

CertaDrive LED drivers – Linear

CertaDrive 15W 0.4A 36V 230V

March 11, 2015



Fixed current/voltage LED drivers for high volume LED propositions

The CertaDrive LED drivers are designed to fulfill the market need for essential lighting. The CertaDrive LED drivers offer basic specifications such as specific current and voltage settings, optimal to operate CertaFlux LED modules and mid-power LED's from any other LED board manufactures.

Benefits

- Design based on Philips' experience and knowledge of conventional fluorescent and HID technologies
- High reliability
- Design freedom for compact luminaire design
- Various power wattage Drivers that are related to the lumen packages/applications
- 3-years warranty

Features

- Small dimensions
- Specific current and voltage
- Luminaire design flexibility to keep stable/constant lumen output and light quality levels
- 30,000 hours life time
- Product safety thanks to overload protection, short circuit protection, over power protection and hot-wiring features

Applications

- Waterproof luminaires
- Recessed, surface and suspended luminaires in offices
- High bay luminaires



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Electrical input data

Specification item	Value	Unit	Condition
Nominal input voltage	220...240	V _{ac}	
Nominal input frequency	50...60	Hz	
Nominal input current	0.087	A	Input voltage 230 V _{ac} , full load
Nominal input power	17.5	W	Input voltage 230 V _{ac} , full load
Power factor	≥ 0.9		Input voltage 230 V _{ac} , full load
Total harmonic distortion	≤ 30	%	Input voltage 230 V _{ac} , full load
Efficiency	85	%	Input voltage 230 V _{ac} , full load, maximum output power
Input voltage AC	202...254	V _{ac}	Performance range
Input frequency AC	47.5...63	Hz	Maximum permissible range

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	30...42	V _{dc}	
Output voltage max.	400	V	Peak voltage at open load
Output current	0.36...0.44	A	Full output current setting
Output current tolerance	± 5	%	
Output current ripple	≤ 30	%	Ripple (100Hz) = peak / average
Output power	13...15	W	Full output
Galvanic isolation	Basic		Lamp to mains

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		

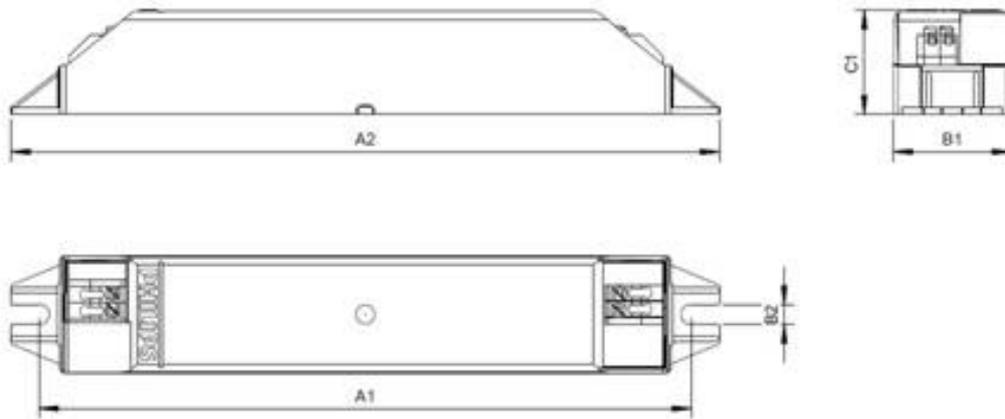
Wiring

Specification item	Value	Unit	Condition
Input wire cross-section	0.2...1.5	mm ²	WAGO250 (3.5 mm), solid wire
	16...24	AWG	WAGO250 (3.5 mm), solid wire
Input wire strip length	8.5...9.5	mm	
Output wire cross-section	0.2...1.5	mm ²	WAGO250 (3.5 mm), solid wire
	16...24	AWG	WAGO250 (3.5 mm), solid wire
Output wire strip length	8.5...9.5	mm	
Maximum cable length	600	mm	Total length of wiring including LED module, one way



Dimensions and weight

Specification item	Value	Unit	Condition
Length (A1)	138	mm	
Width (B1)	25.2	mm	
Height (C1)	22	mm	
Fixing hole diameter (D1)	4.2	mm	
Fixing hole distance (A2)	150	mm	
Weight	56	gram	



Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	
T _{case-max}	75	°C	Maximum temperature measured at T _c -point
T _{case-life}	65	°C	Measured at T _c -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	30,000	hours	Measured temperature at T _c -point is T _{case-life} . Maximum failures = 10%

Programmable features

Specification item	Value	Remark	Condition
Set output current (AOC)	No	See Design-in guide. Default output current: 0.4 A	
LED module temperature derating (MTP)	No		
Constant Lumen Over Lifetime (CLO)	No		
DC emergency dimming (DCemDIM)	No		
Corridor mode	No		
Energy metering	No		
Diagnostics	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	Yes		
Suitable for fixtures with protection class	I		

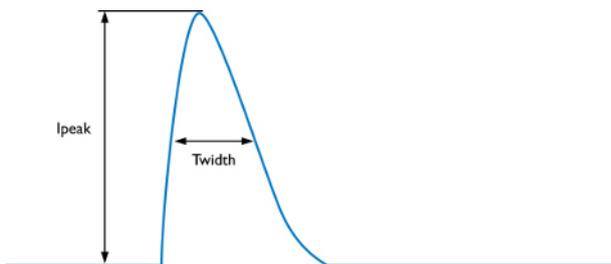
Certificates and standards

Specification item	Value	Unit	Condition
Approval marks	CCC / CE		
Ingress Protection classification	20		

Additional information

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	4.6	A	Input voltage 230V
Inrush current T_{width}	52	μ s	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 60	pcs	



Earth leakage current

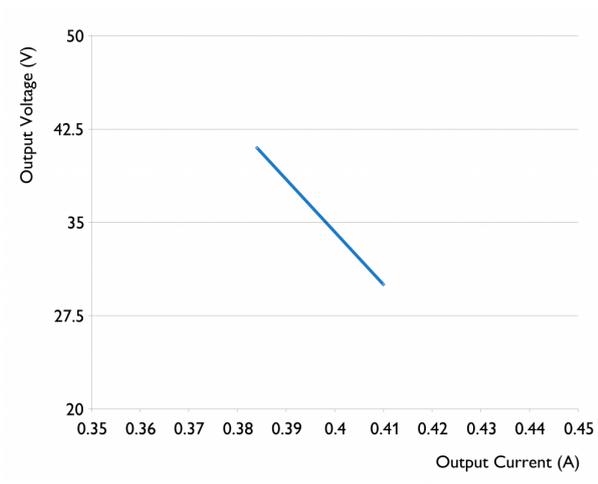
Specification item	Value	Unit	Condition
Earth leakage current	0.7	mApk	LED module contribution not included

Surge capability

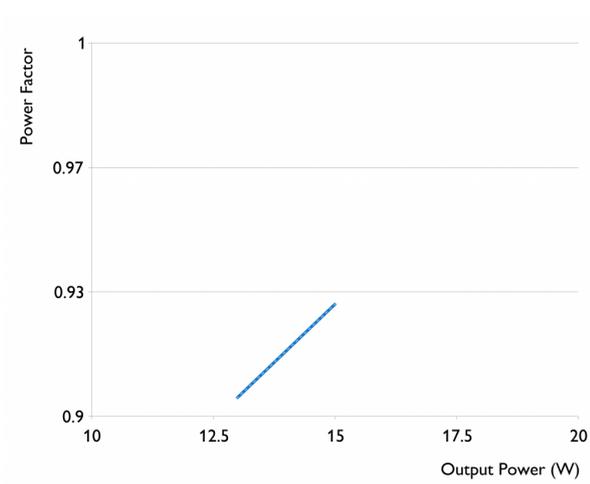
Specification item	Value	Unit	Condition
Mains surge capability (L-N)	0.5	kV	
Mains surge capability (L/N-Ground)	1	kV	

Graphs

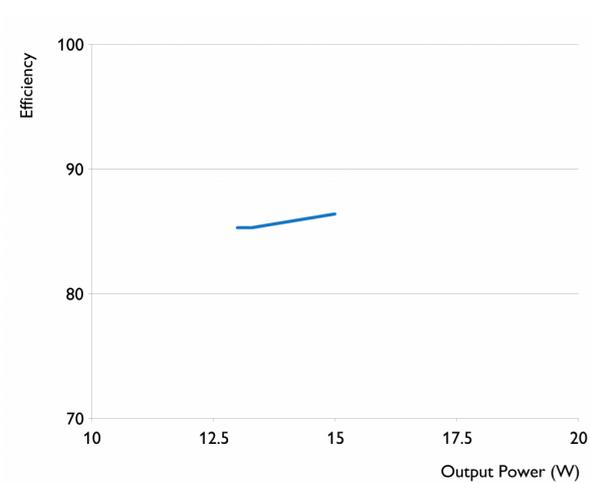
Operating window



Power factor versus output power



Efficiency versus output power



Logistical data

Specification item	Value
Product name	CertaDrive 15W 0.4A 36V 230V
Order code	
Logistic code 12NC	9290 014 09880
EAN3	
Pieces per box	50



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