PHILIPS

Xitanium

LED driver

Datasheet

Xitanium track adaptor drivers

Xitanium 42W/a 0.9/1.05A 40V 3CB 230V
Xitanium 42W/a 0.9/1.05A 40V 3CG 230V
Xitanium 42W/a 0.9/1.05A 40V 3CW 230V

Affordable and reliable LED Drivers

Affordable LED Driver range offering Philips reliability. The Xitanium range is compatible with COB and mid-power LEDs from any LED manufacturer.

Benefits

- Driver design based on Philips experience and knowledge of conventional fluorescent and HID technologies
- Various power wattage Drivers that are related to the lumen packages/applications
- Fixed output Drivers
- Track adaptor housing design for minimization of track light luminaire

Features

- Small, compact dimensions
- Specific, optimized output current and voltage
- 50,000 hours lifetime
- Fast Time to Market
- Low ripple, low THD
- Suitable for 3 circuits system
- White/Black/Grey colour available

Application

- Public buildings (airports, cinemas, theaters, exhibition halls)
- Retail (supermarkets, shops)
- Office

October 2018

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 range	50...60	Hz	Performance range
Rated input current	0.19 / 0.22	A	@ full output power @ rated input voltage
Rated input power	42 / 50	W	@ rated output power @ rated input voltage
Power factor	0.9		@ full output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	85	%	@ 230V full load
Input voltage AC range	202...254	V_{ac}	Operational range
Input frequency AC range	47.5...63	Hz	Operational range
Isolation input to output	SELV		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...40	V_{dc}	
Output voltage max.	60	V	Peak voltage at open load
Output current	0.9 / 1.05	A	Full output current setting
Output current tolerance	± 8	%	@230Vac, 36Vdc
Output current ripple LF	⩽ 3	%	Ripple = peak / average
Output current ripple HF	⩽ 15	%	Ripple = peak / average
Output power	27...36 / 31.5...42	W	Full output

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		
Galvanic Isolation	No		

Logistical data

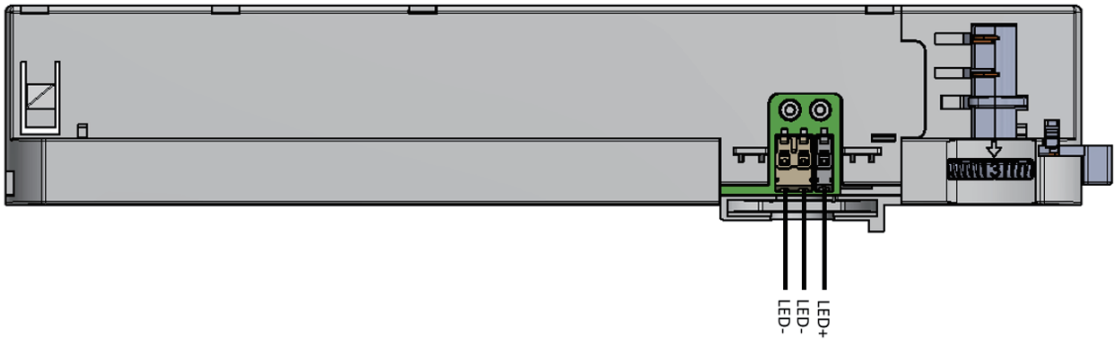
Specification item	Value
Product name	Xitanium 42W/a 0.9/1.05A 40V 3CB 230V
Logistic code 12NC	9290 014 76380
Pieces per box	40

Specification item	Value
Product name	Xitanium 42W/a 0.9/1.05A 40V 3CG 230V
Logistic code 12NC	9290 014 76780
Pieces per box	40

Specification item	Value
Product name	Xitanium 42W/a 0.9/1.05A 40V 3CW 230V
Logistic code 12NC	9290 014 75980
Pieces per box	40

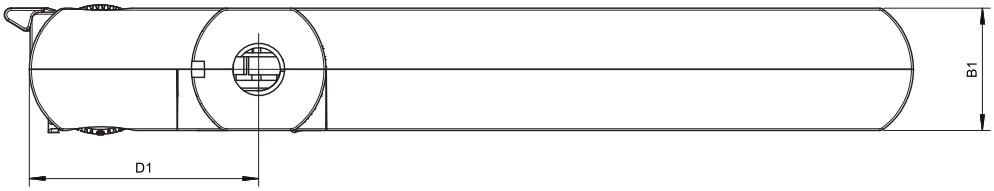
Wiring & Connections

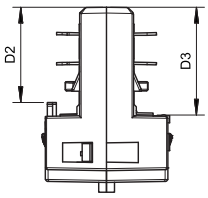
Specification item	Value	Unit	Condition
Output wire cross-section	0.2...0.75	mm^2	Molex 104188, solid wire
	18...24	AWG	Molex 104188, solid wire
	0.45...0.7	mm^2	Molex 104188, strand wire
	20...22	AWG	Molex 104188, strand wire
Output wire strip length	7.5...8.5	mm	
Maximum cable length	300	mm	Total length of wiring including LED module, one way

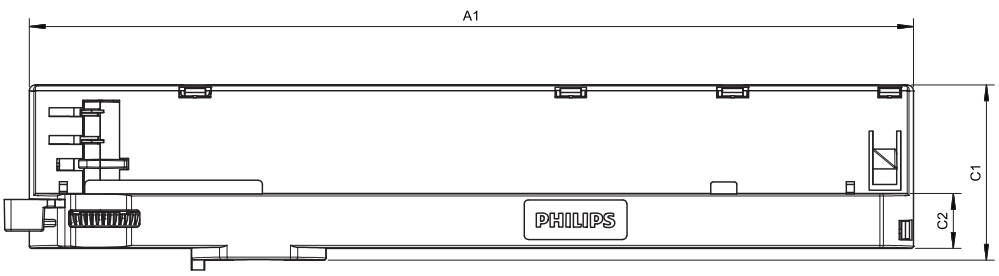


Dimensions and weight

Specification item	Value	Unit	Condition
Length (A1)	224	mm	
Width (B1)	31	mm	
Height (C1)	44.4	mm	
Height (C2)	13.9	mm	
Weight	155	gram	







Data Sheet	
Item	Dimension
A1	224 -/+1.5 mm
B1	31 -/+1.0 mm
C1	44.4 -/+1.0 mm
C2	13.9 -/+0.5 mm
D1	58.1 -/+1.5 mm
D2	24.2 -/+0.5 mm
D3	27.3 -/+0.5 mm

Operational temperatures and humidity

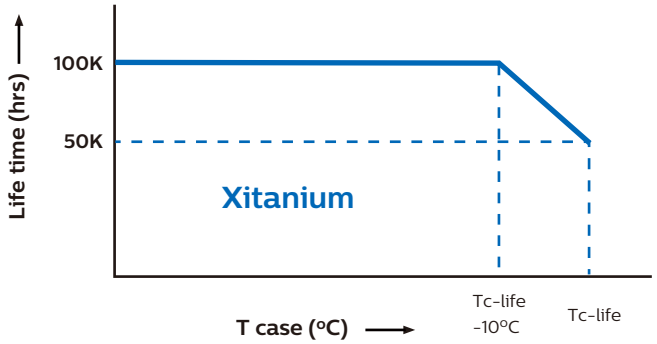
Specification item	Value	Unit	Condition
Ambient temperature	-20...+35	°C	Higher ambient temperature allowed as long as T_{case}-max is not exceeded.
Tcase-max	85	°C	Maximum temperature measured at T_{case}-point
Tcase-life	85	°C	Measured at T_{case}-point
Maximum housing temperature	130	°C	In case of a failure
Relative humidity	10...90	%	Non-condensing

Storage temperature and humidity

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

Lifetime

Specification item	Value	Unit	Condition
Driver lifetime	50,000	hours	Measured temperature at T_{case}-point is T_{case}-life. Maximum failures = 10%



Programmable features

Specification item	Value	Remark	Condition
Set output current (AOC)		See Design-in guide.	Default output current: = 900 /1050 mA
LED module temperature derating (MTP)	No		
Constant Lumen Over Lifetime (CLO)	No		
DC emergency dimming (DCemDIM)	No		

Features

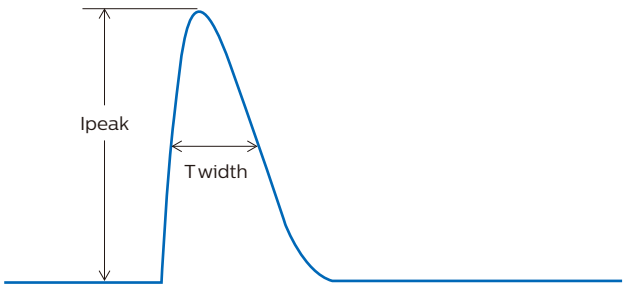
Specification item	Value	Remark	Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	No		
Suitable for fixtures with protection class	II		per IEC60598

Certificates and standards

Specification item	Value
Approval marks	CB / CE / ENEC / RCM
Ingress Protection classification	20

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	20	A	Input voltage 230V
Inrush current T_{width}	240	µs	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	⩽ 28	pcs	



MCB	Rating	Relative number of LED drivers
B	10A	63%
B	13A	81%
B	16A	100% (stated in datasheet)
B	20A	125%
B	25A	156%
C	10A	104%
C	13A	135%
C	16A	170%
C	20A	208%
C	25A	260%

Driver touch current / protective conductor current

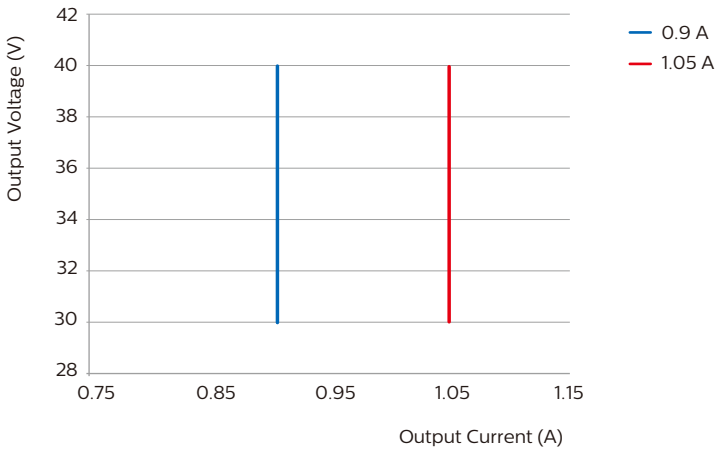
Specification item	Value	Unit	Condition
Typical touch current (ins. Class II)	< 0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

Surge immunity

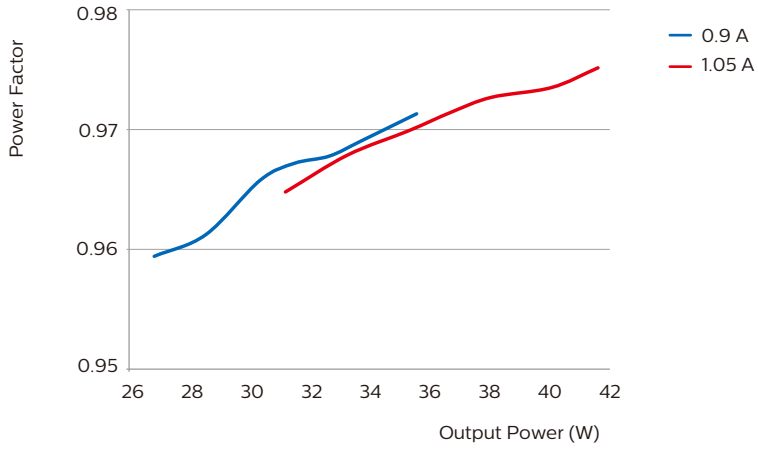
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us

Graphs

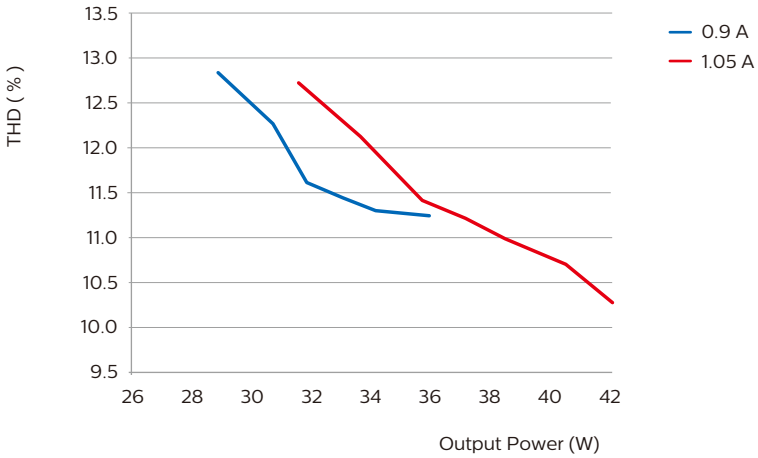
Operating window



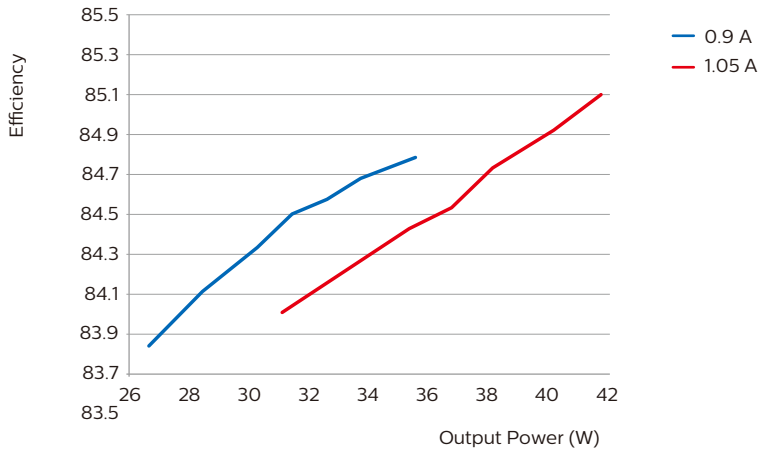
Power factor versus output power



Total Harmonic Distortion



Efficiency versus output power



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