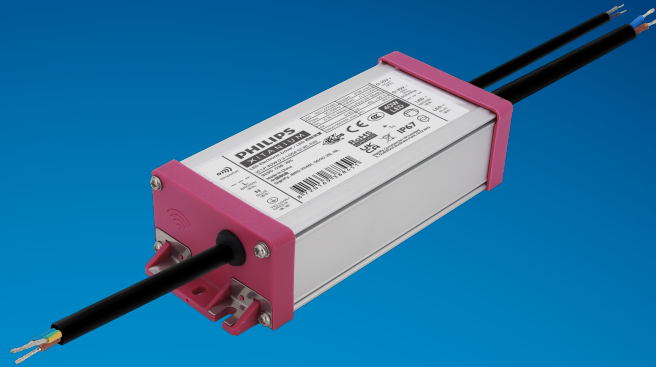


# PHILIPS

## Xitanium

### LED driver



## Datasheet

### Xitanium LITE Programmable LED Drivers

Xi LP 40W 0.3-1.05A S1 WL I125

9290 038 76580

Xitanium Lite Programmable (LP) LED drivers are value engineered to deliver a carefully selected programming feature set and high-end performance, making it a preferred choice for outdoor applications. One of the key features is SimpleSet®, an easy and fast way to configure the driver without the need to power the driver. The WideLine family can operate on input voltage 100-277Vac and ensure 100% performance from 202-254Vac.

#### Features

- A selected programmable feature set via SimpleSet®, based on NFC technology
- Adjustable Output Current (AOC)
- Dimming (0-10V) and reversed dimming available
- 10-step DynaDimmer
- Constant Light Output (CLO)
- WideLine input voltage range: 100-277Vac
- High surge protection: 6/10kV (DM/CM)
- IP67 waterproof
- 50,000 hours lifetime@Tc 80°C and 100,000 hours lifetime@Tc 70°C
- High efficiency up to 90%

#### Benefits

- Ultimate robustness, offering peace of mind and lower maintenance costs
- Long lifetime and high survival rate
- Energy savings through high efficiency
- Balanced configurable feature set covering the most common applications
- Superior thermal management
- Consistent waterproof performance through the lifecycle
- Easy to design-in, configure and install for Class I applications

#### Application

- Road and street lighting
- Area and flood lighting
- Tunnel lighting

## Logistical data

Specification item	Value
Product name	Xi LP 40W 0.3-1.05A S1 WL I125
Logistic code 12NC	9290 038 76580
Pieces per box	16
Weight	475 gram

## Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	202...254	V <sub>ac</sub>	Performance range
Rated input voltage	230	V <sub>ac</sub>	Performance range
Rated input frequency	47...63	Hz	Performance range
Rated input current	0.21	A	@ rated output power @ rated input voltage
Max. input current	0.35	A	@ rated output power @ minimum performance input voltage
Rated input power	46.0	W	@ rated output power @ rated input voltage
Power factor	0.95		@ rated output power @ rated input voltage
Total harmonic distortion	15	%	@ rated output power @ rated input voltage
Efficiency	90.0	%	@ rated output power @ rated input voltage @max. Uout @Tc max
	89.5	%	@ rated output power @ rated input voltage @ max. Uout
Input voltage AC	95...305	V <sub>ac</sub>	Operational range
Input frequency AC	45...66	Hz	Operational range
Standby Power (W)	< 0.50	W	
Isolation input to output	Basic		

## Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	28...56	V <sub>dc</sub>	
Output voltage max.	78	V	Maximum output voltage (rms)
Output current	300...1050	mA	
Output current min programmable	300	mA	
Min output current	70	mA	
Output current tolerance ±	5	%	@full load
Output current ripple LF	≤ 4	%	Ripple = peak / average @ ≤3KHz, among AOC window.
Output current ripple HF	≤ 15	%	
Output P <sub>st</sub> <sup>LM</sup>	≤ 0.6		In entire operating window
Output SVM	≤ 0.3		In entire operating window
Output power	2.0...40.0	W	

## Control interfaces

Specification item	Value	Unit	Condition
Control method	0-10V		Default: 0-10V. Optional: 1-10V, reversed 1-10V, reversed 0-5V
Dimming range	10...100	%	Dim to off when dimming voltage <0.5V.
Isolation controls input to output	Reinforced		acc. IEC61347-1

## Wiring and Connections

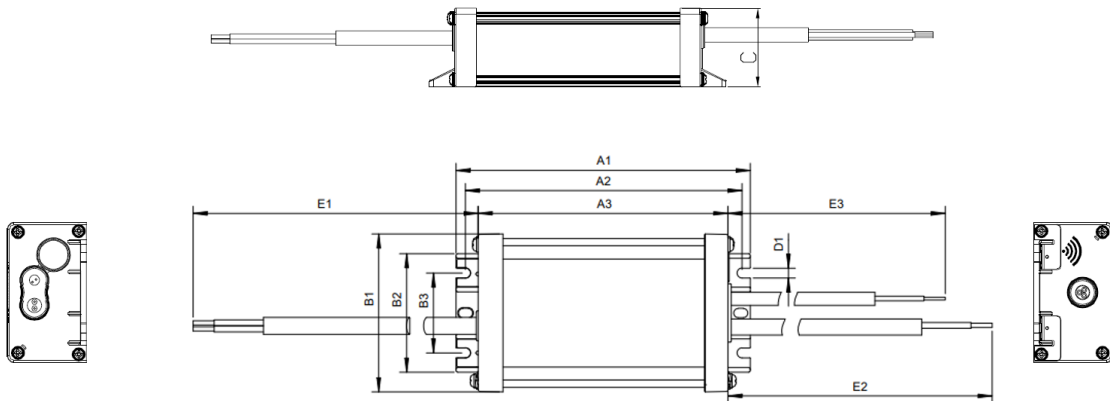
Specification item	Value	Unit	Type
Input wire cross-section	1	mm <sup>2</sup>	3x 1.0mm <sup>2</sup> stranded wires
Output wire cross-section	1	mm <sup>2</sup>	2x 1.0mm <sup>2</sup> stranded wires
Control wire cross-section	0.3	mm <sup>2</sup>	2x 0.3mm <sup>2</sup> stranded wires
Maximum cable length	2	m	Total length of wiring including LED module, one way

## Isolation

Insulation per IEC61347-1	Input	Output	0-10V	Ground
Input	-	Basic	Reinforced	Basic
Output	Basic	-	Reinforced	Basic
0-10V	Reinforced	Reinforced	-	Basic
Ground	Basic	Basic	Basic	-

## Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	125	mm	± 2
Mounting hole distance (A2)	117.5	mm	± 2
Length (A3)	106	mm	± 2
Width (B1)	67	mm	± 1.5
Width (B2)	50.5	mm	± 0.3
Width (B3)	34	mm	± 0.3
Height (C1)	34	mm	± 1.5
Mounting hole diameter (D1)	4.2	mm	± 0.3
Input cable length (E1)	450	mm	± 30
Output cable length (E2)	350	mm	± 30
Control cable length (E3)	250	mm	± 30
Weight	475	gram	

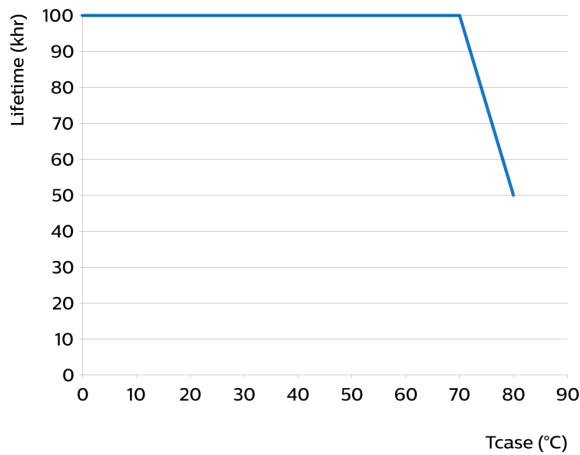


## Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-40...+55	°C	Higher ambient temperature allowed as long as T <sub>case-max</sub> is not exceeded
T <sub>case-max</sub>	80	°C	Maximum temperature measured at T <sub>case-point</sub>
Maximum housing temperature	130	°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 80°C. Maximum failures = 10%
Driver lifetime	100,000	hours	Measured temperature at Tcase-point is 70°C. Maximum failures = 10%



Maximum failures = 10%

## Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-40...+80	°C	
Relative humidity	5...95	%	Non-condensing

## Programmable features

Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	SimpleSet	700 mA	
Driver Temperature Limit (DTL)	Yes	ON	
Adjustable Light Output (ALO)	Yes	OFF	
Constant Light Output (CLO)	Yes	OFF	
0-10V	Yes		Default: 0-10V. Optional: 1-10V, reversed 1-10V, reversed 0-5V
Integrated Dynadimmer	Yes	OFF	

## Non-programmable features

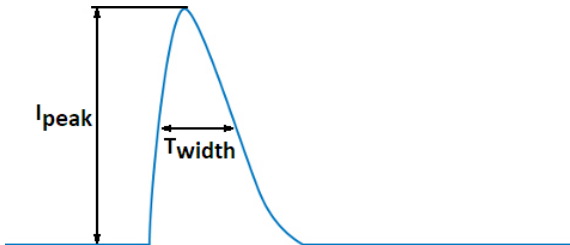
Specification item	Value	Condition
Open load protection	Yes	Automatic recovering
Short circuit protection	Yes	Automatic recovering
Over power protection	Yes	Automatic recovering
Hot wiring	No	
Suitable for fixtures with protection class	I	per IEC60598
Overtemperature protection	Yes	Automatic recovering
Diagnostics via Signify tool	Yes	

## Inrush current

Specification item	Value	Unit	Condition
Inrush current	28.4	A	Input voltage 230V
Inrush peak width	139	μs	Input voltage 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 29	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)	0.7	mA rms	Acc. IEC60598-1. LED module contribution not included

## Surge immunity

Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	6	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	10	kV	Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us

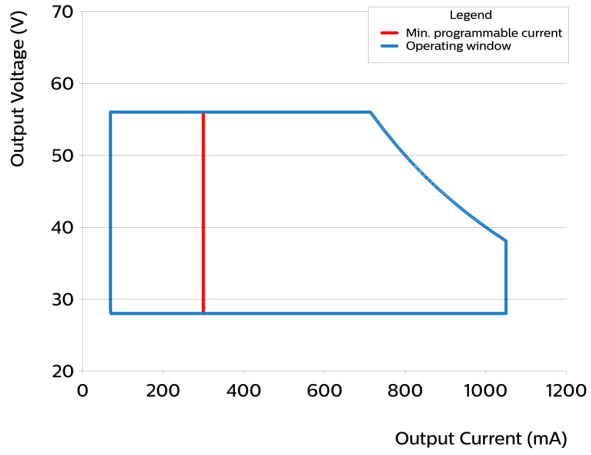
## Application Info (Approbation)

Specification item	Value
Approval marks and Certifications	CB / CCC / CE / ENEC / UKCA
Ingress Protection classification (IP)	67
Application	Outdoor
Mounting Type	Independent

## Graphs

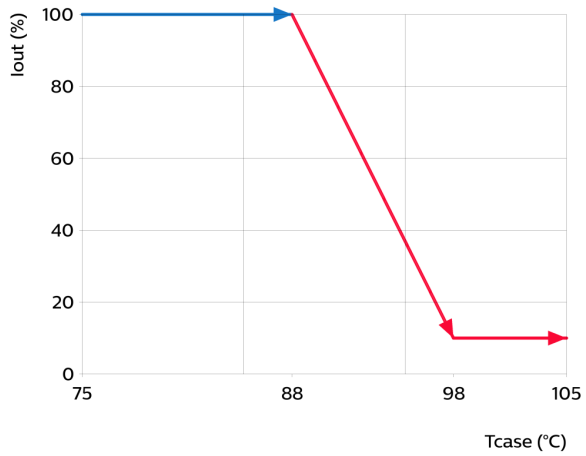
### Operating window

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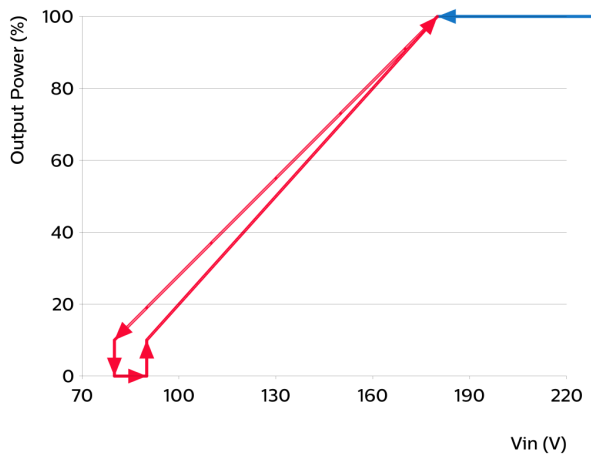
### Thermal Guard

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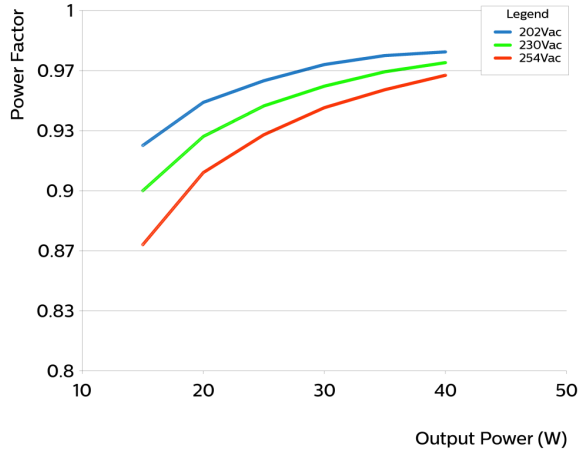


### Mains Guard

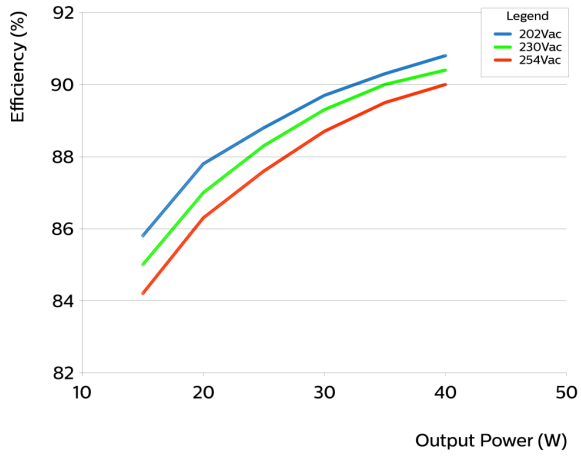
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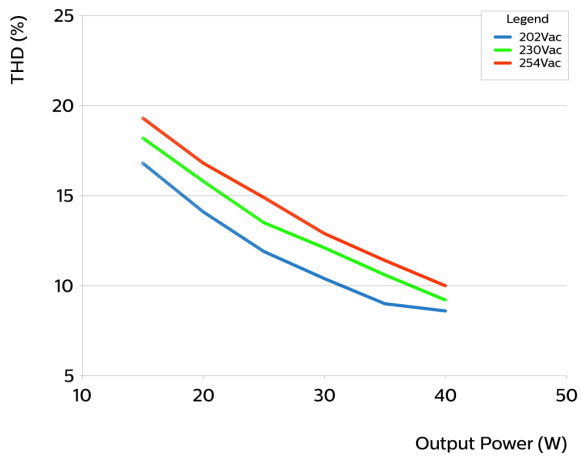
### Power factor versus output power



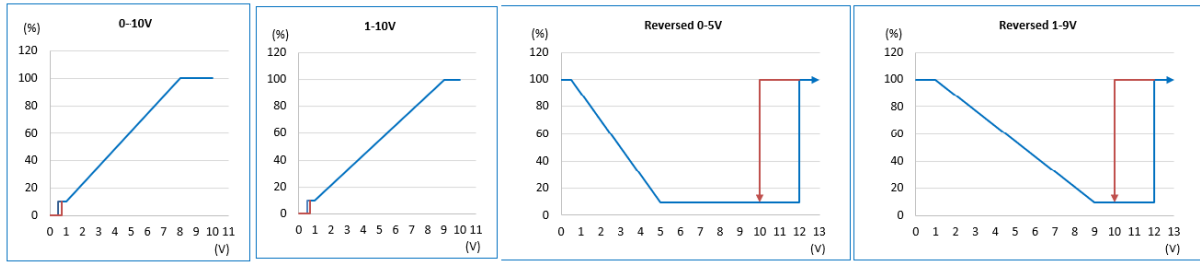
### Efficiency versus output power



### THD versus output power



## I<sub>out</sub> as function of 0-10V interface



Note:  
During reversed dimming mode, when the DIM+/DIM- is open, the driver will be at maximum output current.



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Date of release: April 28, 2025 v1

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