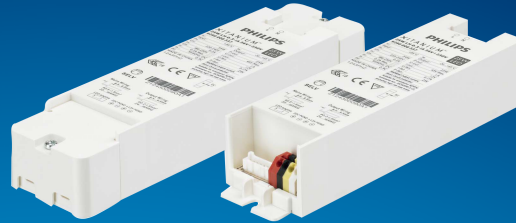


# PHILIPS

## Xitanium

### LED driver



## Datasheet

### Xitanium LED drivers – spot- and downlight SELV

Xitanium 25W LH 0.3-1A 36V TD/Is 230V

9290 008 63703

#### Enabling future-proof LED technology

Our Xitanium programmable window LED drivers ensure OEMs have complete flexibility and control in producing high quality luminaires. Available in application-dedicated form factors for built-in use and independent applications, our LED point drivers provide further customization via wide operating windows. Additionally, almost all drivers feature the following specifications: SELV, improved ripple current, temperature derating, – providing OEMs the tools to produce, and even alter later if necessary, premium downlights and spotlights.

#### 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 the Philips MultiOne configurator ('TD' drivers) or with a resistor outside the driver or SimpleSet
- Power ratings: 10-75W
- Choice of housing designs -linear housing for tracks in '3 in 1' in design, conventional HID housings for down and Spotlighting and WH housing for independent use with strain relief and loop through

#### Application

- Retail
- Office

## 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	0.2	A	@ rated output power @ rated input voltage
Rated input power	29	W	@ rated output power @ rated input voltage
Power factor	0.9		@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	≥ 87	%	@ rated output power @ rated input voltage
Rated input voltage DC range	186...250	V <sub>dc</sub>	Performance range
Input voltage AC range	202...254	V <sub>ac</sub>	Operational range
Input frequency AC range	47.5...64	Hz	Operational range
Input voltage DC range	168...275	V <sub>dc</sub>	Operational range
Isolation input to output	SELV		

## Electrical output data

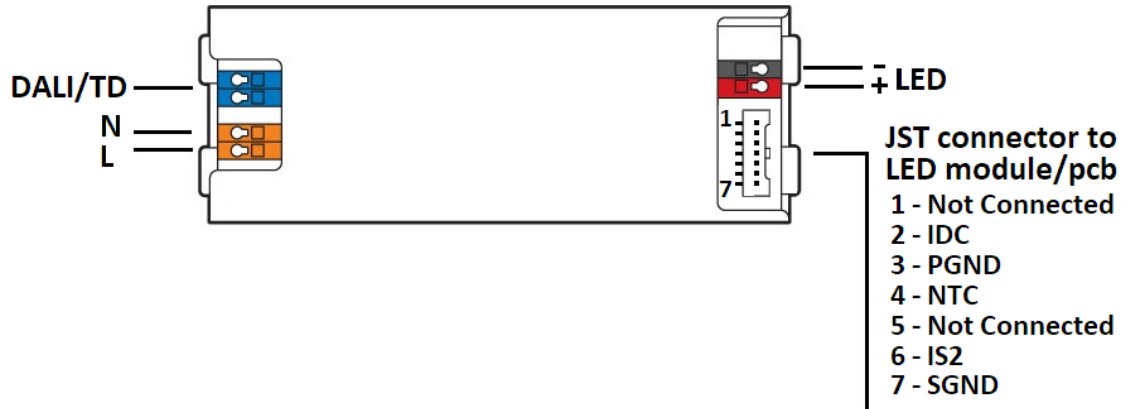
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	18...36	V <sub>dc</sub>	
Output voltage max.	50	V	Maximum output voltage (rms)
Output current	0.3...1	A	
Output current tolerance ±	5	%	
Output current ripple LF	≤ 20	%	Ripple = peak / average, < 3kHz
Output power	5...26	W	

## Electrical data controls input

Specification item	Value	Unit	Condition
Control method	DALI, Touch & Dim (TD)		
Dimming range	1...100	%	Default range
Isolation controls input to output	Basic		acc. IEC61347-1

## Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.5...1.5 / 20...16	mm <sup>2</sup> / AWG	WAGO250 (pitch 3.5 mm), solid / stranded wire
Input wire strip length	8.5...9.5	mm	
Output wire cross-section	0.08...0.33 / 28...22	mm <sup>2</sup> / AWG	JST, solid wire
Output wire cross-section	0.5...1.5 / 20...16	mm <sup>2</sup> / AWG	WAGO250 (pitch 3.5 mm), solid / stranded wire
Output wire strip length	8.5...9.5	mm	
Maximum cable length	0.5	m	Total length of wiring including LED module, one way

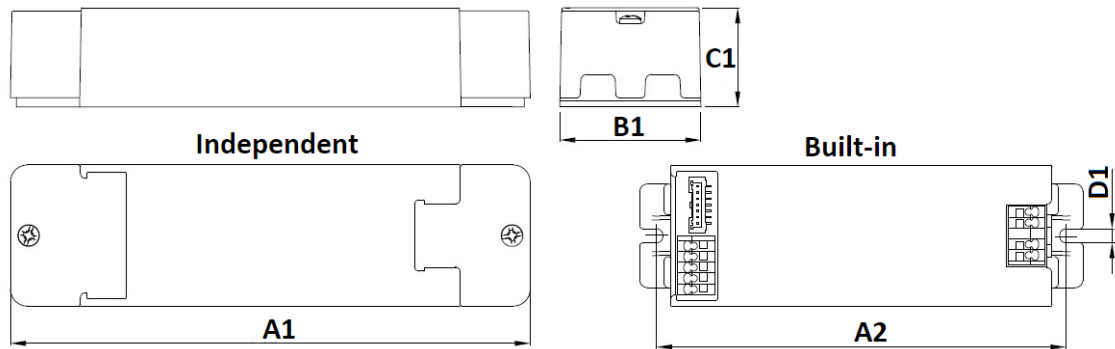


## Insulation

Insulation per IEC61347-1	Input	Output
Input		SELV
Output	SELV	

## Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	150	mm	
Mounting hole distance (A2)	114	mm	
Width (B1)	46	mm	
Height (C1)	32	mm	
Mounting hole diameter (D1)	4.2	mm	
Weight	150	gram	



## Logistical data

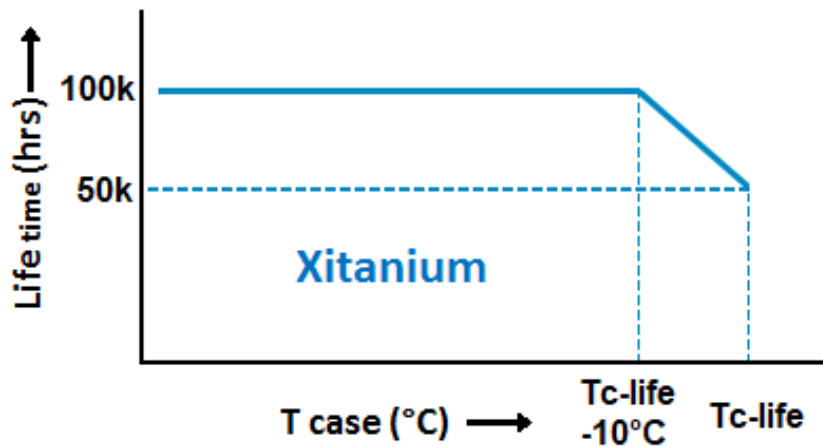
Specification item	Value
Product name	Xitanium 25W LH 0.3-1A 36V TD/Is 230V
EOC	871829170803200
Logistic code 12NC	9290 008 63703
EAN1 (GTIN)	8718291708032
EAN3	8718291708049
Pieces per box	10

## Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+65	°C	Higher ambient temperature allowed as long as T <sub>case-max</sub> is not exceeded
T <sub>case-max</sub>	90	°C	Maximum temperature measured at T <sub>case-point</sub>
T <sub>case-life</sub>	80	°C	Measured at T <sub>case-point</sub>
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	50,000	hours	Measured temperature at Tcase-point is Tcase-life. 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

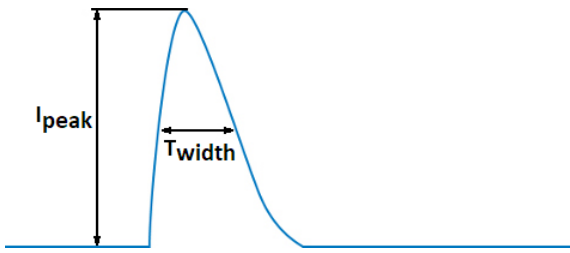
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	Programmable, Rset2	700 mA	
LED Module Temperature Protection (MTP)	Yes	OFF	
Constant Light Output (CLO)	Yes	OFF	
Touch & Dim (TD)	Yes	ON	
Corridor Mode	Yes	ON	Default: T1=55s, T2=12s, T3=30min
DC emergency (DCemDim)	Yes	ON	Current output decreased to 15%

## 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	Yes	
Suitable for fixtures with protection class	II	per IEC60598
Energy metering	No	
Diagnostics	No	

## Inrush current

Specification item	Value	Unit	Condition
Inrush current $I_{peak}$	20	A	Input voltage 230V
Inrush current $T_{width}$	150	$\mu$ s	Input voltage 230V, measured at 50% $I_{peak}$
Drivers / MCB 16A type B	$\leq 30$	pcs	Indicative value



MCB	Rating	Relative number of LED drivers
B	4A	25%
B	6A	40%
B	10A	63%
B	13A	81%
B	16A	100% (stated in datasheet)
B	20A	125%
B	25A	156%
B	32A	200%
B	40A	250%
C	4A	42%
C	6A	63%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%
C	32A	340%
C	40A	415%

## Driver touch current / protective conductor 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

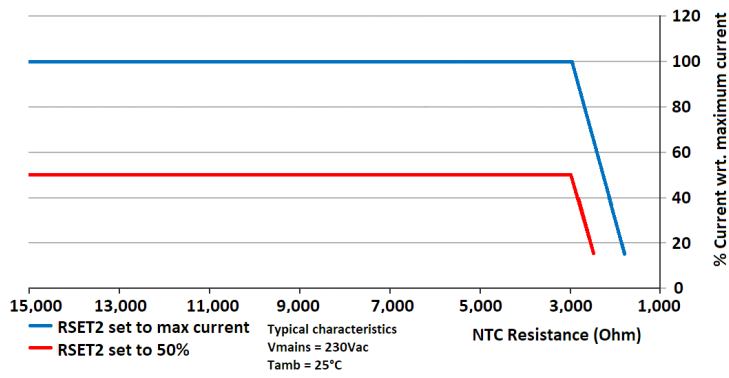
## Application Info

Specification item	Value
Approval marks	BIS / CCC / CE / EAC / EL / ENEC / RCM / SELV / UA
Ingress Protection classification (IP)	20
Application	Indoor Point
Mounting Type	Built-in / Independent

## Module Temperature Protection

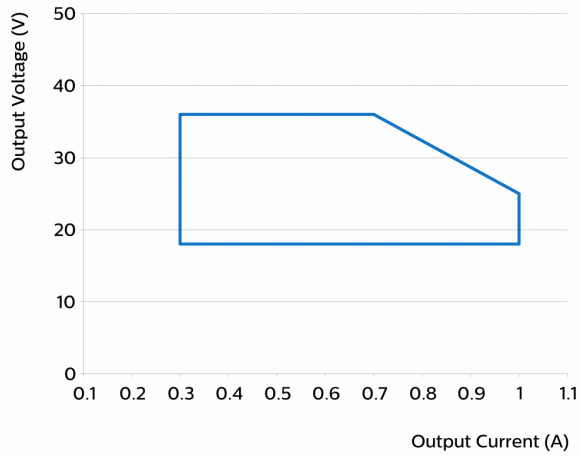
Specification item	Value	Unit	Condition
Advised NTC type	Vishay 15Kohm +/- 2%	238161554153	
	Murata NCP15XW153E03RC	NCP15XW153E03RC	With 390Ω in series
NTC resistance threshold	2966	Ω	Start limiting output current
Corresponding temperature	70	°C	With advised type 238161554153

## NTC resistance versus output current



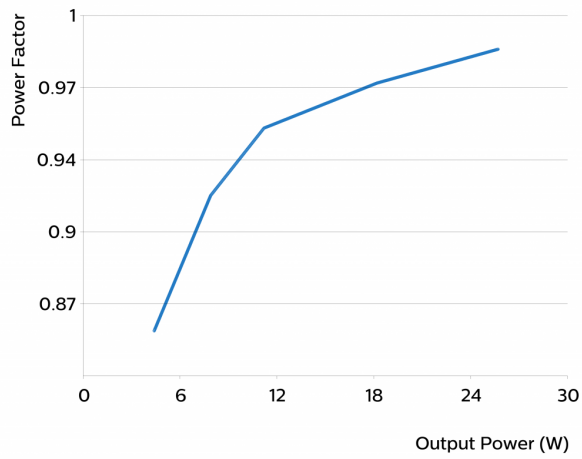
## Graphs

### Operating window



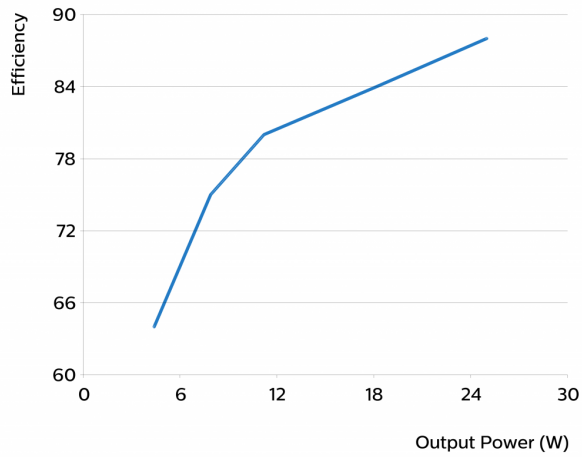
## Power factor versus output power

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## Efficiency versus output power

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