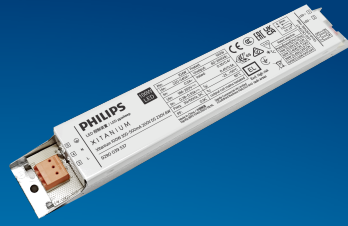


PHILIPS

Xitanium

LED driver



Datasheet

Xitanium non-isolated Dip Switch

Xitanium 100W 350-500mA 200V DS 230V AW

9290 039 53701

Xitanium LED drivers with single current output offer industry leading performance and reliability at optimized cost. They are ideal for high volume applications while delivering to specific requirements. These drivers offer the same level of performance as Xitanium adjustable current linear drivers to ensure high quality of light, but with a specific current setting for optimized performance. Due to the low output current ripple, you can be sure to offer your customers high quality of light without visual flicker and stroboscopic effects.

Features

- Low output current tolerance
- Low output current ripple
- Flexible current setting (4 output currents - dipswitch)
- Suitable for Class I luminaires

Benefits

- High quality of light
- High reliability
- Optimized performance at specific output current settings

Application

- Offices
- Retail: supermarkets, shopping malls

Logistical data

Specification item	Value
Product name	Xitanium 100W 350-500mA 200V DS 230V AW
EOC	872110307260300
Logistic code 12NC	9290 039 53701
EAN1 (GTIN)	8721103072603
EAN3 (box)	8721103072610
Pieces per box	50
Weight	165 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	0.5	A	@ full output power @ rated input voltage
Rated input power	104.0	W	@ full output power @ rated input voltage
Power factor performance range	≥ 0.9 C		
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	≥ 94.0	%	@ full output power @ rated input voltage @ max. U _{out}
Rated input voltage DC	186...250	V _{dc}	Performance range
Rated input current DC	0.38...0.55	A _{dc}	Performance range
Input voltage AC	198...264	V _{ac}	Operational range
Input frequency AC	47.5...63	Hz	Operational range
Input voltage DC	168...275	V _{dc}	Operational range
Isolation input to output	No		

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	350 / 400 / 450 / 500	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	28.0...100.0	W	
Rated output power	100.0	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	0.5...1.5 / 20...16	mm ² / AWG	WAGO744, solid wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm ² / AWG	WAGO744, solid wire
Output wire strip length	8...9	mm	
Maximum cable length	2	m	Total length of wiring including LED module, one way

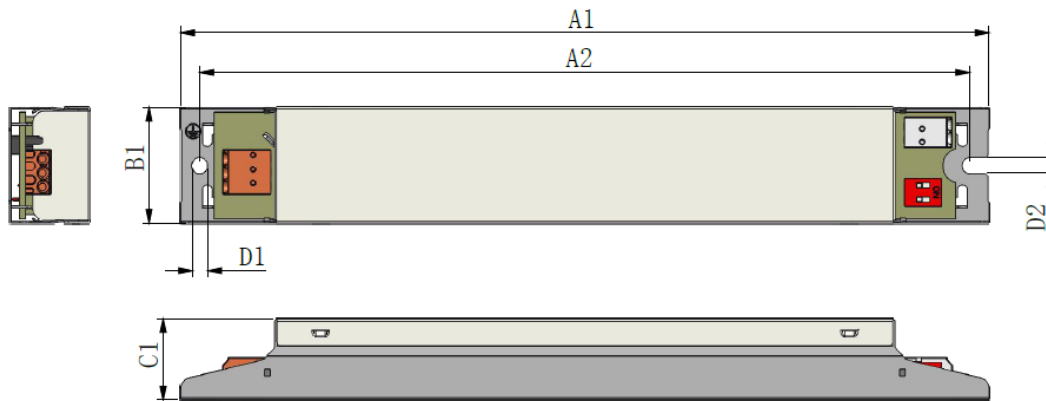


Isolation

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	165	gram	
Housing color	white		

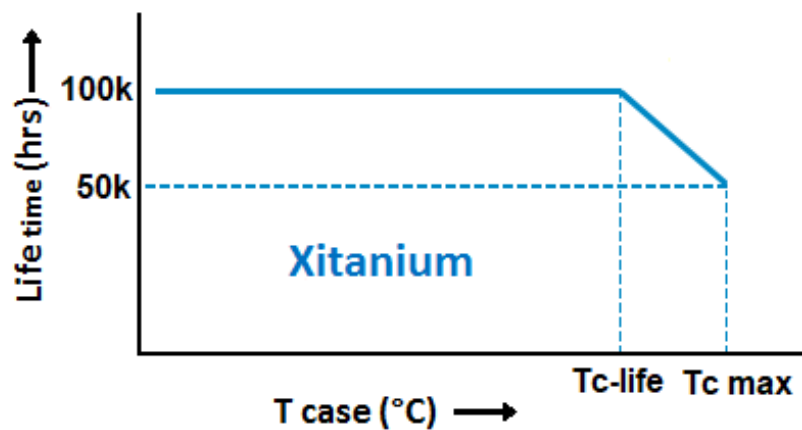


Operational temperatures and humidity

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

Non-programmable features

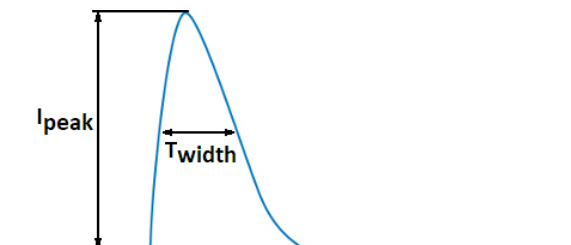
Specification item	Value		Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Suitable for fixtures with protection class	I		per IEC60598

Inrush current

Specification item	Value	Unit	Condition
Inrush current	53	A	Input voltage 230V
Inrush peak width	176	μs	Input voltage 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 12	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

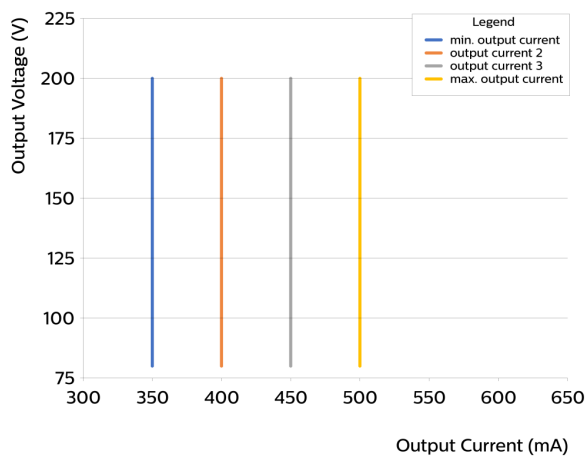
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info (Approbation)

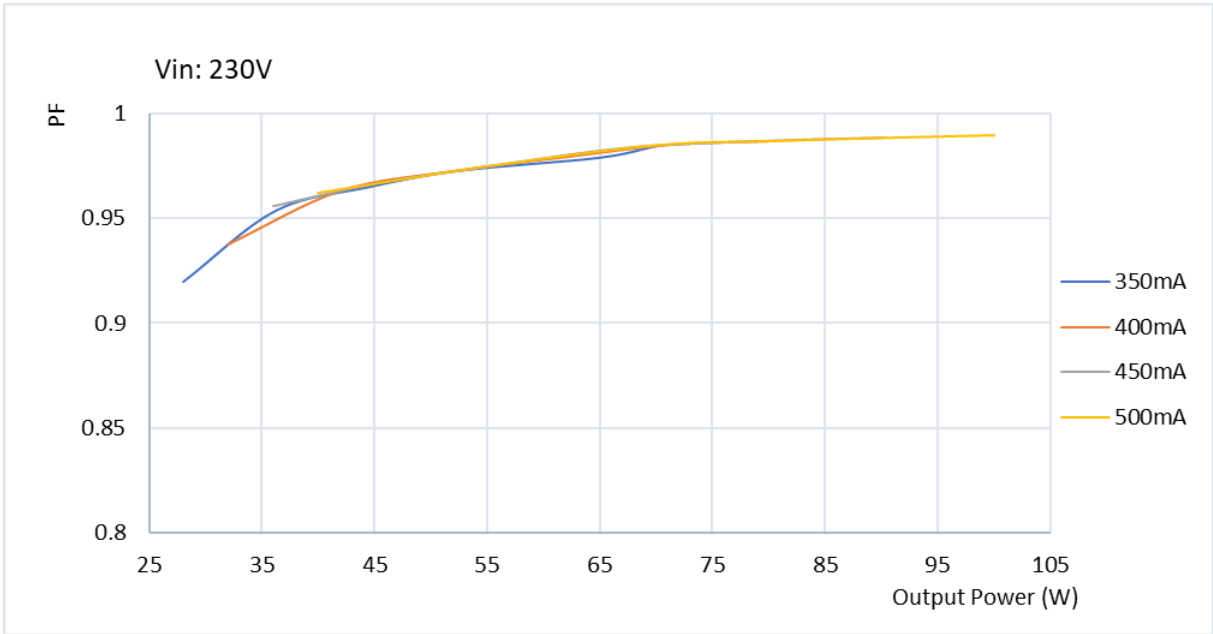
Specification item	Value
Approval marks and Certifications	CB / CCC / CE / EAC / EL / ENEC / RCM / UA / UKCA
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

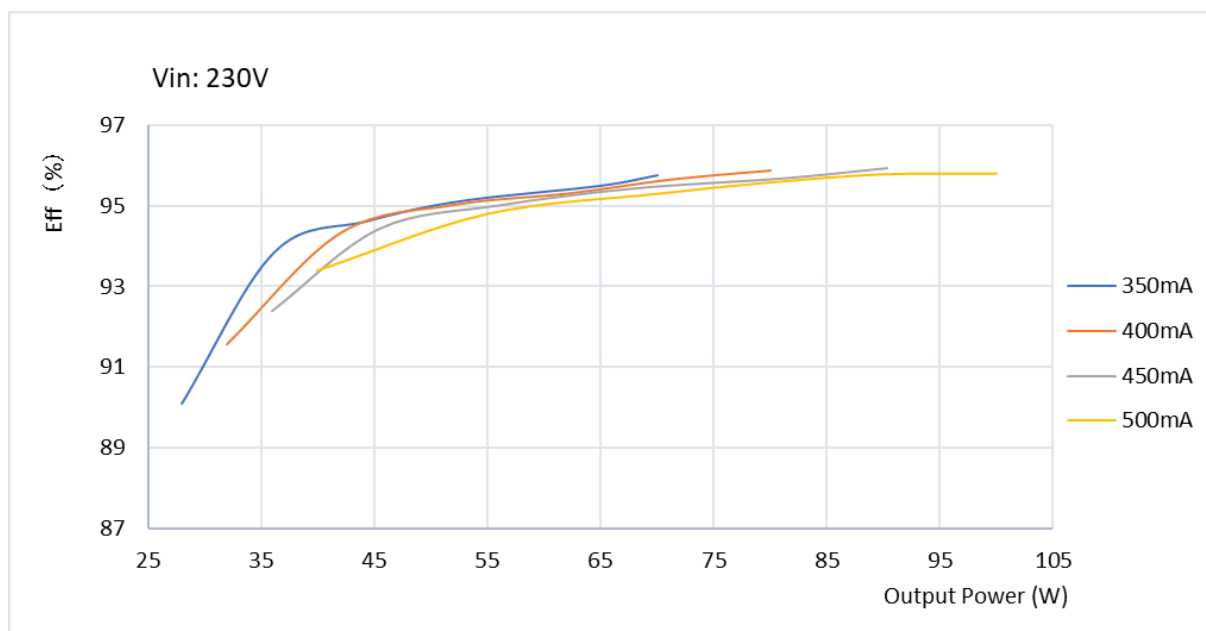
Operating window



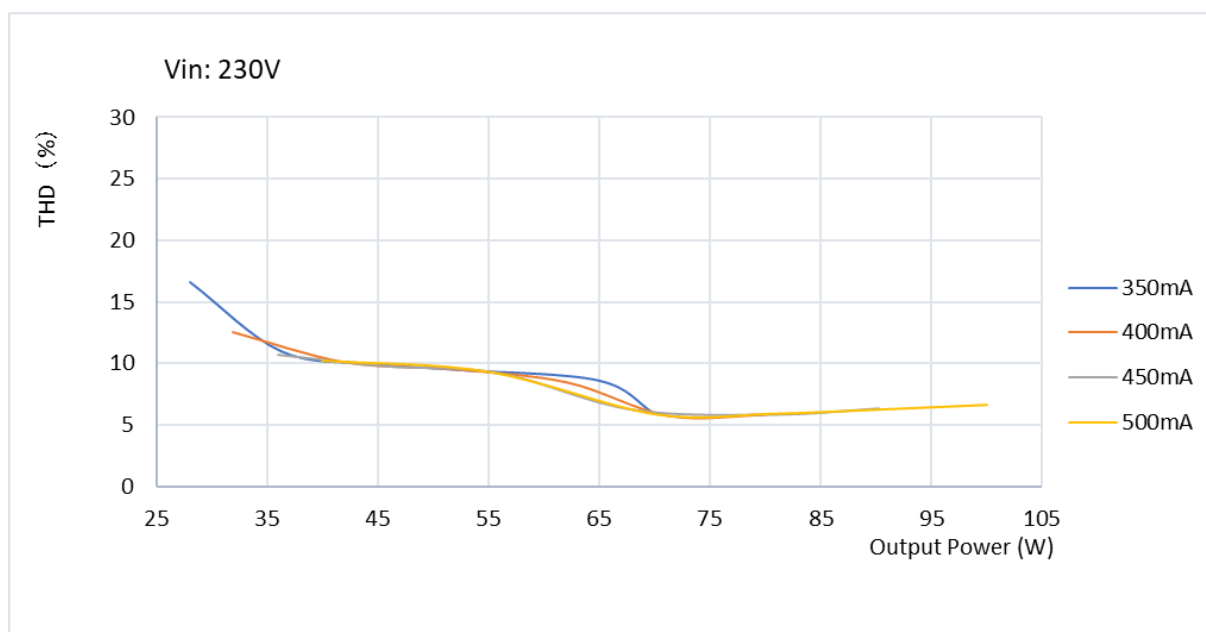
Power factor versus output power



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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Date of release: February 24, 2025 v8

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