PHILIPS

Xitanium

LED driver

Xitanium LITE Prog LED Xtreme drivers
Xi LP 75W 0.3-1.0A SL 230V S240 sXt

Xitanium LITE Prog LED Xtreme drivers

Philips Xitanium Lite Programmable LED drivers are value engineered to deliver a carefully selected feature set and high-end performance, making it a preferred choice for many outdoor applications. The portfolio offers high flexibility with a customizable operating window, enabling differentiation in LED lighting designs via system tuning and being prepared for LED efficacy upgrades.

In this product family Philips introduces new drivers in a stretched form factor with a balanced feature set, which offer high value for both OEM customers and end-users. The products can replace the existing programmable outdoor LED drivers and will bring significant improvement in programming, assembly into a luminaire and electrical performance. One of the key features is SimpleSet®, an easy and fast way to configure the driver without the need to power the driver.

Benefits

- Ultimate robustness, offering peace of mind and lower maintenance costs
- Balanced configurable feature set covering the most common applications
- Easy to design-in and install for Class I and Class II applications
- Energy savings through high efficiency and via a choice of dimming options

Features

- SimpleSet®, wireless configuration interface
- High surge protection
- Long lifetime and robust protection against moisture, vibration and temperature
- Configurable operating windows(AOC)
- External control interface
- 1-step autonomous dimming via integrated DynaDimmer LITE
- Thermal protection for driver (integrated)
- Simplified linear version of Constant Light Output (CLO LITE)

Application

- Road and street lighting
- Area lighting

Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220 ... 240	Vac	Performance
Input voltage range	198 ... 264	Vac	Operational
Rated input frequency range	50 ... 60	Hz	Performance
Input frequency range	45 ... 66	Hz	Operational
Rated input current	0.42 ... 0.33	A	230Vac, full load
Rated input power	82	W	230Vac, full load
Power factor	≥ 0.98		230Vac, full load. See graph
Total harmonic distortion	≤ 8	%	230Vac, full load. See graph
Efficiency	91	%	230Vac, full load. See graph

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	35 ... 108	Vdc	See graph
Output voltage max.	140	V	Peak voltage at open load
Output current	300 ... 1050	mA	
Output current min dimming	150	mA	
Output current tolerance	± 5	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, 70Hz ... 1kHz
Output current ripple HF	≤ 15	%	Ripple = peak / average, > 1kHz
Output power range	5 ... 75	W	

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	LineSwitch, Dynadimmer LITE		
Dimming range	15...100	%	Output current amplitude dimming

Logistical data

Specification item	Value
Product name	Xi LP 75W 0.3-1.0A SL 230V S240 sXt
Order code	871869648160800
Logistic code 12NC	9290 009 63106
EAN3	8718696481615
Pieces per box	10

Wiring & Connections

Specification item	Value	Unit	Condition
Input wire cross-section	0.5...2.5	mm^2	Push-in at 0° angle, solid and stranded wire
	20...12	AWG	
Input wire strip length	10 ... 11	mm	
Output wire cross-section	0.2...1.5	mm^2	Push-in at 45° angle, solid and stranded wire
	24...16	AWG	
Output wire strip length	8.5...9.5	mm	
Maximum output cable length	2.5	m	CISPR15: between driver and LED module
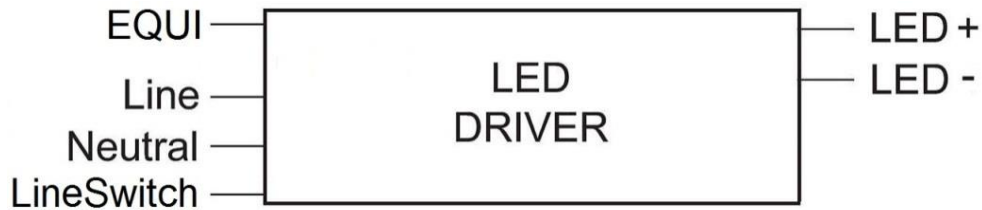
Insulation

Insulation	Mains	EQUI	LED	LineSwitch
Mains	N/A	Double	Double	None
EQUI	Double	N/A	Basic	Double
LED	Double	Basic	N/A	Double
LineSwitch	None	Double	Double	N/A

Dimensions and weight

Specification item	Value	Unit	Condition
Length (A1)	240.5 ± 0.5	mm	
Width (B1)	58.6 ± 0.3	mm	
Height (C1)	37.8 ± 0.5	mm	
Fixing hole diameter (D1)	4.5	mm	Screw: M4. washer: ø ≤ 10.5mm, torque: ≤1.5Nm
Fixing hole distance (A2)	226.2 ± 0.5	mm	
Fixing hole distance (B2)	42.9 ± 0.3	mm	
Weight	640	gram	
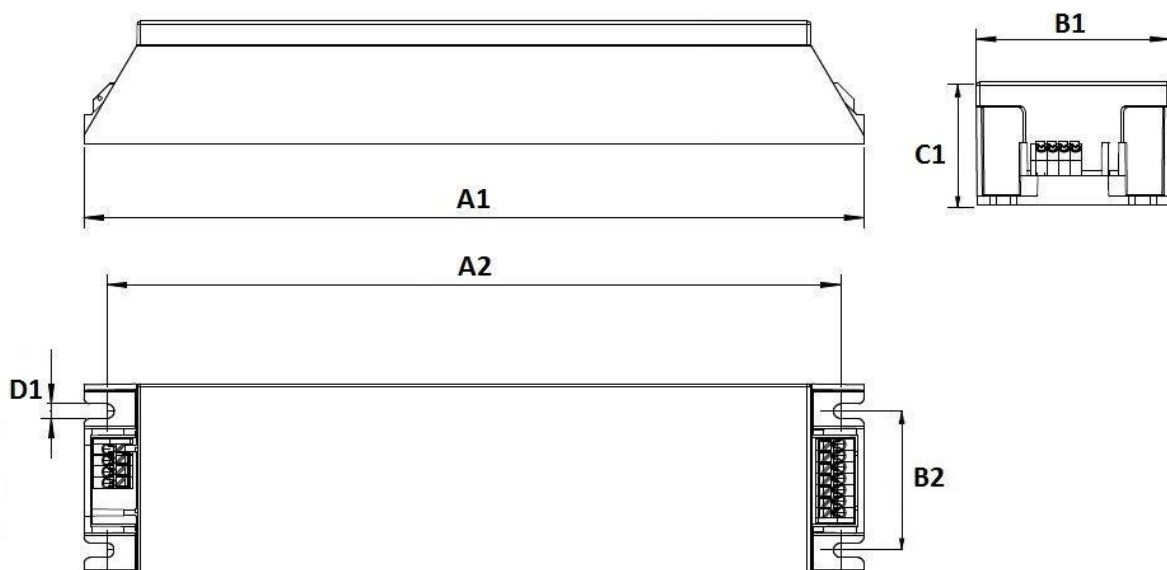
Operational temperatures and humidity

Specification item	Value	Unit	Condition
Driver ambient temperature	-40...+55	°C	At nominal output power. Higher ambient temperature allowed as long as Tcase-max is not exceeded.
Tcase-min	-30	°C	Min. steady-state Tcase
Tcase-max	+85	°C	Max. steady-state Tcase
Tcase-life	-30...+75	°C	For nominal driver lifetime
Maximum housing temperature	130	°C	In case of failure
Relative humidity	10...90	%	Non-condensing
Ingress Protection	20		Suggested luminaire IP: ≥ IP54
Noise and hum	24	dB	Typical

Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-30...+80	°C	
Relative humidity	10...90	%	Non-condensing

Lifetime

Specification item	Value	Unit	Condition
Rated driver lifetime	100,000	hours	Tcase ≤ Tcase-life Maximum failures = 10%

Programmable features

Specification item	Value	Remark	Default setting
Adjustable Output Current (AOC)	SimpleSet	See Design-in guide	700mA
LineSwitch	Yes	V_{low}: < 160Vac V_{high}: 170 ... 264Vac	Enabled, 100% light output at V_{low}
Constant Lumen Over Lifetime (CLO)	Yes	CLO LITE	Disabled
Diagnostics	Yes	Basic options	Enabled
Integrated Dynadimmer	Yes	Dynadimmer LITE	Disabled

Features

Specification item	Value	Remark	Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Overheating protection	Yes		Automatic recovering. See graph
Hot wiring	No		
Suitable for luminaire insulation class	I and II		Per IEC60598

Certificates and standards

Specification item	Value
Approval marks	CE / ENEC / CB / CCC Pending: VDE-S

Inrush current

Specification item	Value	Unit	Condition
Inrush current Ipeak	46	A	Input voltage 230Vac
Inrush current Twidth	250	µs	Input voltage 230Vac, measured at 50% Ipeak
Typical number of drivers	Max. 11	pcs	MCB 16A B type, mains impedance 200mΩ + 400µH
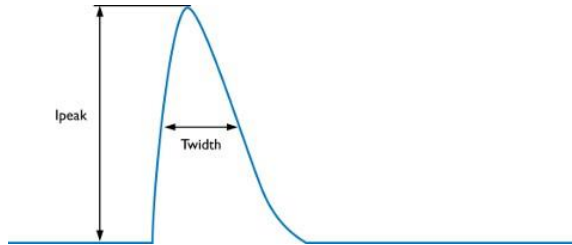
MCB	Rating	Relative number of LED drivers
B	10A	63%
B	13A	81%
B	16A	**100%**
B	20A	125%
B	25A	156%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%

Driver touch current

Specification item	Value	Unit	Condition
Typical touch current	0.34 / 0.41	mA peak	Acc. IEC61347-1 at 230Vac 50/60Hz LED module contribution not included

Surge immunity

| Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	6 / 3	kV / kA	L-N acc. IEC61000-4-5. 2 Ohm, 1.2/50µs, 8/20µs
Mains surge immunity (comm. mode)	8	kV	L/N - GND acc. IEC61000-4-5. 12 Ohm, 1.2/50µs, 8/20µs
Control surge immunity (diff. mode)	6	kV	Ls-L, Ls-N acc. IEC61000-4-5. 2 Ohm 1.2/50µs, 8/20µs
Control surge immunity (comm. mode)	8	kV	Ls – GND acc. IEC61000-4-5. 12 Ohm 1.2/50µs, 8/20µs

Graphs

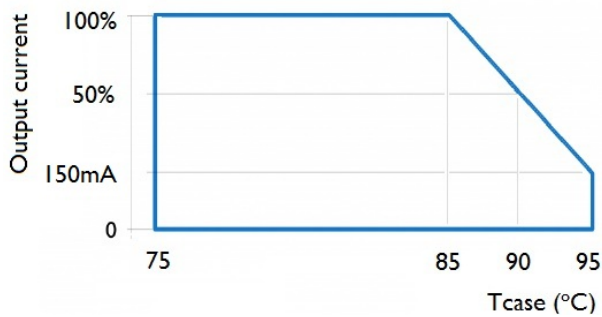**Operating window**
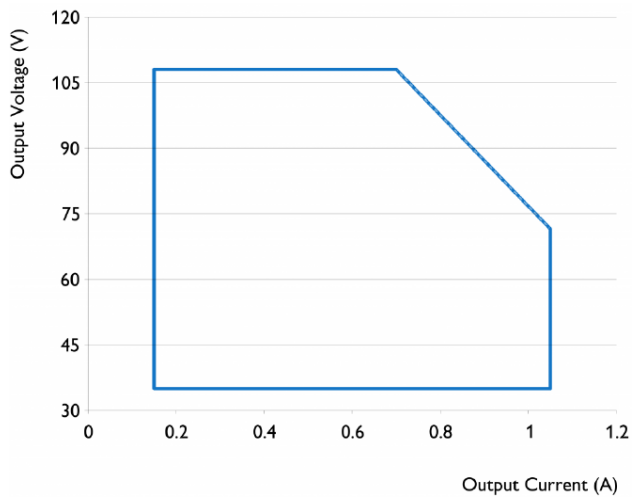
Power factor versus output power
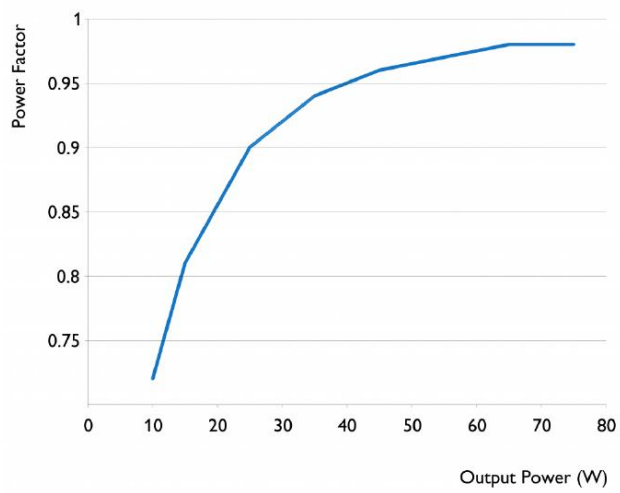
Efficiency versus output power
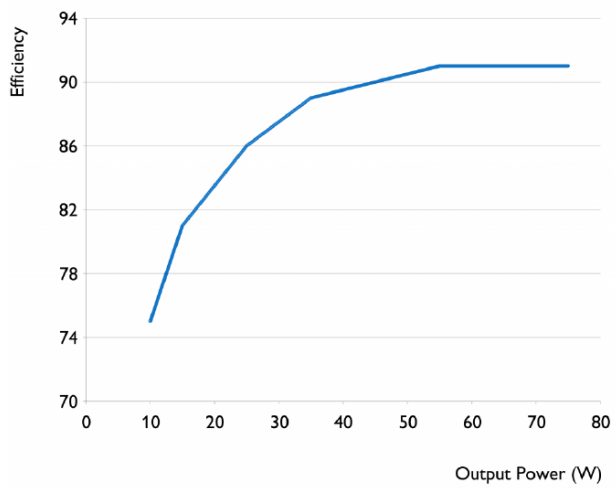
THD versus output power
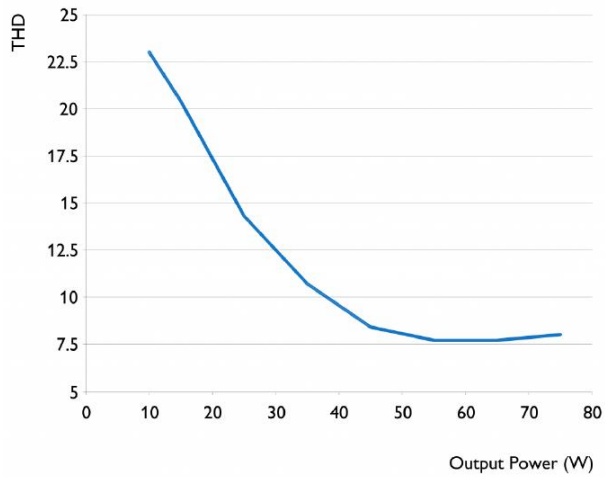
Driver output current versus Tcase

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