

# PHILIPS

## Xitanium

### LED driver



## Datasheet

### Xitanium track adaptor drivers 1C G2

Xi 42W/a 0.7-1.05A 40V DS 1CW 230V

Xi 42W/a 0.7-1.05A 40V DS 1CG 230V

Xi 42W/a 0.7-1.05A 40V DS 1CB 230V

#### Affordable and reliable LED Drivers

Philips Xitanium LED Point drivers are designed to operate with LED COB solutions used in built-in applications such as track light. Xitanium drivers have common features such as low ripple output current, adjustable output current by dip switch and 50,000 hours lifetime. They are specifically designed to ensure great EMI performance, high robustness and safe usage.

#### Features

- Class I application
- Low Ripple less than 3%
- 1 Circuit 3 Wire track system
- 4 output currents by Dip switch
- 50,000 hours lifetime

#### Benefits

- Great EMI performance for easy design-in
- Simplify track light luminaire design
- Compatible with most popular tracks
- Selectable output current enables flexibility
- Peace of mind with proven reliability

#### Application

- Track lighting

## Logistical data

Specification item	Value
Product name	Xi 42W/a 0.7-1.05A 40V DS 1CW 230V
Logistic code 12NC	9290 034 53980
Pieces per box	80

Specification item	Value
Product name	Xi 42W/a 0.7-1.05A 40V DS 1CB 230V
Logistic code 12NC	9290 034 54380
Pieces per box	80

Specification item	Value
Product name	Xi 42W/a 0.7-1.05A 40V DS 1CG 230V
Logistic code 12NC	9290 034 54780
Pieces per box	80

## Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220...240	V <sub>ac</sub>	Performance range
Rated input voltage	230	V <sub>ac</sub>	
Rated input frequency range	50...60	Hz	Performance range
Rated input current	0.21	A	@max output power@rated input voltage
Rated input power	47.1	W	@max output power@rated input voltage
Power factor	0.96		@max output power@rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	90.0	%	@max output power@rated input voltage
Input voltage AC range	198...264	V <sub>ac</sub>	operational range
Input frequency AC range	47.5...63	Hz	operational range
Isolation input to output	Reinforced (SELV)		

## Electrical output data

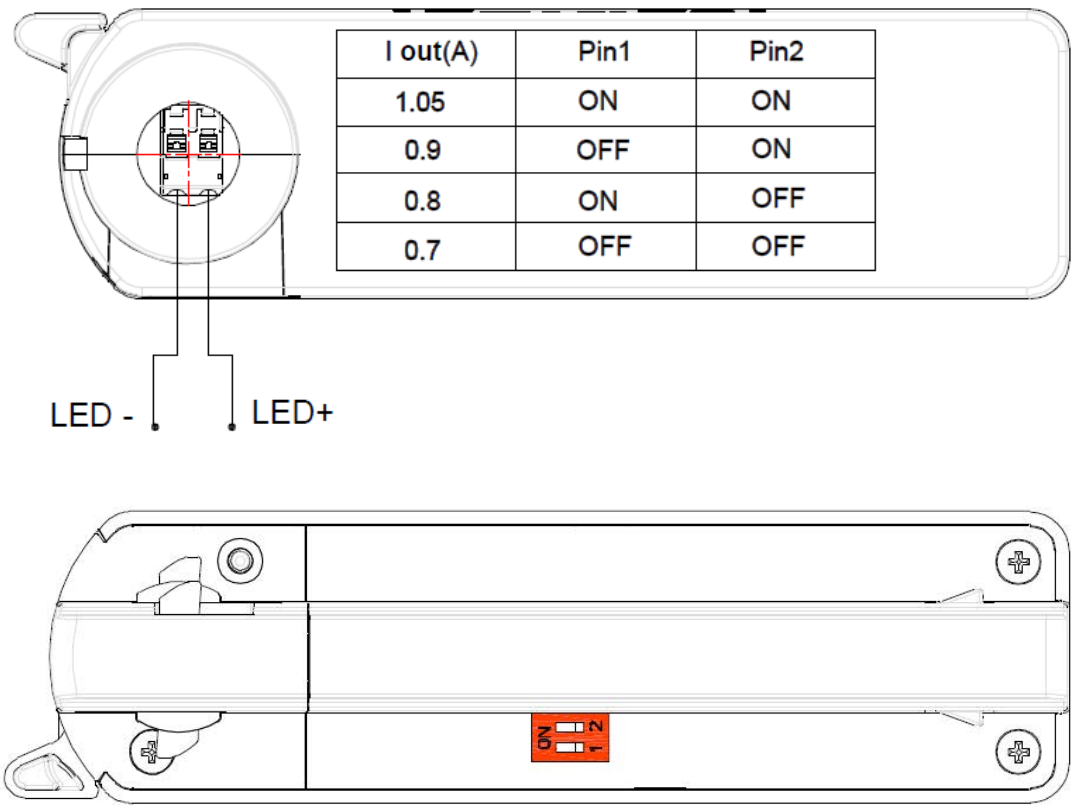
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...40	V <sub>dc</sub>	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	0.70 / 0.80 / 0.90 / 1.05	A	
Output current tolerance ±	8	%	@full load
Output current ripple LF	≤ 3	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 15	%	
Output P <sub>st</sub> <sup>LM</sup>	≤ 0.1		In entire operating window
Output SVM	≤ 0.1		In entire operating window
Output power	21...42	W	

## Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		

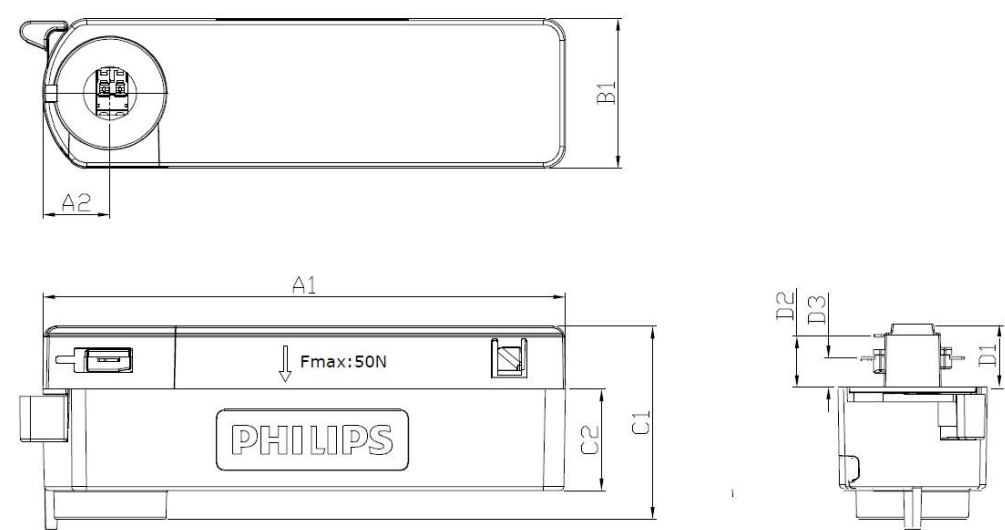
Wiring and Connections

Specification item	Value	Unit	Type
Output wire cross-section	0.2...0.75 / 24...18	mm <sup>2</sup> / AWG	Molex 104188, solid wire. Stranded wire supported from 0.45mm2 and up
Output wire strip length	7.5...8.5	mm	
Maximum cable length	0.3	m	Total length of wiring including LED module, one way



Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	128.9	mm	
Mounting hole distance (A2)	16.5	mm	
Width (B1)	36.9	mm	
Height (C1)	47.5	mm	
Height (C2)	25	mm	
Mounting hole diameter (D1)	15.5	mm	
Mounting hole diameter (D2)	12.6	mm	
Weight	107	gram	

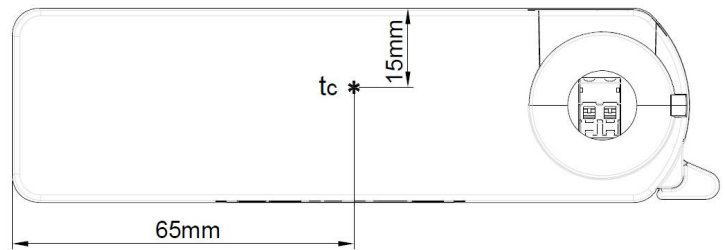
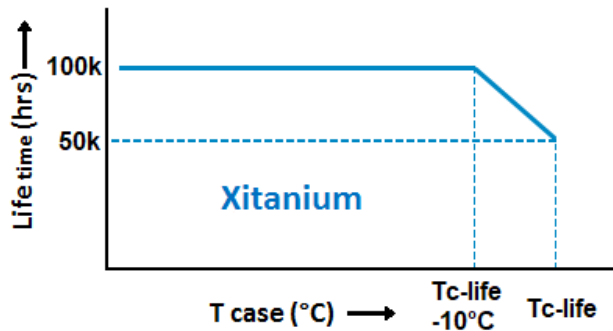


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+35	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	90	°C	Maximum temperature measured at Tcase-point
Tcase-life	90	°C	Measured at Tcase-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	
LED Module Temperature Protection (MTP)	No		
Driver Temperature Limit (DTL)	No		
Constant Light Output (CLO)	No		
Corridor Mode	No		
DC emergency (DCemDim)	No		

## 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

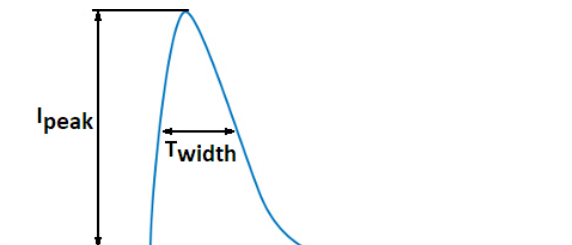
## Inrush current

Specification item	Value	Unit	Condition
Inrush current	24.5	A	Input voltage 230V
Inrush peak width	135	μs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	≤ 32	pcs	Indicative value at 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

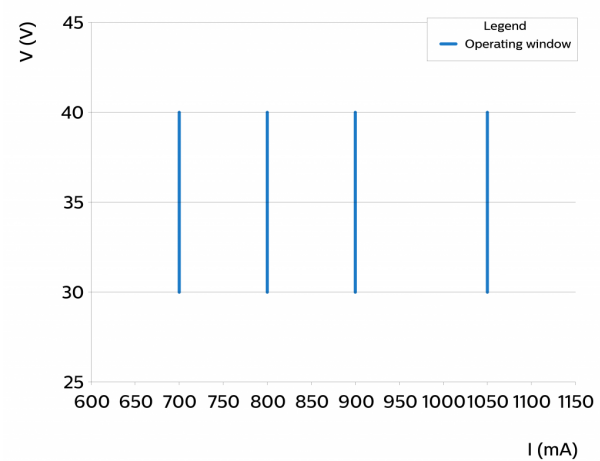
## Surge immunity

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

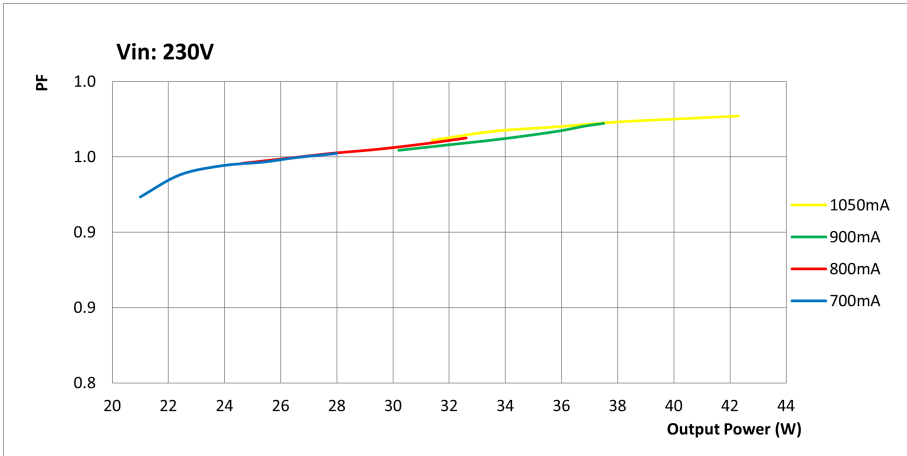
## Application Info

Specification item	Value
Approval marks and Certifications	CB / CE / CQC / ENEC / TISI
Ingress Protection classification (IP)	20
Application	Indoor Point
Mounting Type	Track mounting

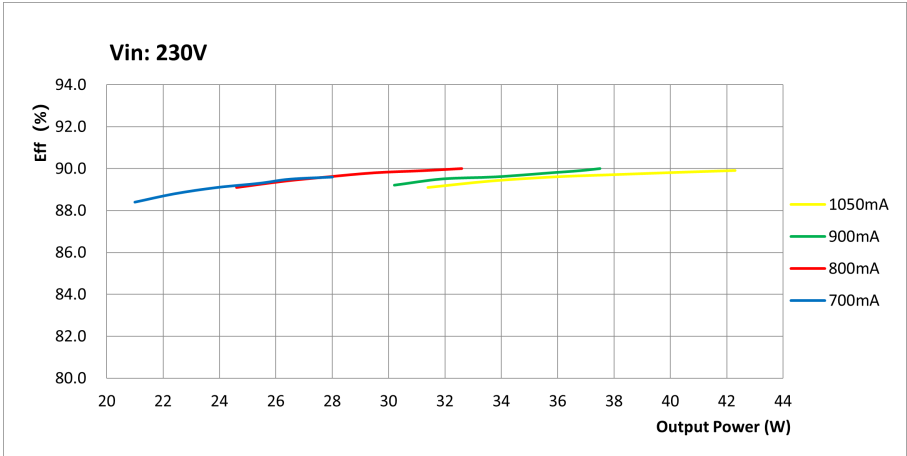
Operating window



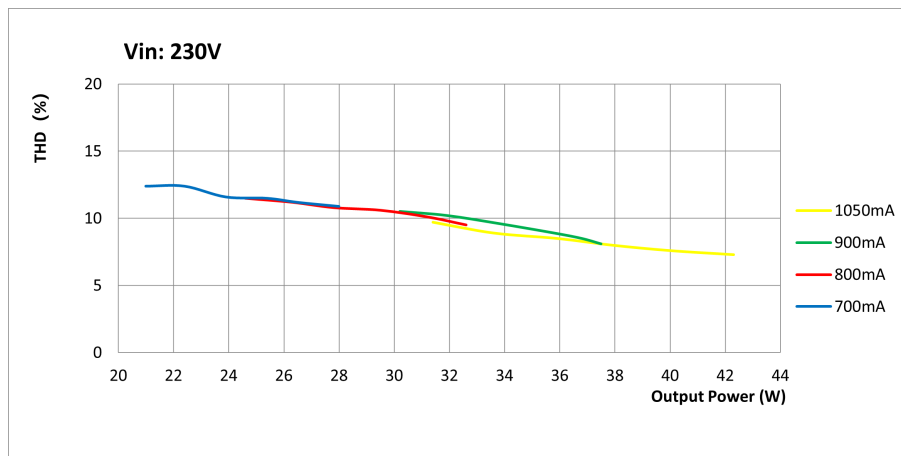
Power factor versus output power



Efficiency versus output power



## THD versus output power



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Date of release: August 15, 2023 v3

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