

PHILIPS

Xitanium

LED driver



Datasheet

Xitanium G4

Xitanium HE 20W 0.35-0.5A 40V DS I 230V

9290 039 22580

Advance and reliable LED Drivers

Advance LED Driver range offering Philips reliability. The Xitanium range is compatible with COB and mid-power LEDs from any LED manufacturer.

Features

- Adjustable output current by dip switch
- Safe design with dip switch protected by cubicle
- Low ripple current less than 1%
- 50,000 hours lifetime

Benefits

- Design based on Philips experience and knowledge of lighting
- Various power wattage drivers for different applications
- Independent housing design for stand-alone installations
- Advance LED Drivers with premium brand

Application

- Public buildings (airports, cinemas, theaters, exhibition halls)
- Retail (supermarkets, shops)
- Office

Logistical data

Specification item	Value
Product name	Xitanium HE 20W 0.35-0.5A 40V DS I 230V
Logistic code 12NC	9290 039 22580
Pieces per box	48

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	0.1	A	@ full output power @ rated input voltage
Rated input power	21.9	W	@ rated output power @ rated input voltage
Power factor	0.9		@ full output performance range @ rated input voltage range
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	90.5	%	@ max output power @ rated input voltage
Input voltage AC	198...264	V _{ac}	Operational range
Input frequency AC	45...66	Hz	Operational range
Isolation input to output	Reinforced		

Electrical output data

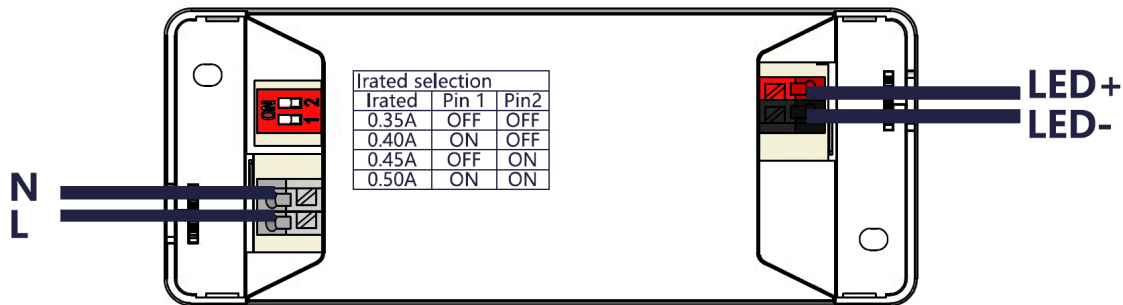
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...40	V _{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	350 / 400 / 450 / 500	mA	Select output current via the dipswitch
Output current tolerance ±	8	%	@full load
Output current ripple LF	≤ 1	%	Ripple = peak / average, < 3kHz
Output P _{st} ^{LM}	≤ 0.1		In entire operating window
Output SVM	≤ 0.1		In entire operating window
Output power	10.5...20.0	W	

Control interfaces

Specification item	Value	Unit	Condition
Control method	Fixed		Select output current via the dipswitches

Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.75...1.5 / 18...16	mm ² / AWG	solid / stranded wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm ² / 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

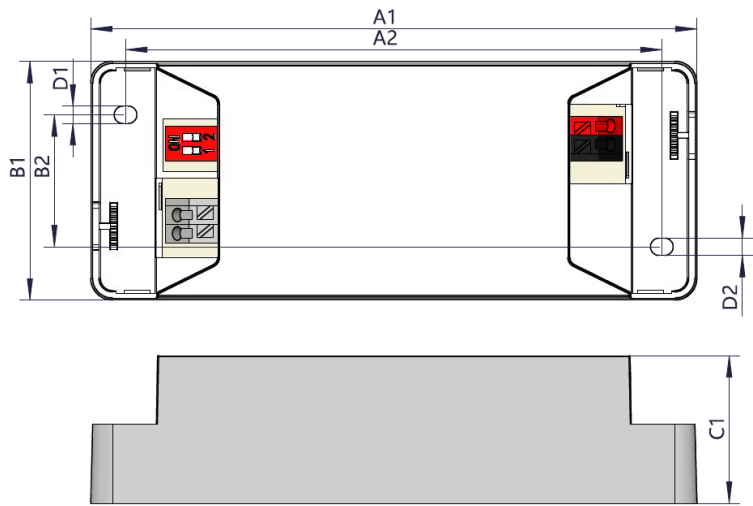


Isolation

Insulation per IEC61347-1	Input	Output
Input	-	Reinforced
Output	Reinforced	-

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	115	mm	
Mounting hole distance (A2)	102	mm	
Width (B1)	45	mm	
Width (B2)	25	mm	
Height (C1)	28	mm	
Mounting hole diameter (D1)	3.3	mm	
Mounting hole diameter (D2)	3.3	mm	
Weight	90	gram	
Housing color	white		

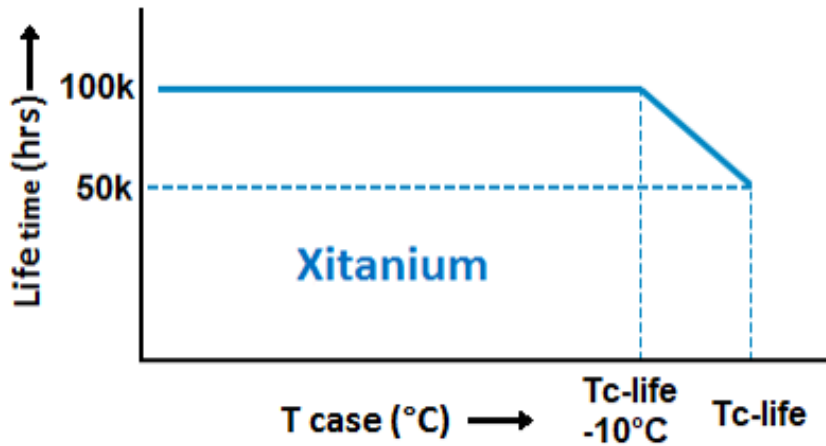


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	75	°C	Maximum temperature measured at Tcase-point
Tcase-life	65	°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%
Driver lifetime	100,000	hours	Measured temperature at Tcase-point is Tcase-life -10 degrees. Maximum failures = 10%



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	500 mA	Set the output current via the dipswitches, see wiring diagram for an overview

Non-programmable features

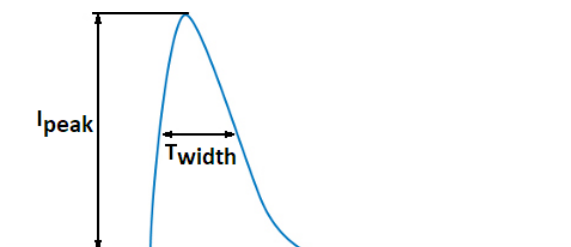
Specification item	Value		Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	No		
Suitable for fixtures with protection class	I and II		per IEC60598

Inrush current

Specification item	Value	Unit	Condition
Inrush current	10.2	A	Input voltage 230V
Inrush peak width	295	μs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 41	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

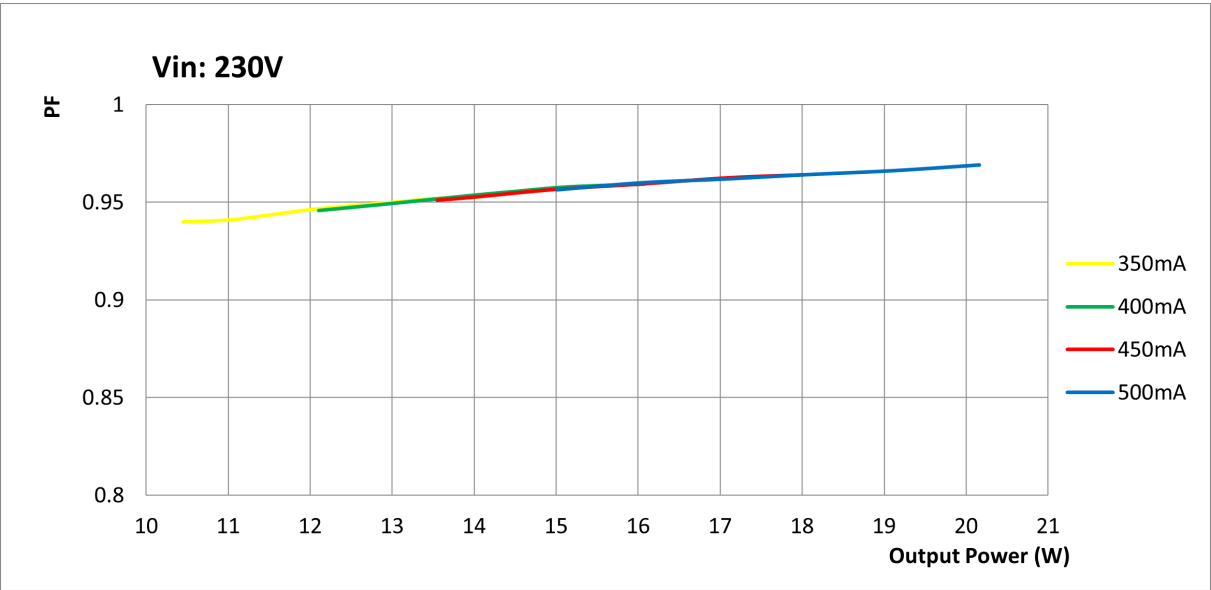
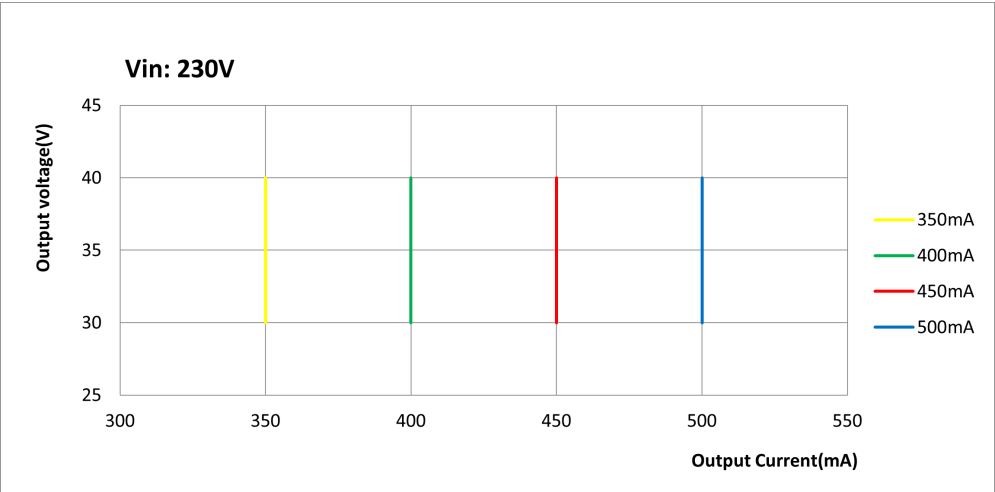
Specification item	Value	Unit	Condition
Typical Touch Current (ins. Class II)	0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

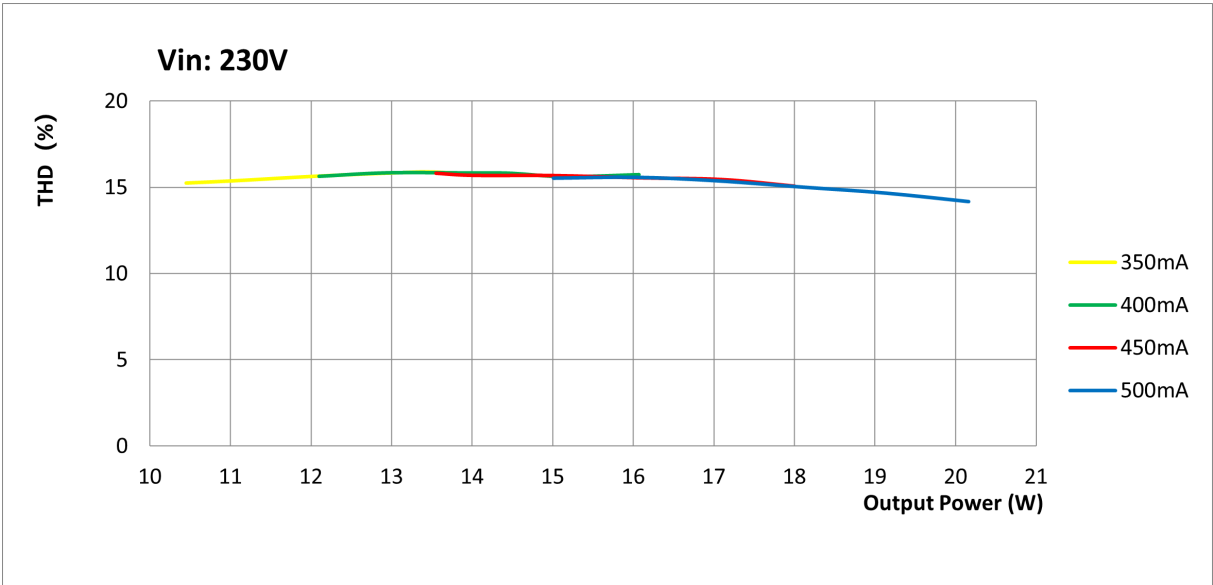
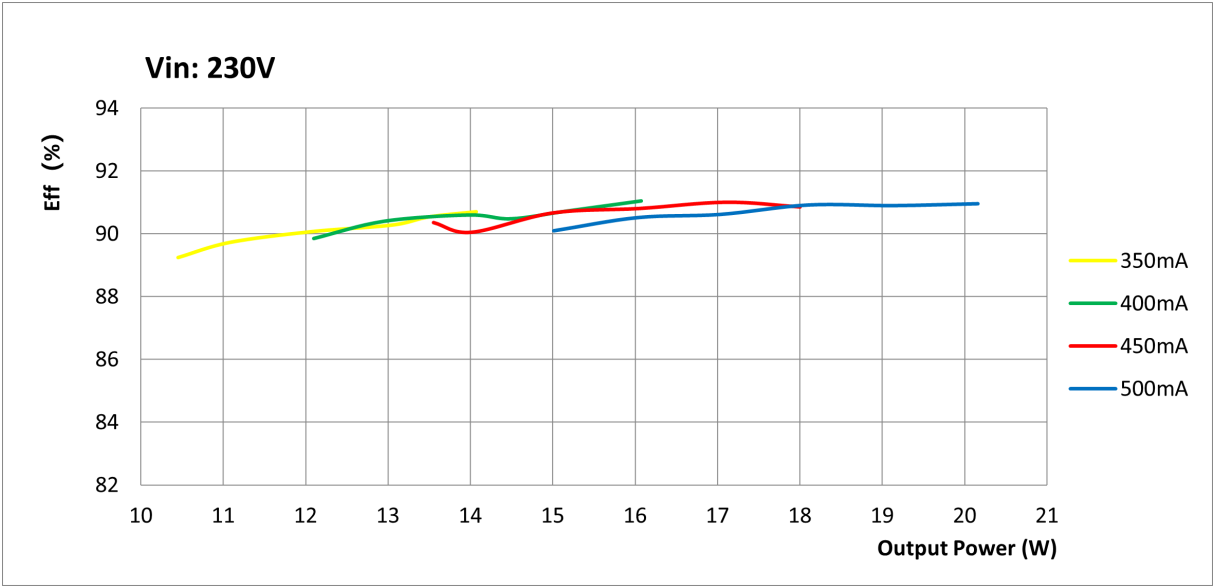
Surge immunity

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 / SELV / TISI / UKCA
Ingress Protection classification (IP)	20





Notes

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



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Date of release: November 20, 2024 v3

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