

# PHILIPS

## Xitanium

### LED driver



## Datasheet

### Xitanium G3

Xitanium 50W 1.05-1.2A 42V DS I 230V

9290 034 57580

#### Affordable and reliable LED Drivers

Philips Xitanium LED point drivers are designed to operate with LED COB solutions used both in built-in and independent applications such as down light, sport light and 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 design and safety usage.

#### Features

- Class I and II application
- Low Ripple less than 1%
- Built in and independent
- 4 output currents by Dip switch
- 50,000 hours lifetime

#### Benefits

- SELV operating voltages, ensuring safety
- Great EMI performance for easy design-in
- Reliable design with strict quality control
- Safe to use with all round protection
- Selectable output current enables flexibility

#### Application

- Down lighting
- Sport lighting
- Track lighting
- Panel light

## Logistical data

Specification item	Value
Product name	Xitanium 50W 1.05-1.2A 42V DS I 230V
Logistic code 12NC	9290 034 57580
Pieces per box	40

## 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	0.256	A	@ full output power @ rated input voltage
Rated input power	55.08	W	@ rated output power @ rated input voltage
Minimum Power factor	0.95		@ full output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	88	%	@ rated output power @ rated input voltage @max. U <sub>out</sub>
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	SELV		

## Electrical output data

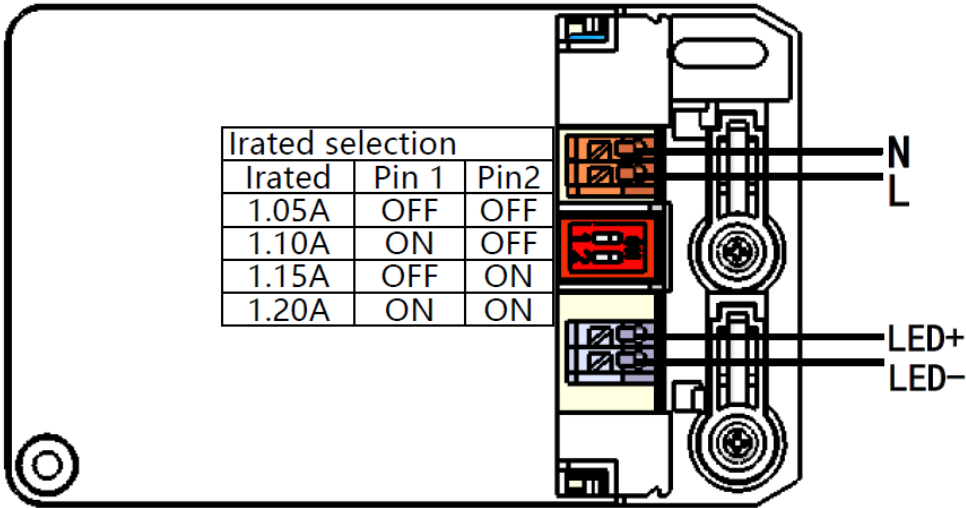
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...44	V <sub>dc</sub>	30...42Vdc for I <sub>out</sub> =1.15A and 1.2A
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	1.05 / 1.1 / 1.15 / 1.2	A	Select output current via the dipswitches
Output current tolerance ±	8	%	@full load
Output current ripple LF	≤ 1	%	Ripple = peak / average, < 3kHz
Output P <sub>st</sub> <sup>LM</sup>	≤ 0.1		In entire operating window
Output SVM	≤ 0.3		In entire operating window
Output power	31.5...50.4	W	
Rated output power	50	W	

## Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		

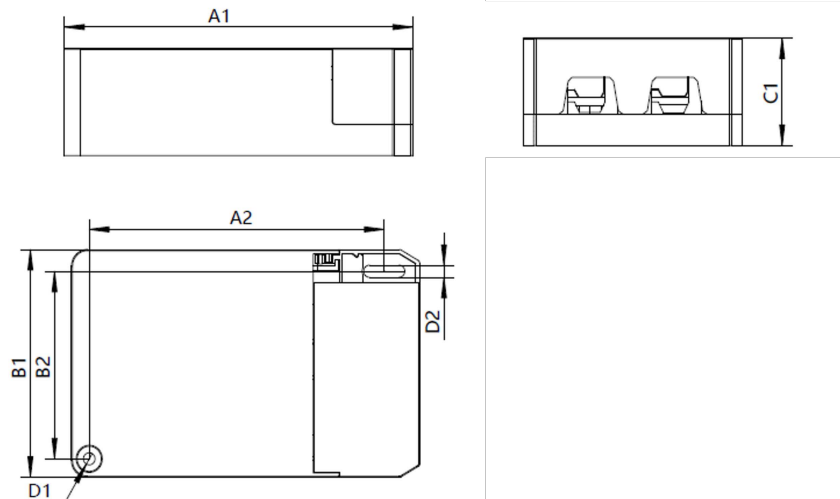
Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.75...1.5 / 18...16	mm <sup>2</sup> / AWG	solid / stranded wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm <sup>2</sup> / AWG	solid / stranded wire
Output wire strip length	8...9	mm	
Maximum cable length	0.6	m	Total length of wiring including LED module, one way



## Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	108	mm	
Mounting hole distance (A2)	91.5	mm	
Width (B1)	68	mm	
Width (B2)	56	mm	
Height (C1)	32	mm	
Mounting hole diameter (D1 D2)	3.6	mm	
Weight	263	gram	

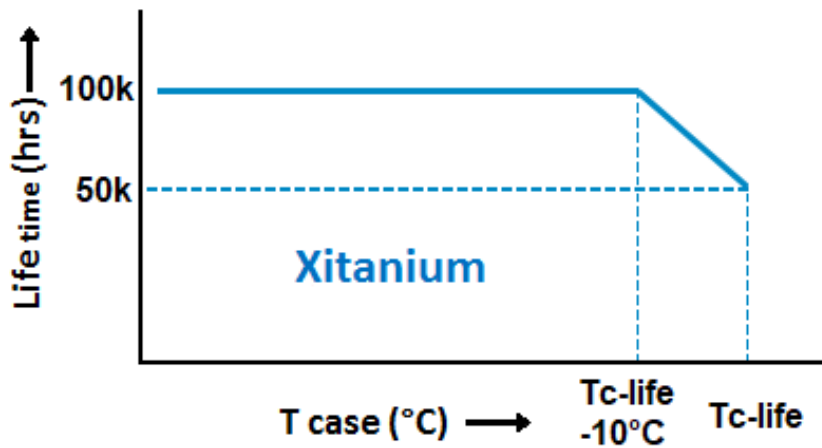


## Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	95	°C	Maximum temperature measured at T <sub>case</sub> -point
Tcase-life	85	°C	Measured at T <sub>case</sub> -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%
Driver lifetime	100,000	hours	Measured temperature at Tcase-point is Tcase-life -10 degrees. 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	1200 mA	Set the output current via the dipswitches, see wiring diagram for an overview
LED Module Temperature Protection (MTP)	No		
Constant Light Output (CLO)	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 and II		per IEC60598

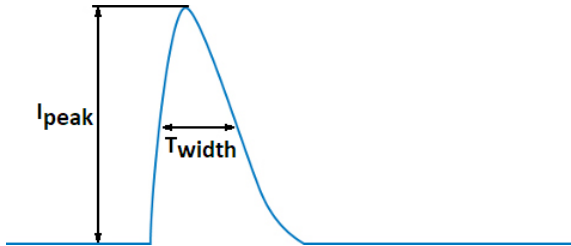
## Inrush current

Specification item	Value	Unit	Condition
Inrush current	30.0	A	Input voltage 230V
Inrush peak width	202	μs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	≤ 18	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

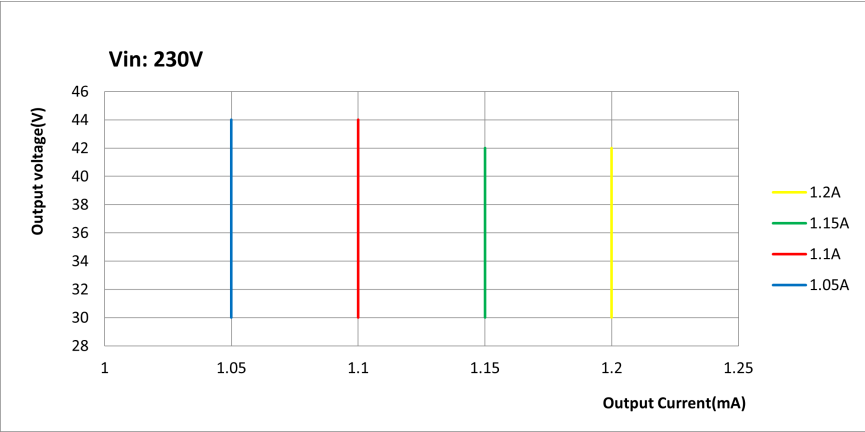
Specification item	Value	Unit	Condition
Typical Touch Current (ins. Class II)	0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

## Surge immunity

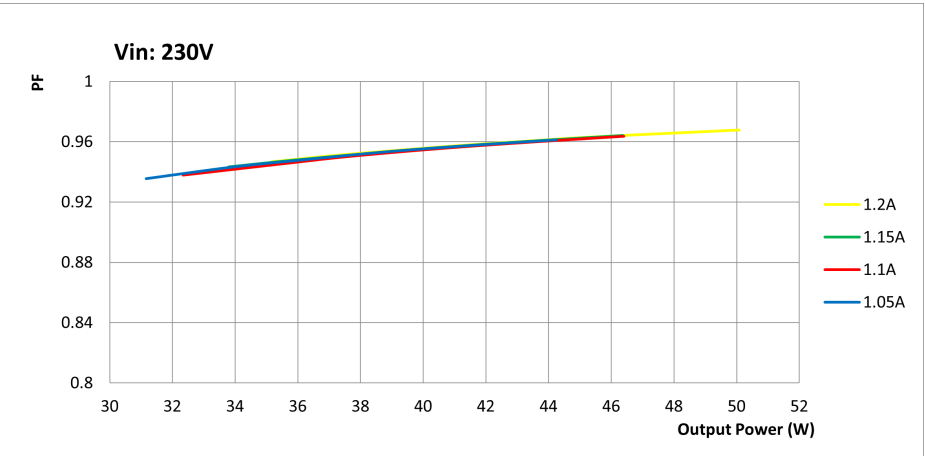
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	2	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	4	kV	Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us

## Application Info

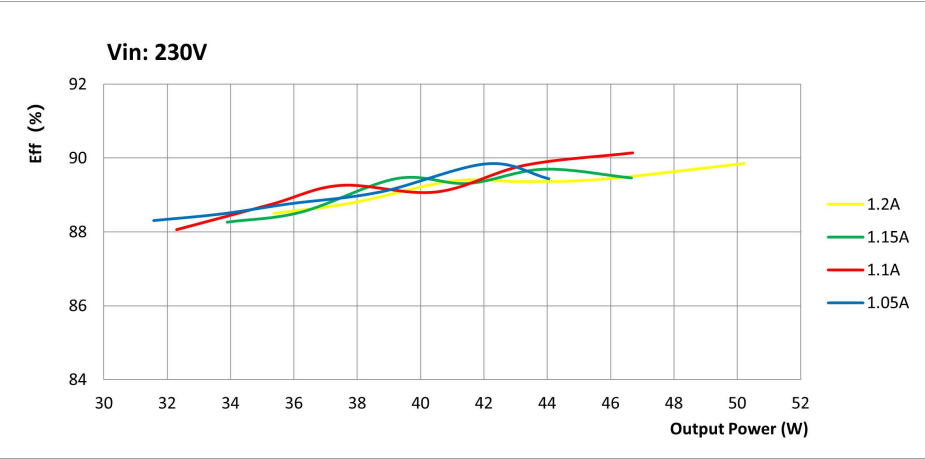
Specification item	Value
Approval marks and Certifications	CB / CCC / CE / ENEC / RCM / SELV / TISI / UKCA
Ingress Protection classification (IP)	20
Application	Indoor Point
Mounting Type	Built-in / Independent



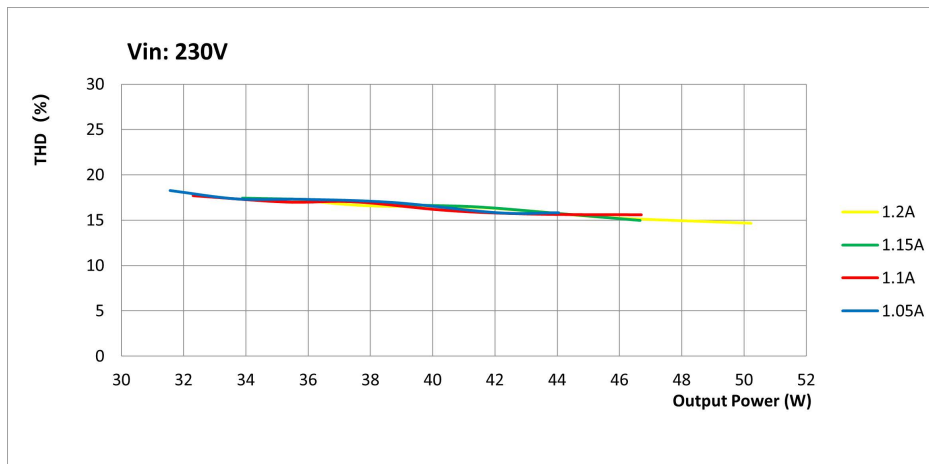
Power factor versus output power



Efficiency versus output power



## THD versus output power



## Notes

Electrical Specifications: All the specifications are typical and at 25°C Ta unless specified otherwise.



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