

PHILIPS

Xitanium

LED driver



Datasheet

Xitanium non-isolated Dip Switch driver

Xitanium 80W 400-550mA 200V DS 230V

9290 039 13580

Philips Xitanium non-isolated Dip Switch Linear LED drivers provide 4 output currents by dip switch, and 50,000 hours lifetime at Tc max 85°C. These drivers offer the same level of performance as Xitanium adjustable output current linear drivers to ensure high quality of light. They are ideal for high volume applications while delivering to quality requirements that you can expect from the Philips brand.

Features

- Class I application
- Low Ripple less than 4%
- 4 output currents by Dip switch
- High efficiency
- 50,000 hours lifetime @ Tc-max 85°C

Benefits

- Provides options for different luminaire designs
- Comfortable for the eyes
- Selectable output current enables flexibility and SKU reduction
- Energy saving
- Peace of mind with proven reliability

Application

- Waterproof lighting
- Recessed, surface and suspended linear lighting

Logistical data

Specification item	Value
Product name	Xitanium 80W 400-550mA 200V DS 230V
Logistic code 12NC	9290 039 13580
Pieces per box	50

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	0.39	A	@ full output power @ rated input voltage
Rated input power	84.0	W	@ full output power @ rated input voltage
Power factor	0.9		@maximum output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	94.0	%	@ full output power @ rated input voltage @ max. Uout
Input voltage AC	198...264	V _{ac}	Operational range
Input frequency AC	45...66	Hz	Operational range

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	80...200	V _{dc}	
Output voltage max.	250	V	Maximum output voltage (rms)
Output current	400 / 450 / 500 / 550	mA	
Output current tolerance ±	8	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 15	%	
Output P _{st} ^{LM}	≤ 0.1		In entire operating window
Output SVM	≤ 0.1		In entire operating window
Output power	32.0...80.0	W	
Rated output power	80.0	W	

Control interfaces

Specification item	Value	Unit	Condition
Control method	Fixed		See design-in guide at www.philips.com/oem for more controllability details.

Wiring and Connections

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

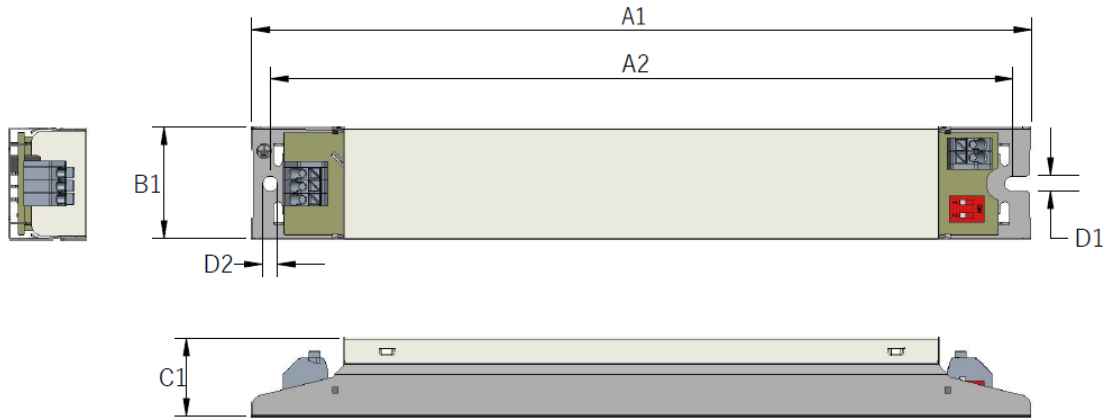


Isolation

Insulation per IEC61347-1	Input	Output
Input	-	No
Output	No	-

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	210	mm	
Mounting hole distance (A2)	200	mm	
Width (B1)	30	mm	
Height (C1)	21	mm	
Mounting hole diameter (D1)	4.1	mm	
Mounting hole diameter (D2)	4.1	mm	
Weight	160.0	gram	
Housing color	white		

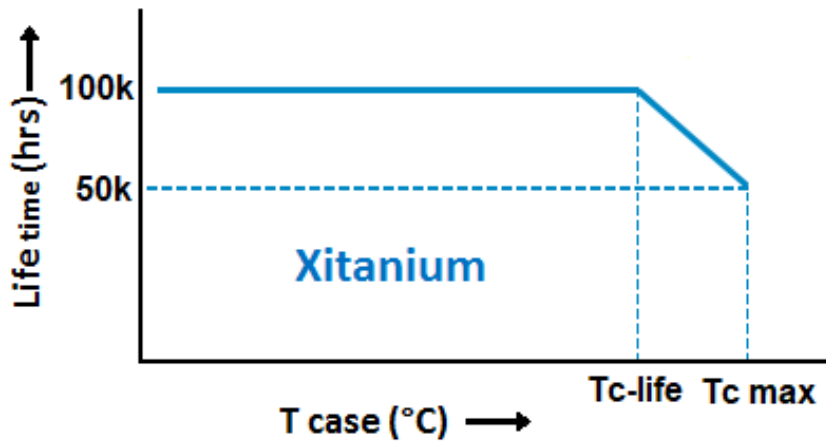


Operational temperatures and humidity

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	100,000	hours	Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10%



Maximum failures = 10%

Temperature [°C]	Lifetime	Unit	Condition
85	50000	hr	
80	71000	hr	
75	100000	hr	Temperature measured @Tc point
70	>100000	hr	
65	>100000	hr	

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	550 mA	

Non-programmable features

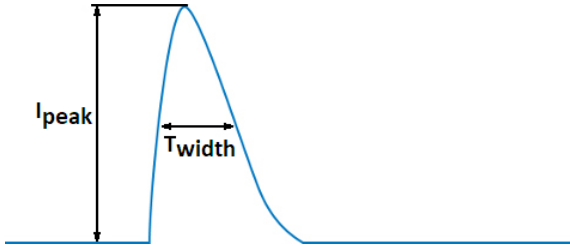
Specification item	Value	Condition
Open load protection	Yes	Automatic recovering
Short circuit protection	Yes	Automatic recovering
Over power protection	Yes	Automatic recovering
Suitable for fixtures with protection class	I	per IEC60598

Inrush current

Specification item	Value	Unit	Condition
Inrush current	43	A	Input voltage 230V
Inrush peak width	169	μs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 15	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 Protective Conductor Current (ins. Class I)	0.5	mA rms	Acc. IEC60598-1. LED module contribution not included

Surge immunity

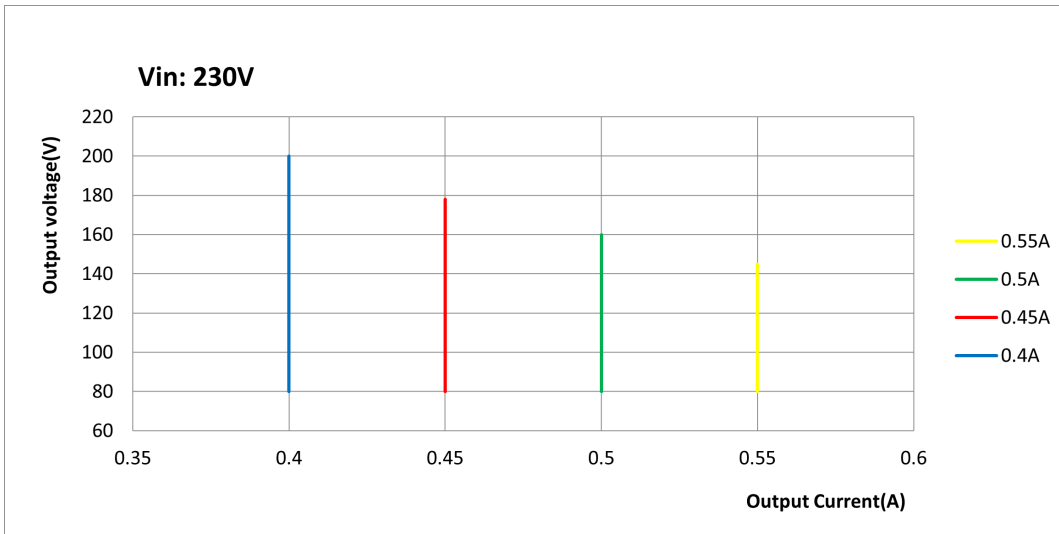
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info (Approbation)

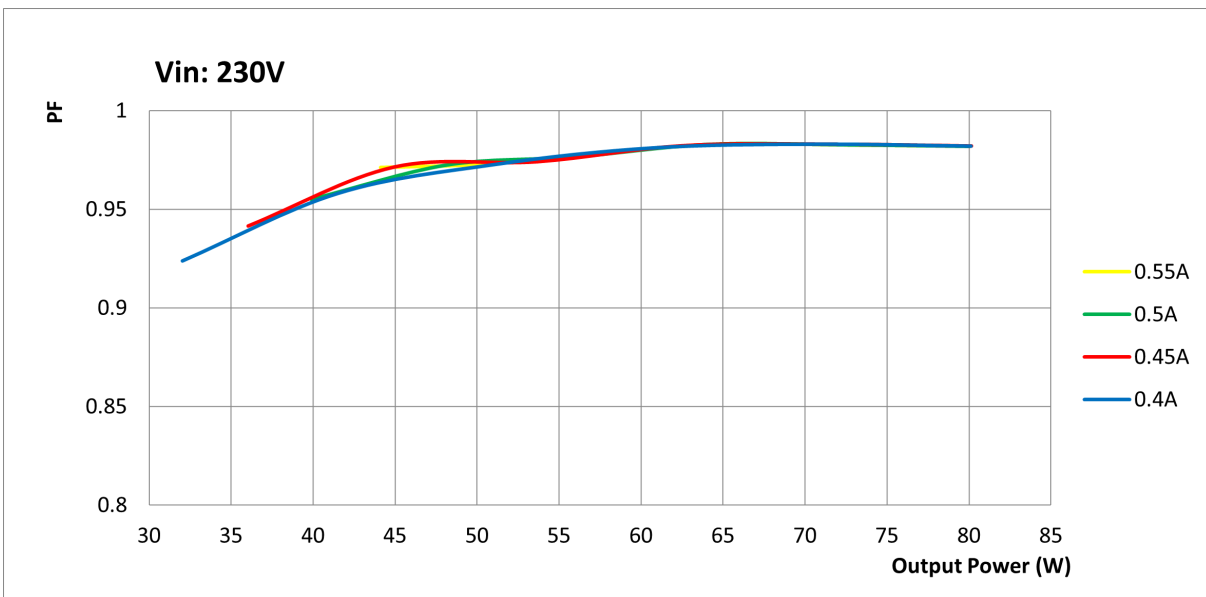
Specification item	Value
Approval marks and Certifications	CB / CCC / CE / EAC / ENEC / RCM / UA / UKCA
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

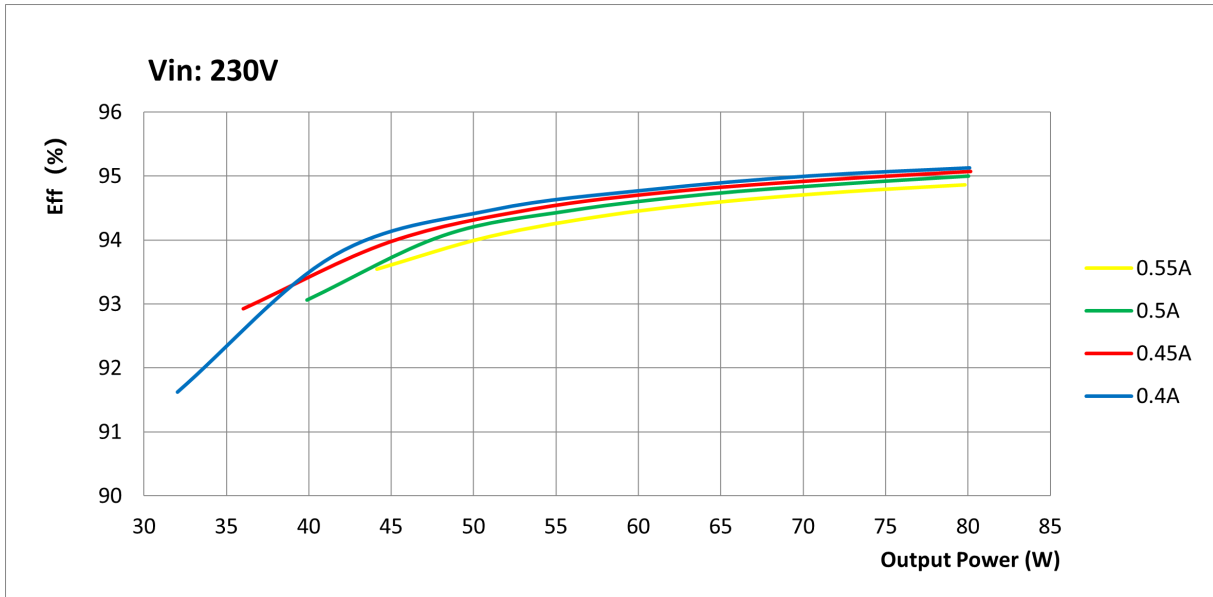
Operating window



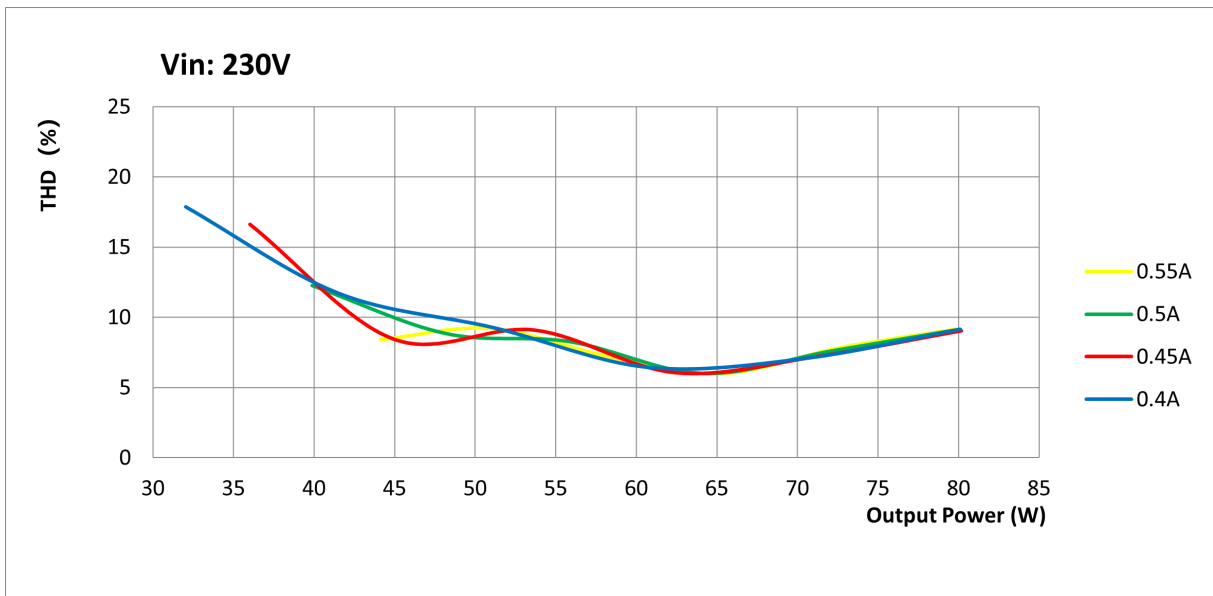
Power factor versus output power



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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