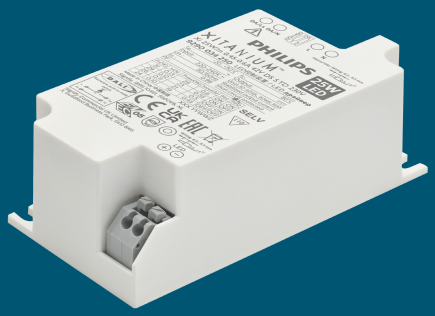
Xitanium

Datasheet

Xitanium LED drivers – spot- and downlight

Xi 25W/m 0.45-0.6A 42V DS S TD 230V
9290 034 25080



Enabling future-proof LED technology

Xitanium LED drivers are designed to operate LED solutions for general lighting applications. With Xitanium LED drivers, flexibility in luminaire design is assured thanks to an adjustable output current. Application-oriented operating windows offer stable lumen output and light quality levels that specifiers and architects demand. The adjustable output current also enables operation of various LED PCB solutions from different manufacturers.

Benefits

- High reliability underpinned by 5 year warranty
- Future-proof flexibility - application-oriented operating windows enable LED generation and complexity management
- Compatibility - can also be used for other manufacturers' modules or OEMs' own PCB designs

Features

- Operating windows - output current can be adjusted via a resistor outside the driver
- Housing for down- and spotlighting, in build-in and independent (with strain relief) versions

Application

- Retail

Logistical data

Specification item	Value
Product name	Xi 25W/m 0.45-0.6A 42V DS S TD 230V
Logistic code 12NC	9290 034 25080
Pieces per box	40
Weight	90 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	0.13	A	@ full output power @ rated input voltage
Rated input power	31.0	W	@ full output power @ rated input voltage
Power factor performance range	≥ 0.96		@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	87.0	%	@ full output power @ rated input voltage @ max. Uout
Input voltage AC	198...264	V_{ac}	Operational range
Input frequency AC	47.5...63	Hz	Operational range
Standby Power (W)	0.5	W	
Isolation input to output	SELV		

Electrical output data

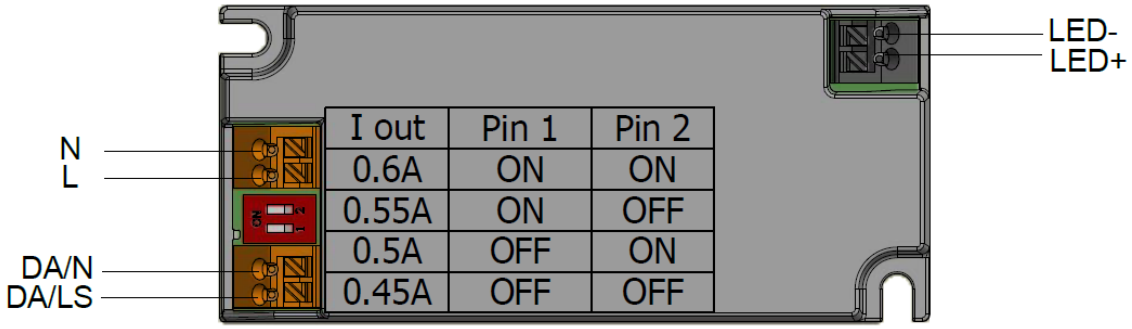
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...42	V_{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	450 / 500 / 550 / 600	mA	
Output current tolerance ±	5	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 15	%	
Output P_{st}^{LM}	≤ 1.0		In entire operating window
Output SVM	≤ 0.6		In entire operating window
Output power	14.9...25.2	W	
Rated output power	25.2	W	

Control interfaces

Specification item	Value	Unit	Condition
Control method	Corridor Mode, DALI, TD		See design-in guide at www.philips.com/oem for more controllability details.
Dimming range	1...100	%	Default range
Isolation controls input to output	Reinforced		acc. IEC61347-1

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	
Control wire cross-section	0.5...1.5 / 20...16	mm^2 / AWG	solid / stranded wire
Control wire strip length	8.5...9.5	mm	
Maximum cable length	0.6	m	Total length of wiring including LED module, one way

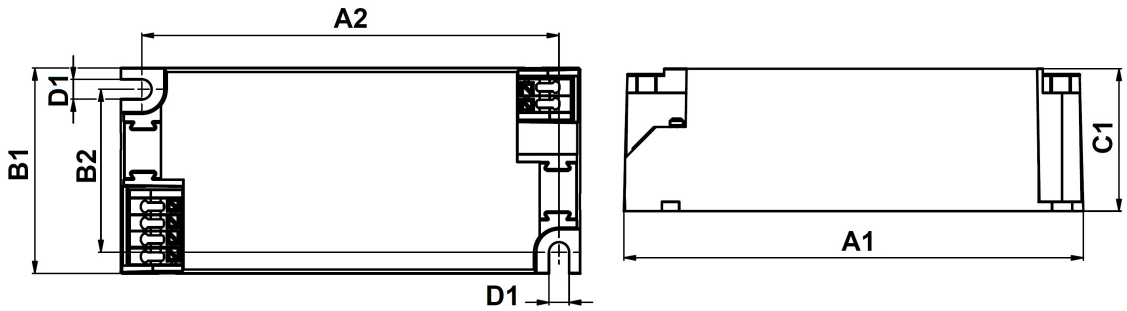


Isolation

Insulation per IEC61347-1	Input	Output	DALI
Input	-	SELV	Basic
Output	SELV	-	Reinforced
DALI	Basic	Reinforced	-

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	97.2	mm	
Mounting hole distance (A2)	88.5	mm	
Width (B1)	43	mm	
Width (B2)	34	mm	
Height (C1)	30	mm	
Mounting hole diameter (D1)	4.2	mm	
Weight	90	gram	
Housing color	white		

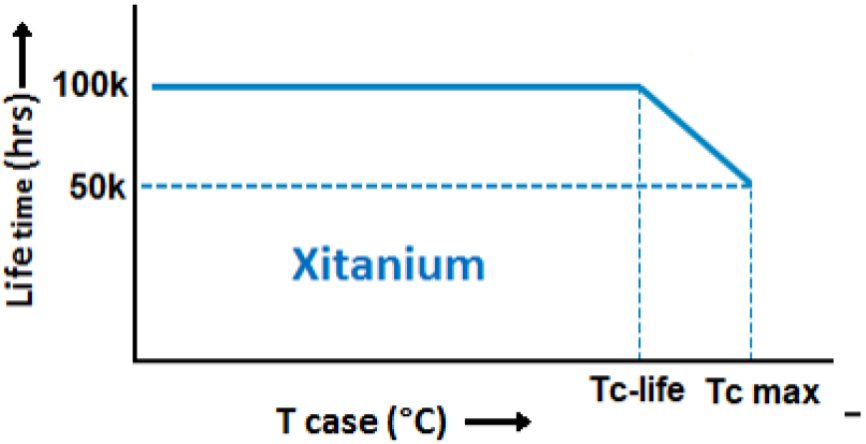


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	80	°C	Maximum temperature measured at T_{case}-point
Tcase-life	80	°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 Tcmax - 10 degrees. Maximum failures = 10%
Driver lifetime Tcmax	50,000	hours	Measured temperature at Tcase-point is Tc-max. Maximum failures = 10%



Maximum failures = 10%

Maximum failures = 10%

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

Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-25...+85	°C	
Relative humidity	5...95	%	Non-condensing

Programmable features

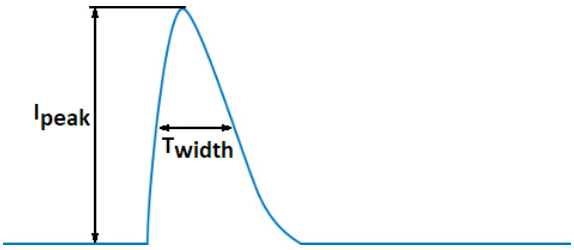
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	DipSwitch	450 mA	
Adjustable Light Output (ALO)	Yes		
Constant Light Output (CLO)	Yes		
Touch & Dim (TD)	Yes	ON	Factory default setting: ON
Corridor Mode	Yes	ON	Default: T1=55s, T2=12s, T3=30min
Min Dim Level (%)	Yes		
OEM Write Protection (OWP)	Yes	OFF	

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 and II	per IEC60598

Inrush current

Specification item	Value	Unit	Condition
Inrush current	16.5	A	Input voltage 230V
Inrush peak width	177	µs	Input voltage 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 36	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

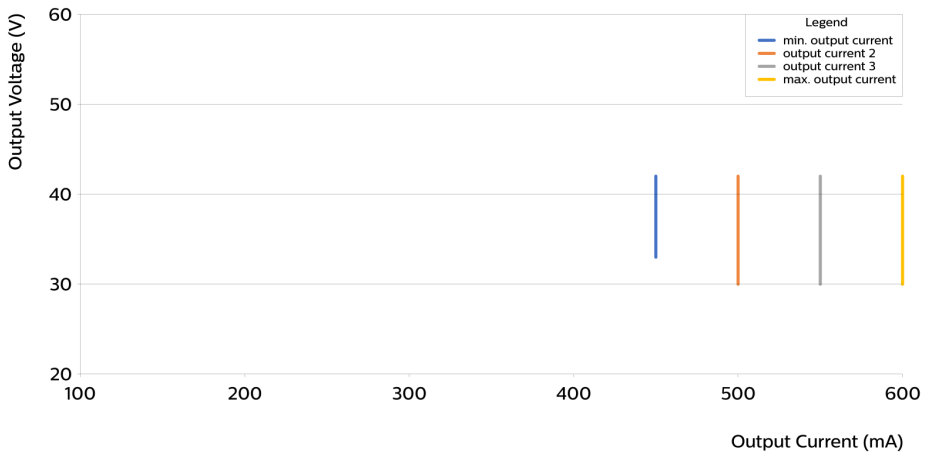
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us
Control surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Control surge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

Application Info (Approbation)

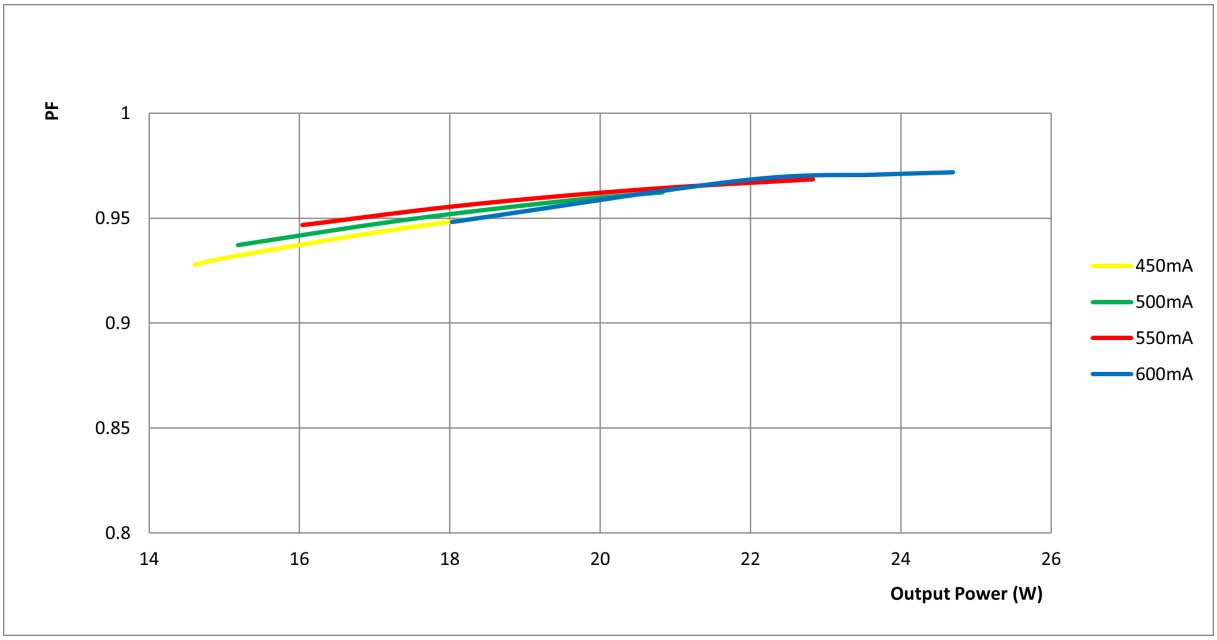
Specification item	Value
Approval marks and Certifications	BIS / CB / CCC / CE / DALI 2 / EAC / ENEC / RCM / SELV / TISI / UKCA
Ingress Protection classification (IP)	20
Application	Indoor Point
Mounting Type	Built-in

Graphs

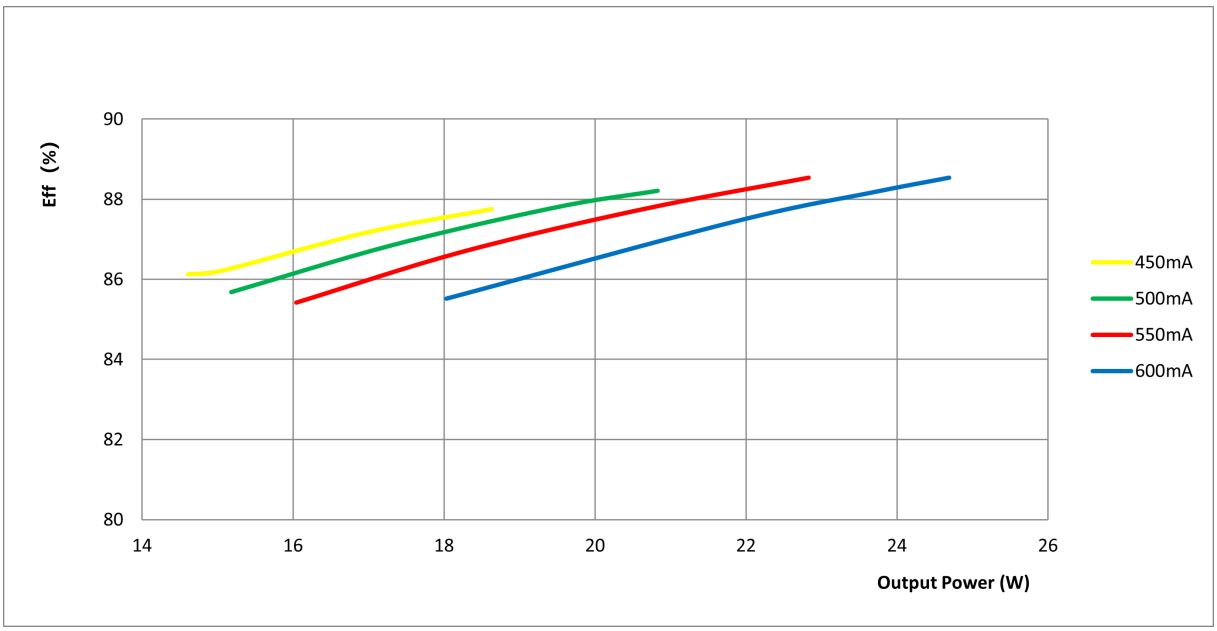
Operating window



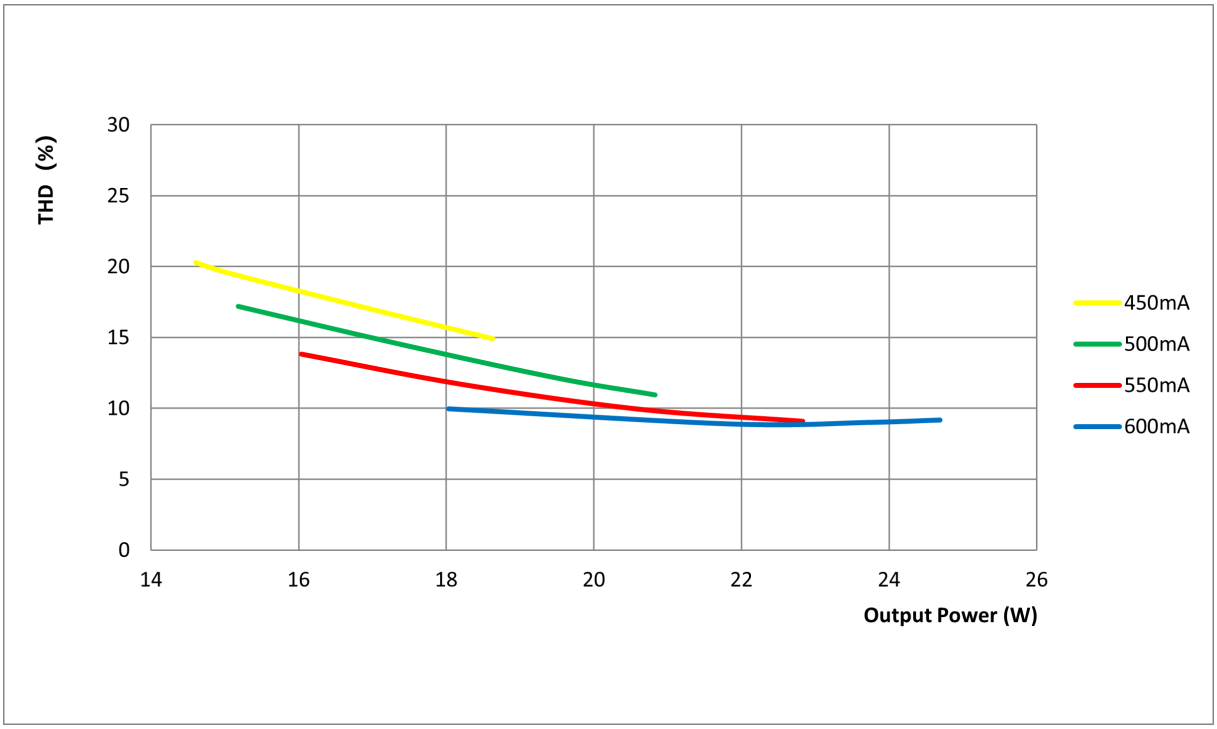
Power factor versus output power



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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