



## Datasheet

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

Xitanium 36W WH 0.3-1.05A 54V SR S 230V

9290 039 18606

#### 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.

#### 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

#### 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

#### Application

- Retail
- Office

## Logistical data

Specification item	Value
Product name	Xitanium 36W WH 0.3-1.05A 54V SR S 230V
EOC	872110303618600
Logistic code 12NC	9290 039 18606
EAN1 (GTIN)	8721103036186
EAN3 (box)	8721103036193
Pieces per box	9
Weight	150 gram

## 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	50...60	Hz	Performance range
Rated input current	0.19	A	@ rated output power @ rated input voltage
Rated input power	44.0	W	@ rated output power @ rated input voltage
Power factor performance range	≥ 0.9 C		@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	89.0	%	@ rated output power @ rated input voltage @ Max. I <sub>out</sub>
Rated input voltage DC	186...250	V <sub>dc</sub>	Performance range
Rated input current DC	0.22	A <sub>dc</sub>	Performance range
Input voltage AC	198...264	V <sub>ac</sub>	Operational range
Input frequency AC	45...66	Hz	Operational range
Input voltage DC	168...275	V <sub>dc</sub>	Operational range
Standby Power (no load)	0.49	W	Excl. consumption by sensors connected to the DA bus
Isolation input to output	SELV		

## Electrical output data

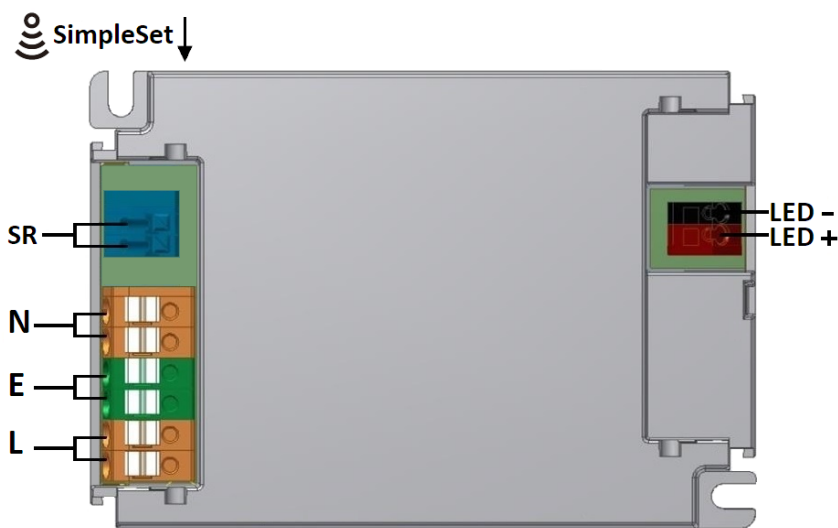
Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	24...54	V <sub>dc</sub>	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	300...1050	mA	
Output current min programmable	300	mA	
Min output current	7	mA	
Output current tolerance ±	5	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak / average < 3kHz
Output P <sub>st</sub> <sup>LM</sup>	≤ 0.1		In entire operating window
Output SVM	≤ 0.1		In entire operating window
Output power	11.0...36.0	W	

Control interfaces

Specification item	Value	Unit	Condition
Control method	SR		Output current amplitude dimming. Please refer to design-in guide at <a href="http://www.philips.com/oem">www.philips.com/oem</a> for more controllability details.
Dimming range	1...100	%	Acc. D4i. See <a href="http://www.digitalilluminationinterface.org/products">www.digitalilluminationinterface.org/products</a>
Isolation controls input to output	Supplementary		acc. IEC61347-1
SR Power Supply max voltage.	22.5	V	
SR output current	52	mA	
SR Power Supply max current source	60	mA	

Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.5...2.5 / 20...14	mm <sup>2</sup> / AWG	WAGO264, solid / stranded wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5 / 20...16	mm <sup>2</sup> / AWG	solid / stranded wire
Output wire strip length	8.5...9.5	mm	
Control wire cross-section	0.5...1.5 / 20...16	mm <sup>2</sup> / AWG	solid / stranded wire
Control wire strip length	8.5...9.5	mm	
Maximum cable length	0.6	m	CISPR15: between driver and LED module
Loop Through	Input		

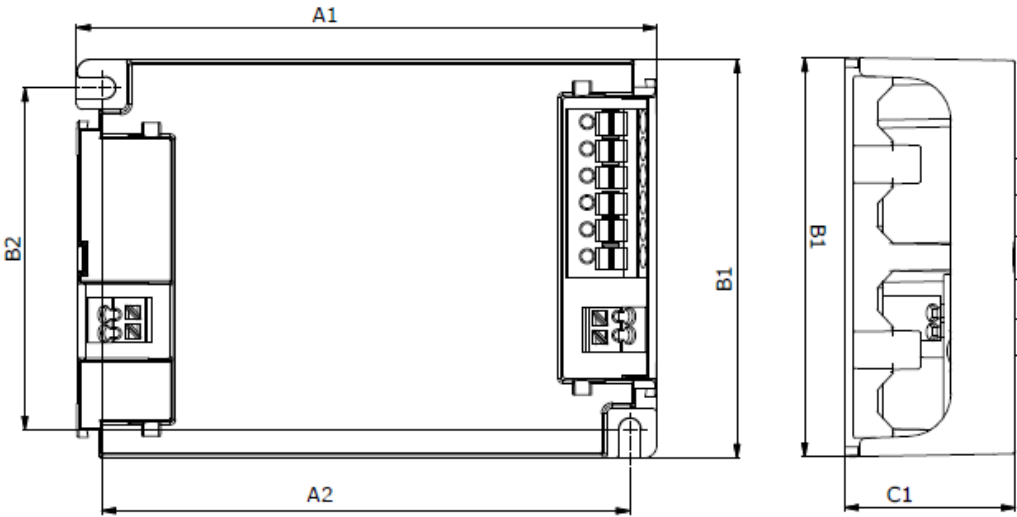


Isolation

Insulation per IEC61347-1	Input	Output	DA
Input	-	SELV	Reinforced
Output	SELV	-	Supplementary
DA	Reinforced	Supplementary	-

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	109	mm	
Mounting hole distance (A2)	99	mm	
Width (B1)	75	mm	
Height (C1)	32.5	mm	
Mounting hole diameter (D1)	4.1	mm	
Weight	150	gram	

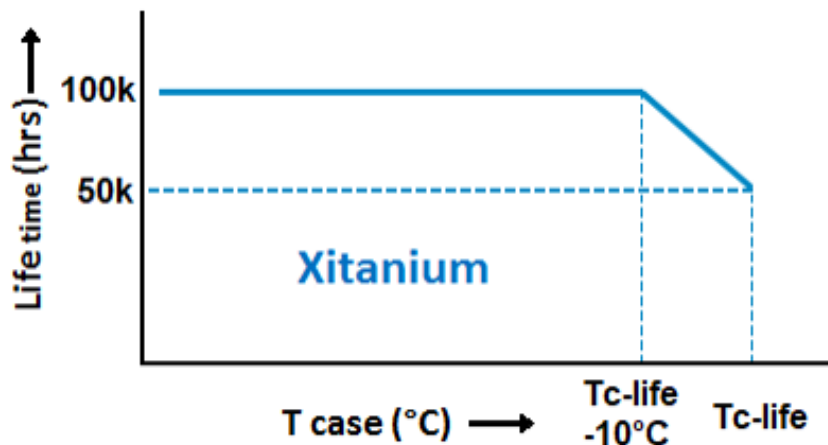


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+55	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	85	°C	Maximum temperature measured at Tcase-point
Tcase-life	75	°C	Measured at Tcase-point
Maximum housing temperature	110	°C	In case of a failure. Thermal protection: 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%



Maximum failures = 10%

Temperature [°C]	Lifetime	Unit	Condition
85	25000	hr	
80	35000	hr	
75	50000	hr	Temperature measured @Tc point
70	>50000	hr	
65	>50000	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)	Programmable, SimpleSet	300 mA	
Adjustable Light Output (ALO)	Yes	OFF	
Adjustable Light Output (ALO) min level	Yes	OFF	
Constant Light Output (CLO)	Yes	OFF	
Min Dim Level (%)	Yes	1 %	
DC emergency (DCemDim)	Yes	ON	Default 15%, EOFx range = 1 .. 100% (EOFx = DCemDIM level). Internal fuse rating: T630mA 250VDC/AC
DALI control supported at DC operation	Yes	OFF	
OEM Write Protection (OWP)	Yes	OFF	
DALI Power Supply (DALI part 250)	Yes	ON	
Luminaire Info (DALI part 251)	Yes		
Luminaire maintenance (DALI part 253)	Yes		

## Non-programmable features

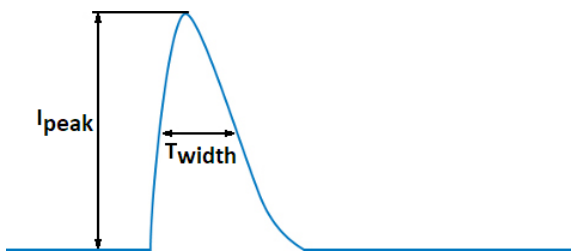
Specification item	Value		Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	Yes		
Suitable for fixtures with protection class	I		per IEC60598
Energy metering (DALI part 252)	Yes		Accuracy = 4%
Diagnostics (DALI part 253)	Yes		
Diagnostics via Signify tool	Yes		

## Inrush current

Specification item	Value	Unit	Condition
Inrush current	9	A	Input voltage 230V
Inrush peak width	25	μs	Input voltage 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 32	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
Typical Protective Conductor Current (ins. Class I)	0.5	mA rms	Acc. IEC60598-1. LED module contribution not included

## Surge immunity

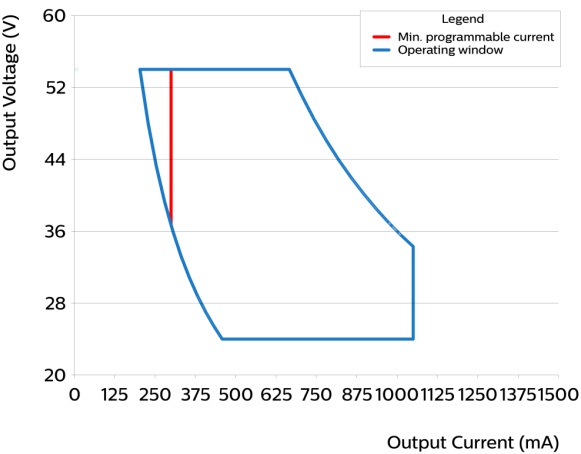
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us
Control surge immunity (diff. mode)	0.03	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Control surge 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	CCC / CE / D4i / EL / ENEC / RCM / SELV / SR / UA / UKCA / WEEE
Ingress Protection classification (IP)	20
Application	Indoor Point
Mounting Type	Built-in

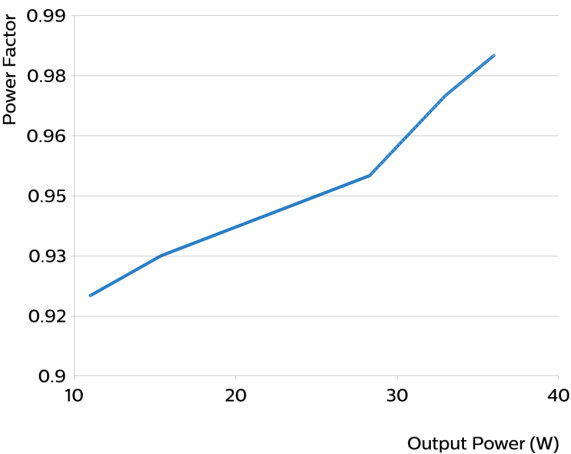
Graphs

Operating window

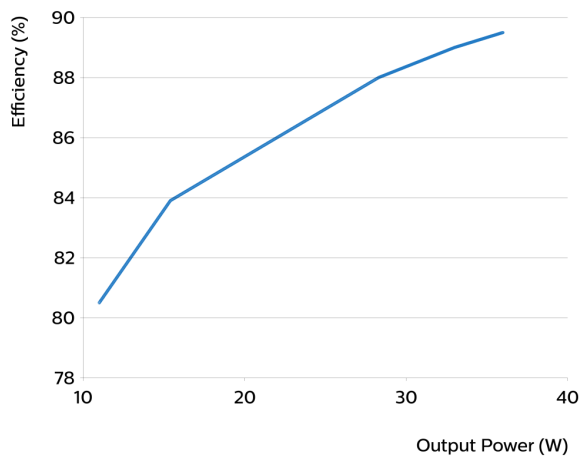


Type	Output current (mA)	Min. output voltage (V)	Max. output voltage (V)	Max. output power (W)
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	300	36	54	16.2
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	350	31	54	18.9
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	400	27	54	21.6
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	450	24	54	24.3
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	500	24	54	27
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	550	24	54	29.7
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	600	24	54	32.4
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	650	24	54	35.1
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	700	24	51	36
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	750	24	48	36
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	800	24	45	36
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	850	24	42	36
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	900	24	40	36
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	950	24	37	36
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	1000	24	36	36
Xitanium 36W WH 0.3-1.05A 54V SR S 230V	1050	24	34	36

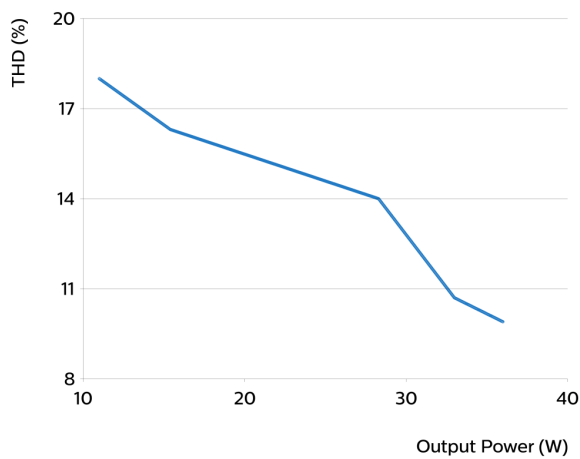
Power factor versus output power



Efficiency versus output power



THD versus output power



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