Xitanium

Datasheet

Xitanium LED drivers - Mini wireless

Xi 45W 0.3-1.2A 48V MC FlexTune 230V
9290 028 27080



Enabling simple, cost effective wireless lighting system

Xitanium Mini 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 Mini wireless drivers helps to build a simple, scalable and standardized connected lighting with different functionalities from simple wireless dimming to cloud based operations and integration with gateways.

Wireless mini drivers can be configured via smart devices with MasterConnect app as standalone or in a mesh network. With Xitanium LED drivers, flexibility in luminaire design is assured thanks to the Adjustable Output Current (AOC). Application-oriented operating windows offer stable lumen output and light quality levels that specifiers and architects demand. The adjustable output current also enables operation of various LED PCB solutions from different manufacturers.

Benefits

- Enabling simple, scalable and standardized connected lighting system
- High reliability underpinned by 5-year warranty
- Lower installation cost for lighting control
- Future-proof flexibility -application-oriented operating windows enable LED generation and complexity management
- Wide range of use cases: From standalone to cloud based / gateway operations

Application

- Retail
- Hospitality
- Office

Features

- Compatible with Zigbee wireless protocols
- Operating windows - With SimpleSet feature, output current can be adjusted via the Philips MultiOne configurator
- Wide operating window: With extended operating window, availability of a wide output current from 0.15A to 1.05A that also helps complexity management
- Wide range of power ratings
- Traditional Mini design which can be used both as a built-in driver and an independent driver with add on caps

Logistical data

Specification item	Value
Product name	Xi 45W 0.3-1.2A 48V MC FlexTune 230V
Logistic code 12NC	9290 028 27080
Pieces per box	40
Weight	270 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	0.26	A	@ full output power @ rated input voltage
Rated input power	51.5	W	@ full 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	89.0	%	@ rated output power @ rated input voltage @max. Uout
Rated input voltage DC	186...250	V_{dc}	Performance range
Rated input current DC	≤ 0.26	A_{dc}	Performance range
Input voltage AC	198...264	V_{ac}	Operational range
Input frequency AC	45...66	Hz	Operational range
Input voltage DC	168...275	V_{dc}	Operational range
Standby Power (no load)	0.4	W	Max standby power
Isolation input to output	SELV		

Electrical output data

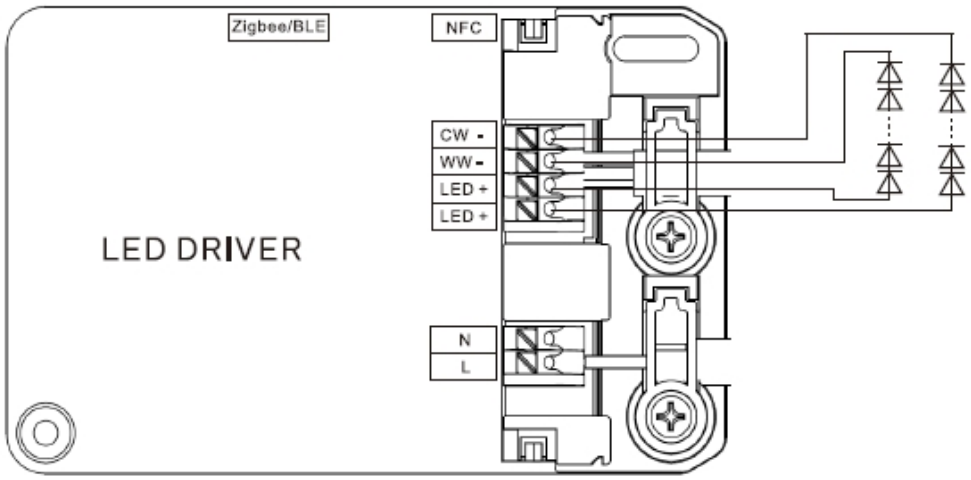
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	24...48	V_{dc}	Performance range
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	7...1200	mA	
Output current min programmable	300	mA	
Min output current	7	mA	
Output current tolerance ±	5	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 4	%	
Output P_{st}^{LM}	≤ 0.3		In entire operating window
Output SVM	≤ 0.3		In entire operating window
Output power	0.1...45.0	W	
Minimum performance output power	10	W	Power factor > 0.9 and THD < 20%

Control interfaces

Specification item	Value	Unit	Condition
Control method			Wireless protocol = ZigBee
Dimming range	1...100	%	Dimming via MasterConnect app, operational range / wireless switches

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	
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

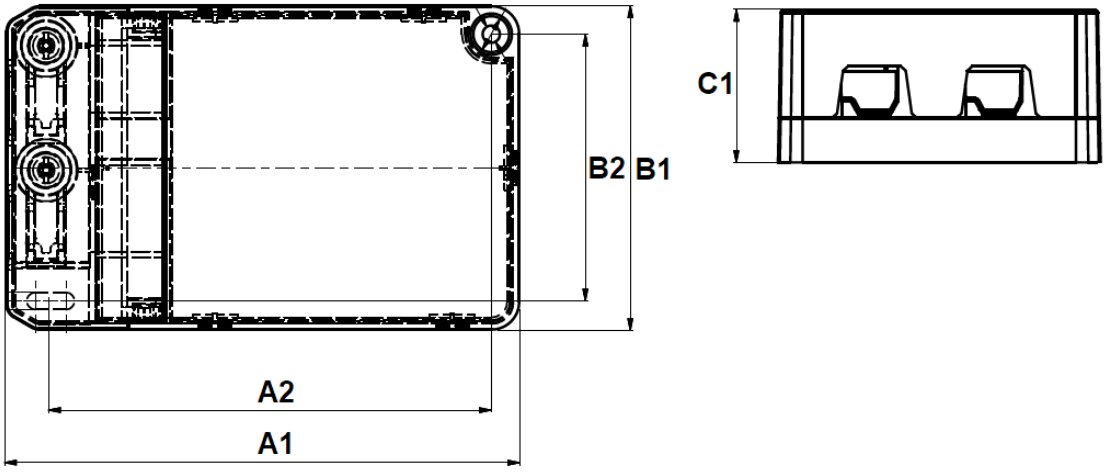


Isolation

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

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	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	270	gram	
Housing color	White		

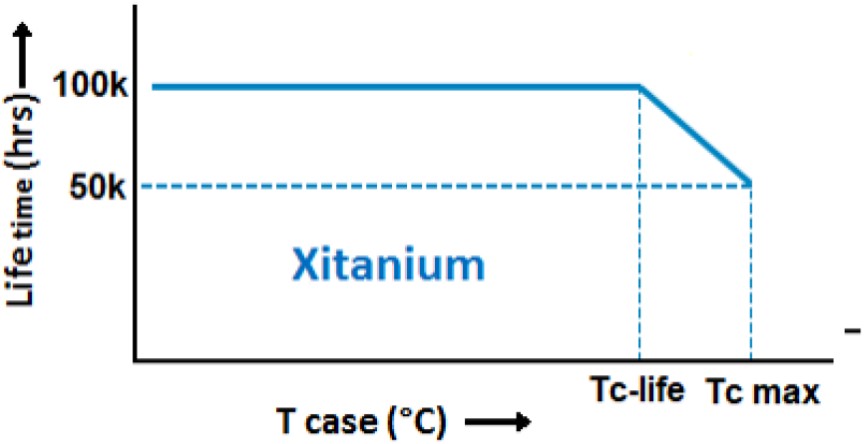


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-25...+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	85	°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%

Temperature [°C]	Lifetime	Unit	Condition
85	25000	hr	
80	35000	hr	
75	50000	hr	Temperature measured @Tc point
70	>50000	hr	
65	>50000	hr	

Storage temperature and humidity

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

Programmable features

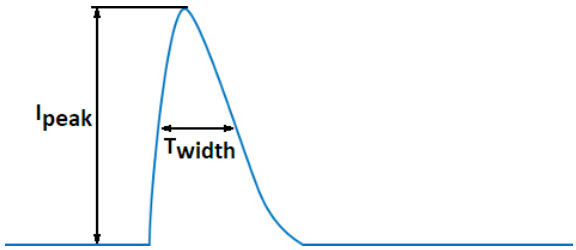
Specification item	Available	Default setting	Condition
Adjustable Light Output (ALO)	Yes	OFF	
Adjustable Light Output (ALO) min level	Yes		
Constant Light Output (CLO)	Yes	OFF	
Touch & Dim (TD)	No		
Corridor Mode	No		
Min Dim Level (%)	Yes	1 %	
DC emergency (DCemDim)	Yes	ON	Current output decreased to 15% (EOFx)
DALI control supported at DC operation	Yes	OFF	
OEM Write Protection (OWP)	Yes	OFF	
FlexTune (DALI part 209)	Yes	ON mA	
Luminaire Info (DALI part 251)	Yes		
Tx Power	Yes	8 dBm	Set the Tx power (strength of the wireless signal)

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
Energy metering (DALI part 252)	Yes	Accuracy is 4%
Diagnostics via Signify tool	Yes	

Inrush current

Specification item	Value	Unit	Condition
Inrush current	5.6	A	Input voltage 230V
Inrush peak width	56	µs	Input voltage 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 24	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

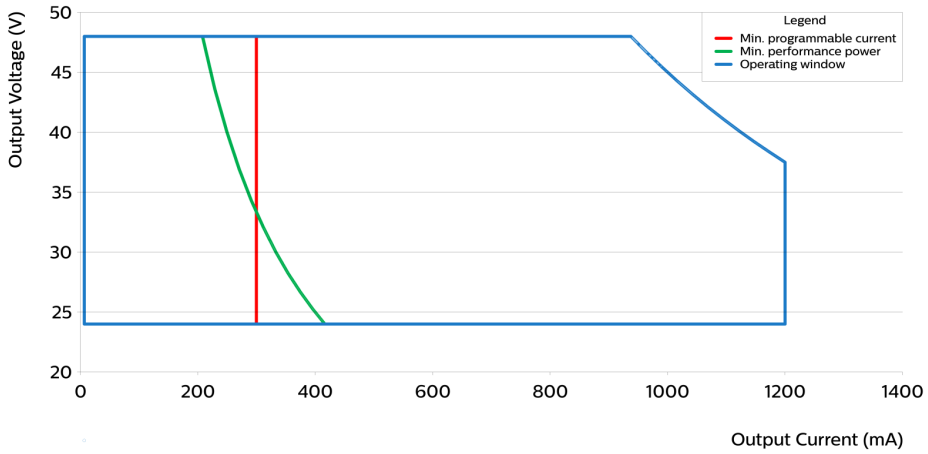
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info (Approbation)

Specification item	Value
Approval marks and Certifications	CB / CCC / CE / ENEC / RCM
Ingress Protection classification (IP)	20
Noise and hum dB(A)	20

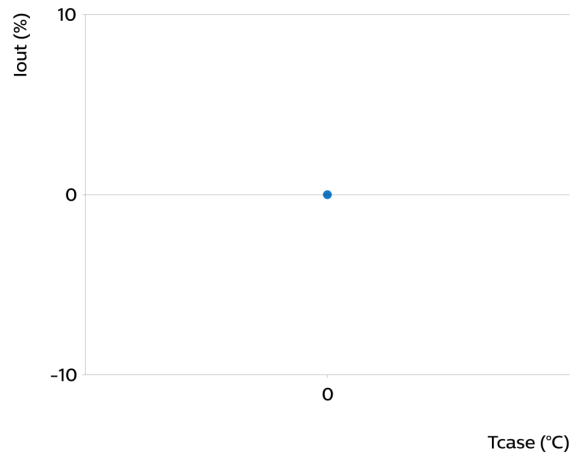
Graphs

Operating window

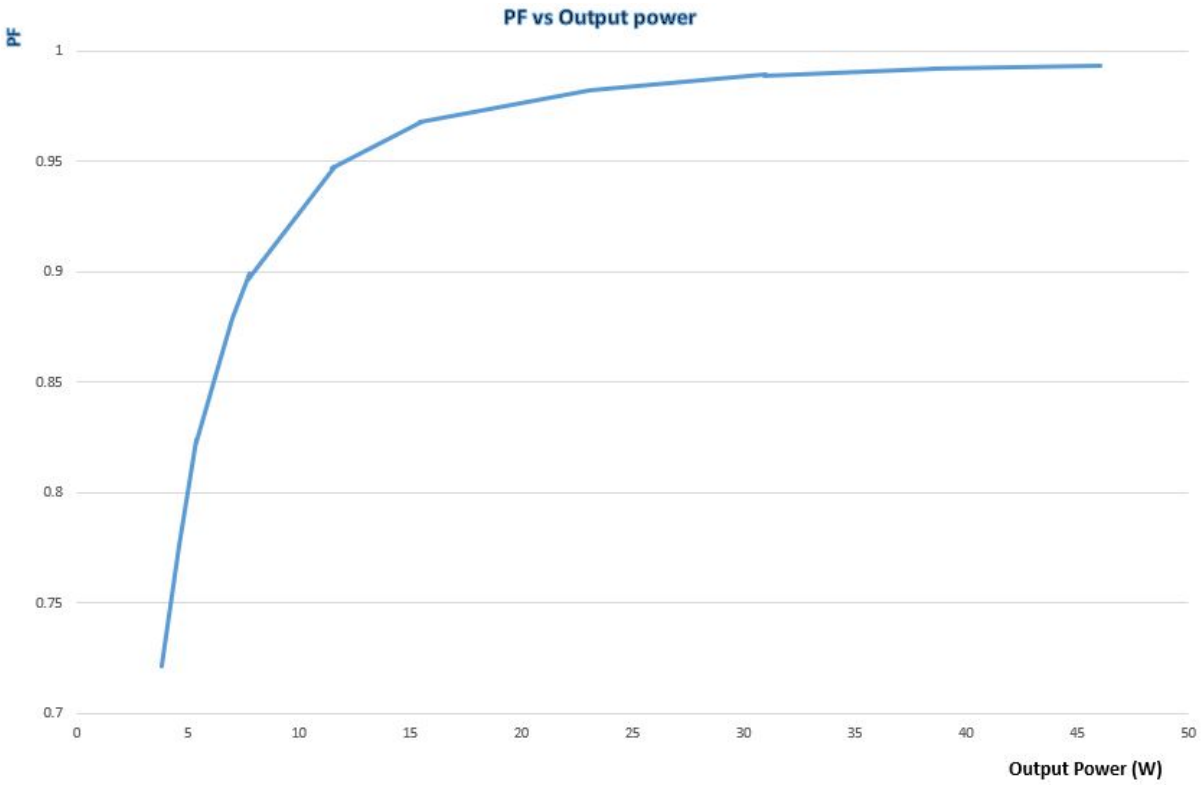


Type	Output current (mA)	Min. output voltage (V)	Max. output voltage (V)	Max. output power (W)
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	300	24	48	14.4
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	350	24	48	16.8
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	400	24	48	19.2
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	450	24	48	21.6
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	500	24	48	24
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	550	24	48	26.4
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	600	24	48	28.8
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	650	24	48	31.2
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	700	24	48	33.6
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	750	24	48	36
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	800	24	48	38.4
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	850	24	48	40.8
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	900	24	48	43.2
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	950	24	47	45
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	1000	24	45	45
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	1050	24	42	45
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	1100	24	40	45
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	1150	24	39	45
Xi 45W 0.3-1.2A 48V MC FlexTune 230V	1200	24	37	45

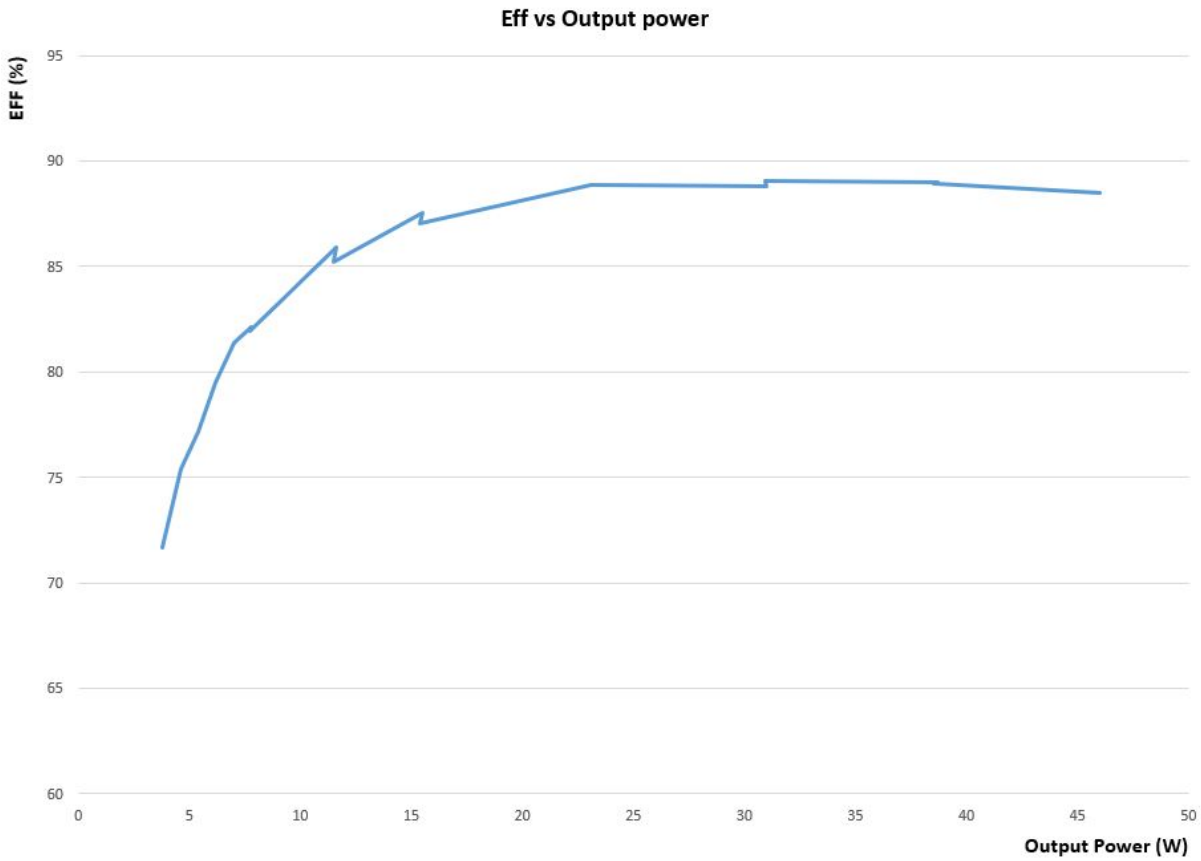
Thermal Guard



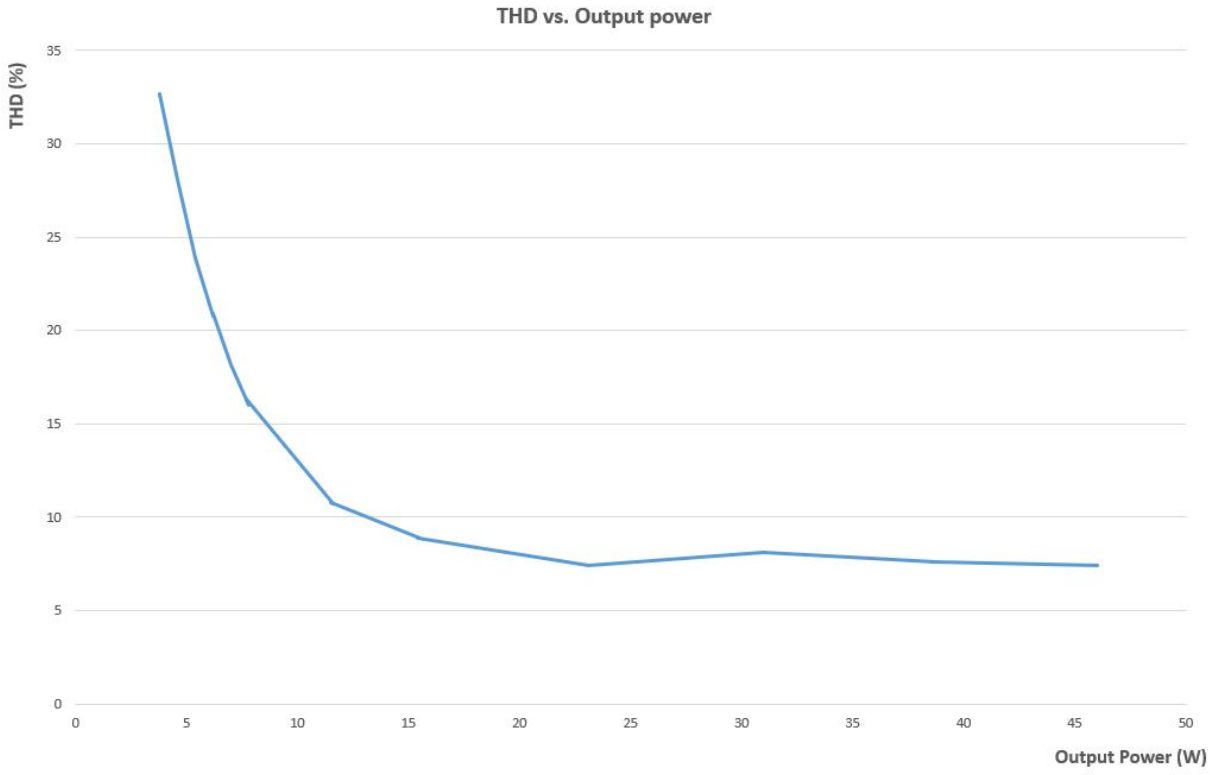
Power factor versus output power



Efficiency versus output power



THD versus output power



Notes

For more information about the MasterConnect app see the End User Manual.

This product includes software licensed under terms that require Signify N.V. to display the following notice:

CmBacktrace 1.3

armink/CmBacktrace is licensed under the MIT License (MIT)

Copyright (c) 2016-2019 Armink (armink.ztl@gmail.com)

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the 'Software'), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED 'AS IS', WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

© 2026 Signify Holding. All rights reserved. The information provided herein is subject to change, without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify. All trademarks are owned by Signify Holding or their respective owners.

xitanium