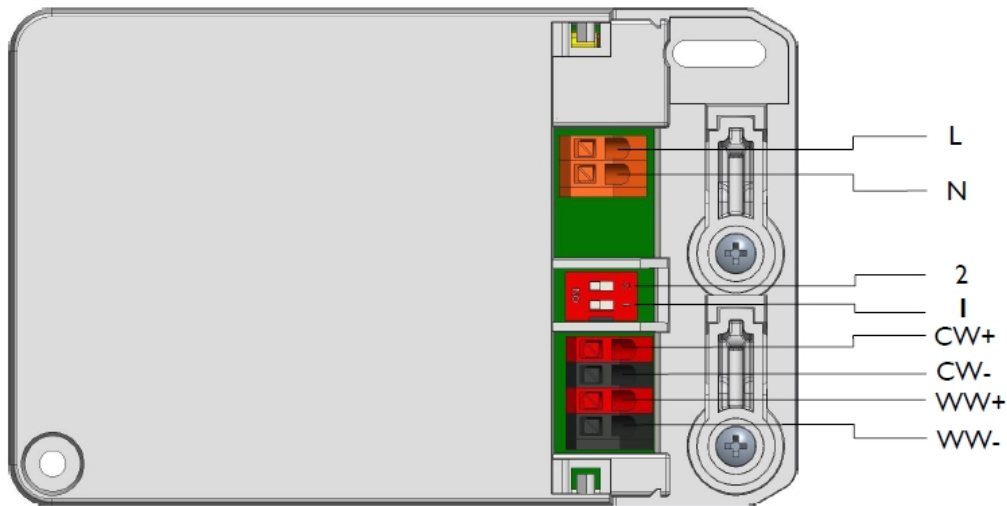
Specification item	Value	Unit	Condition
Work mode	BLE Bluetooth: 4.2		
	Wi-Fi: 802.11b/g		
Work frequency	BLE: 2.4...2.4835	GHz	
	Wi-Fi: 2.4...2.4835	GHz	
Modulation mode	BLE: GFSK		
	Wi-Fi: CCK/DSSS/OFDM		
RF output power	BLE: 8	dBm	
	Wi-Fi: 20	dBm	
Rx sensitivity	BLE: -97	dBm	
	Wi-Fi: -98	dBm	11b 1M
	Wi-Fi: -74	dBm	11g 54M

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Wireless		Wireless protocol = Wi-Fi, BLE
Dimming range	10...100	%	Dimming via WiZ app
Isolation controls input to output	SELV		acc. IEC61347-1

Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.75...1.5 / 18...16	mm ² / AWG	Type250 (Independent), solid / stranded wire
Input wire strip length	8.5...9.5	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm ² / AWG	Type250, solid / stranded wire
Output wire strip length	8.5...9.5	mm	
Maximum cable length	0.3	m	Total length of wiring including LED module, one way

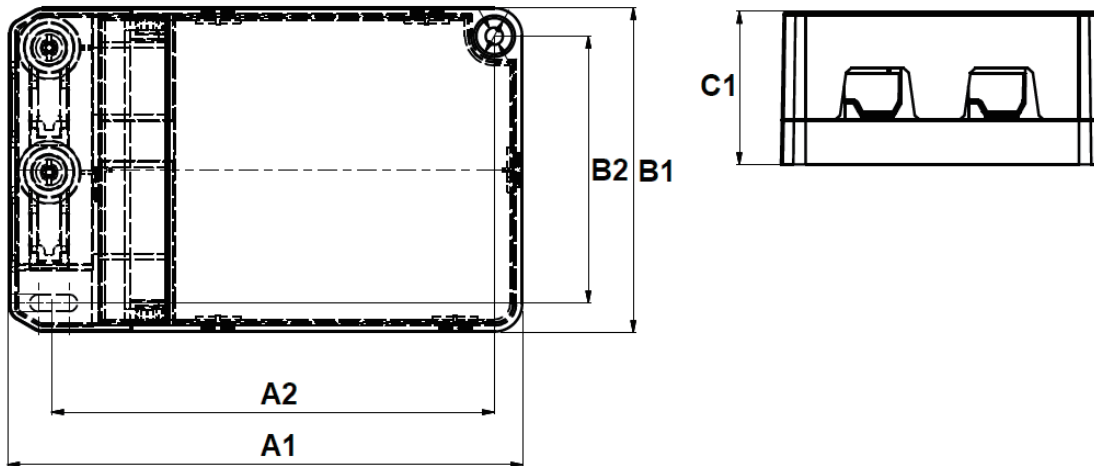


Insulation

Insulation per IEC61347-1	Input	Output
Input		SELV
Output	SELV	

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	108	mm	
Mounting hole distance (A2)	92.9	mm	
Width (B1)	68	mm	
Width (B2)	56.1	mm	
Height (C1)	32	mm	
Mounting hole diameter (D1)	3.6	mm	
Weight	284	gram	
Housing color	White		



Logistical data

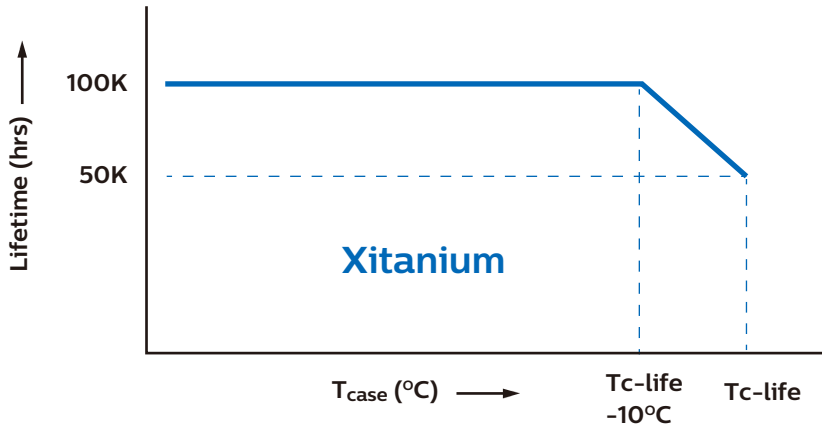
Specification item	Value
Product name	Xitanium 44W 0.7-1.05A 42V WiZ TW 230V
Logistic code 12NC	9290 028 90106
Pieces per box	40

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}	85	°C	Maximum temperature measured at T _{case-point}
T _{case-life}	75	°C	Measured at T _{case-point}
Maximum housing temperature	130	°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%



Storage temperature and humidity

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

Programmable features

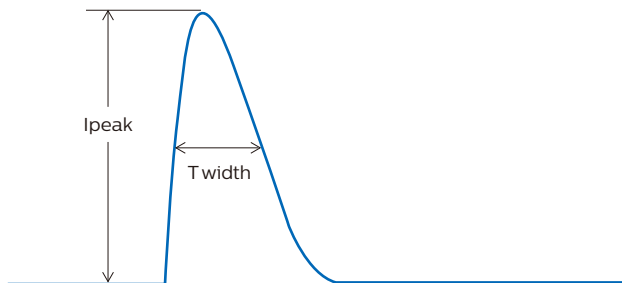
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	DipSwitch	1050 mA	via DipSwitch
Driver Temperature Limit (DTL)	Yes		
Adjustable Light Output (ALO)	Yes		
Min dim level	Yes	10 %	
Corridor mode	No		
FlexTune	No	1050 mA	

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	II		per IEC60598
Overtemperature protection	Yes		Automatic recovering
Overheating protection	Yes		Automatic recovering
Energy metering	No		
Diagnostics	No		

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	7.6	A	Input voltage V
Inrush current T_{width}	32.8	μs	Input voltage V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 39	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

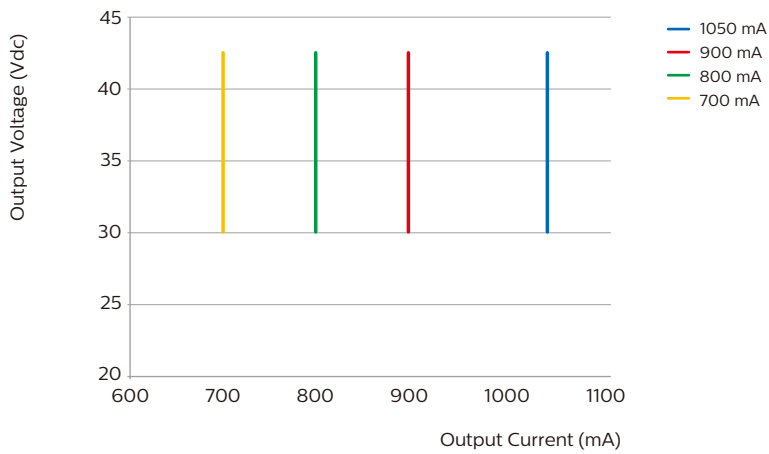
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info

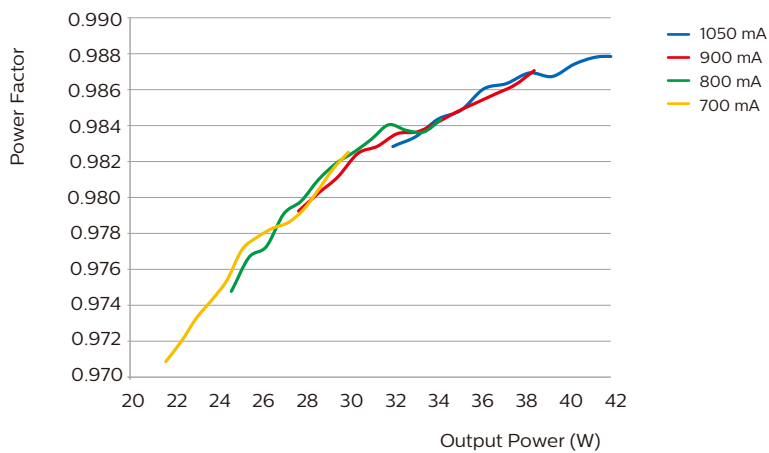
Specification item	Value
Approval marks	CE / ENEC / SELV / BLE / Wi-Fi / SRRC (include a radio transmission module of CMIIT ID: 2018DP1904)
Ingress Protection classification (IP)	20
Noise and hum dB(A)	20

Graphs

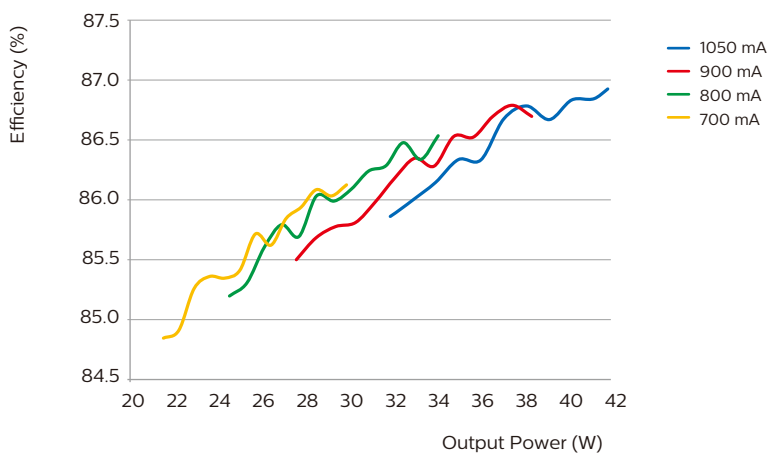
Operating window



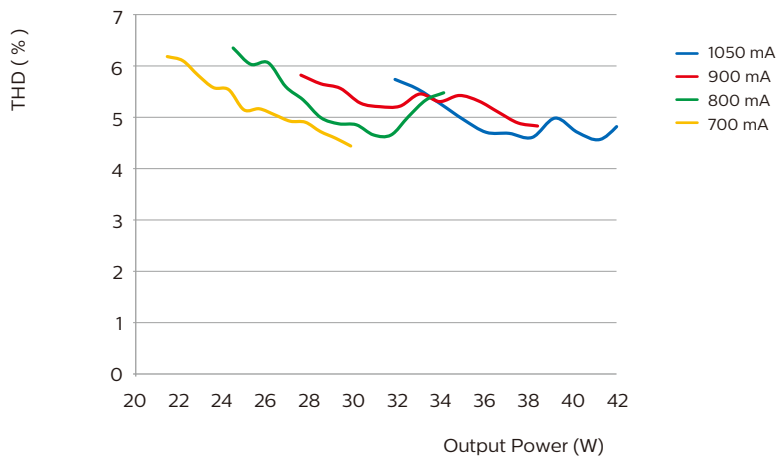
Power factor versus output power



Efficiency versus output power



THD versus output power



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Date of release: December 09, 2020

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