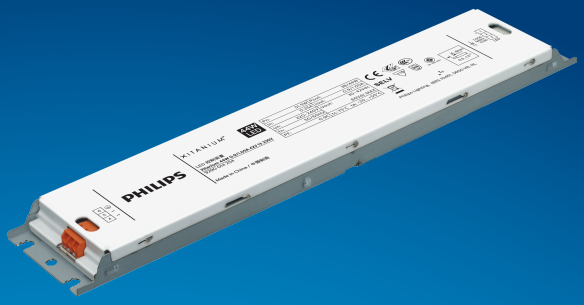
PHILIPS

Xitanium

LED driver



Datasheet

Xitanium LED drivers – linear LV isolated Dual Output

Xitanium 44W 0.9/1.05A 42V 13 230V

9290 014 25480

Enabling future-proof LED technology

Xitanium LED drivers are designed to operate LED solutions for general lighting applications such as linear lighting in offices, public buildings as well as industrial and retail environments. Xitanium LED drivers with single current output offer industry leading performance and reliability at optimized cost. They are ideal for high volume applications while delivering to specific requirements. These drivers offer the same level of performance as Xitanium adjustable-current linear drivers to ensure high quality of light but, with a specific current setting. In addition, the isolated drivers offer ease of design-in and simpler approbation process.

Xitanium LED drivers are based on Philips experience and knowledge from conventional fluorescent technology. The reliability of the LED solution is further enhanced by specific features that protect the connected LED module, such as reduced ripple current.

Benefits

- High reliability underpinned by 5 year warranty
- Assurance of camera and scanner-friendly performance
- Optimized performance at specific output current settings
- Enabling simple approbation process for luminaires

Features

- Low output current tolerance
- Long lifetime at high operating temperature
- Low output ripple current
- Dual output current, easy to use by selecting different output channels

Application

- Office and industry
- IEC Insulation Class I luminaries

December 2020

Electrical input data

Specification item	Value	Value	Unit	Condition
Rated input voltage range	202…254	202…254	V_{ac}	Performance range
Rated input voltage	230	230	V_{ac}	
Rated input frequency range	47…63	47…63	Hz	Performance range
Rated input current	0.2	0.23	A	@ rated output power @ rated input voltage
Rated input power	44	51	W	@ rated output power @ rated input voltage
Power factor	0.92	0.92		@ rated output power @ rated input voltage
Total harmonic distortion	15	15	%	@ rated output power @ rated input voltage
Efficiency	≥ 86	≥ 86	%	@ rated output power @ rated input voltage
Input voltage AC range	202…254	202…254	V_{ac}	Safety operational range
Input frequency AC range	47.5…63	47.5…63	Hz	Safety operational range
Isolation input to output	SELV	SELV		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30…42	V_{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	0.9 / 1.05	A	Depends on the selected output LED- wire
Output current tolerance ±	8	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 15	%	
Output power	27…44	W	depends on the selected output current

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		

Wiring and Connections

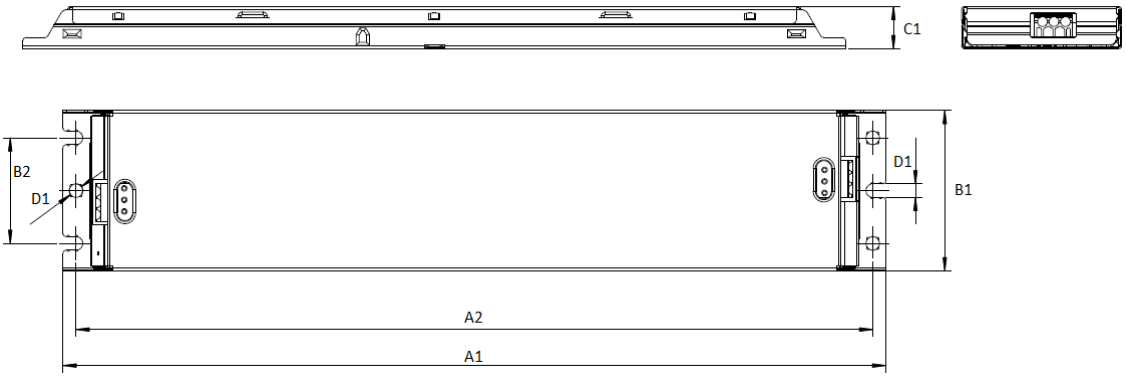
Specification item	Value	Unit	Type
Input wire cross-section	0.5…1.5 / 20…16	mm^2 / AWG	WAGO744, solid wire
Input wire strip length	8…9	mm	
Output wire cross-section	0.5…1.5 / 20…16	mm^2 / AWG	WAGO744, solid wire
Output wire strip length	8…9	mm	
Maximum cable length	0.6	m	Total length of wiring including LED module, one way

Insulation

Insulation per IEC61347-1	Input	Output	Housing
Input		SELV	Basic
Output	SELV		Basic
Housing	Basic	Basic	

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	250	mm	
Mounting hole distance (A2)	242	mm	
Width (B1)	48.6	mm	
Width (B2)	32	mm	
Height (C1)	13	mm	
Mounting hole diameter (D1)	4.1	mm	
Weight	250	gram	



Logistical data

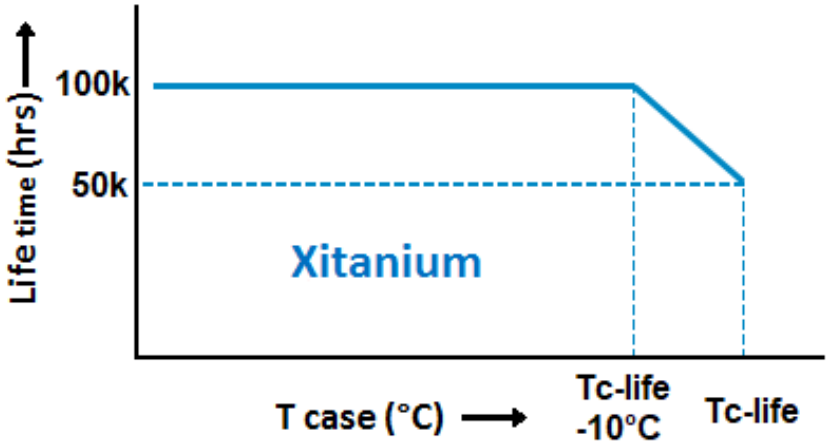
Specification item	Value
Product name	Xitanium 44W 0.9/1.05A 42V 13 230V
EOC	694793914483900
Logistic code 12NC	9290 014 25480
EAN1 (GTIN)	6947939144839
EAN3	6947939144846
Pieces per box	25

Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20…+50	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded
Tcase-max	75	°C	Maximum temperature measured at T_{case}-point
Tcase-life	75	°C	Measured at T_{case}-point
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

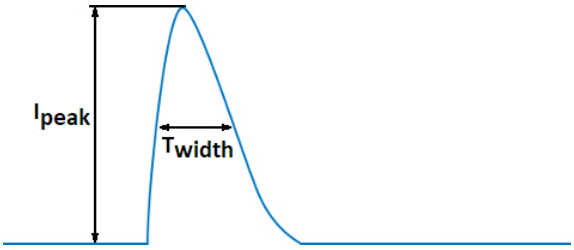
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	Manual	900 mA	Select the output current by wiring the right output connector (LED-)
LED Module Temperature Protection (MTP)	No		
Constant Light Output (CLO)	No		
DC emergency (DCemDim)	No		

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	No		
Overheating protection	No		

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	18	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	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 Protective Conductor Current (ins. Class I)	0.7	mA rms	Acc. IEC60598-1. LED module contribution not included

Surge immunity

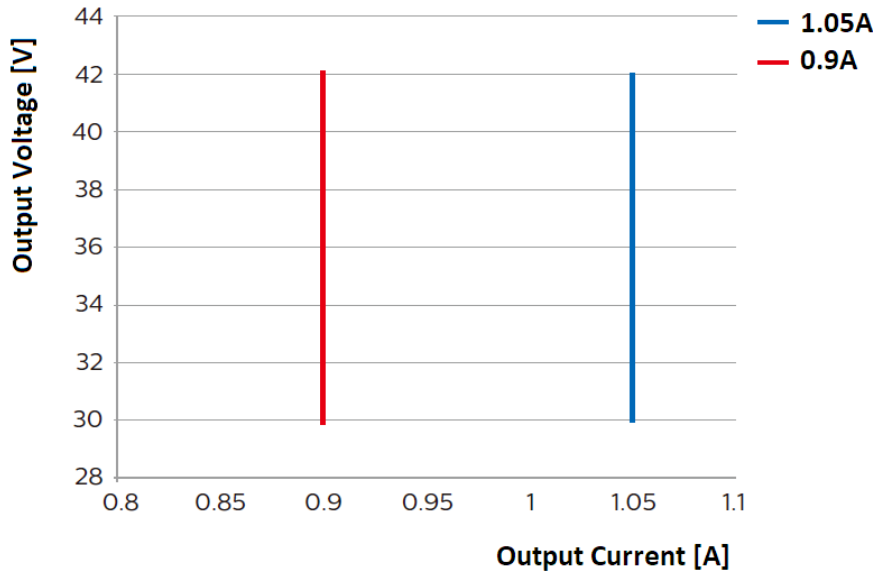
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us

Application Info

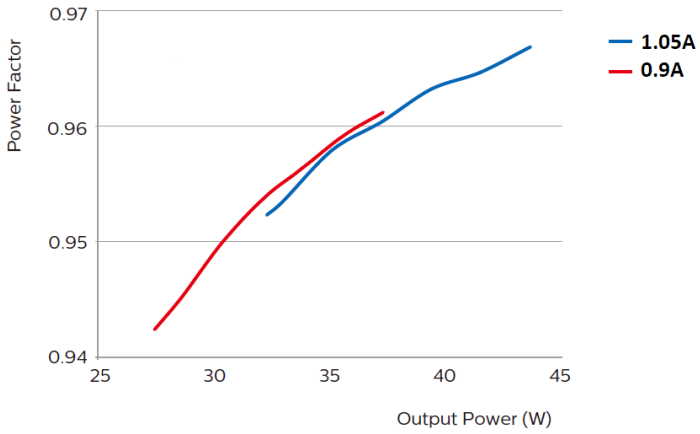
Specification item	Value
Approval marks	CCC / CE / ENEC / KC / KS / RCM / SELV
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

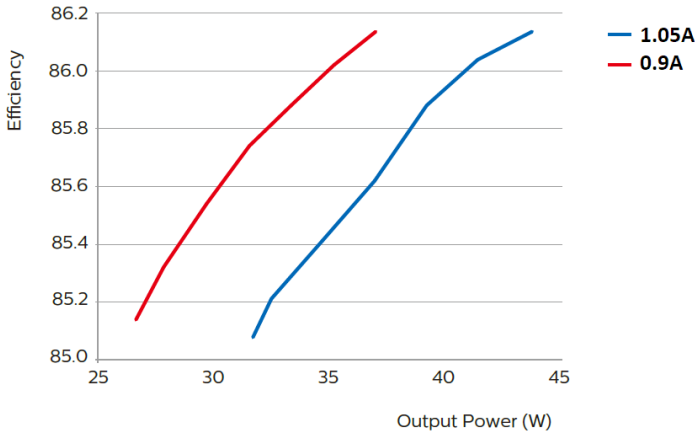
Operating window



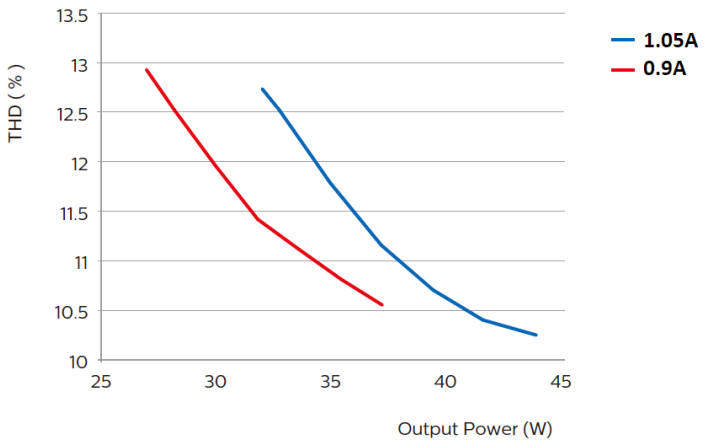
Power factor versus output power



Efficiency versus output power



THD versus output power



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