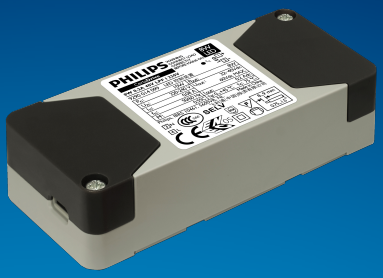
PHILIPS

CertaDrive

LED driver



Datasheet

CertaDrive LED drivers – spot- and downlight

CertaDrive 8W 0.2A 40V LPF I 230V

Affordable and reliable LED Drivers

Affordable LED Driver range offering Philips reliability. The CertaDrive LPF 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
- Independent-version housing design for stand-alone installations

Features

- Small, super compact dimensions
- Specific, optimized output current and voltage
- 30,000 hours lifetime
- Fast Time to Market
- Low ripple current

Application

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

September 2015

Electrical input data

Specification item	Value	Unit	Condition
Nominal input voltage	220…240	V_{ac}	performance range
Nominal input frequency	50…60	Hz	
Nominal input current	0.08	A	@230V @ full load
Input voltage	230	V_{ac}	
Nominal input power	10	W	@230V @ full load
Power factor	≥ 0.55		@ full load. See graph.
Efficiency	79	%	@230V @ full load
Input voltage AC	202…254	V_{ac}	Operational 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	32…40	V_{dc}	
Output voltage max.	60	V	Peak voltage at open load
Output current	0.2	A	Full output current setting
Output current tolerance	± 10	%	
Output current ripple LF	≤ 5	%	Ripple = peak / average
Output power	6.4…8	W	Full output

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		

Logistical data

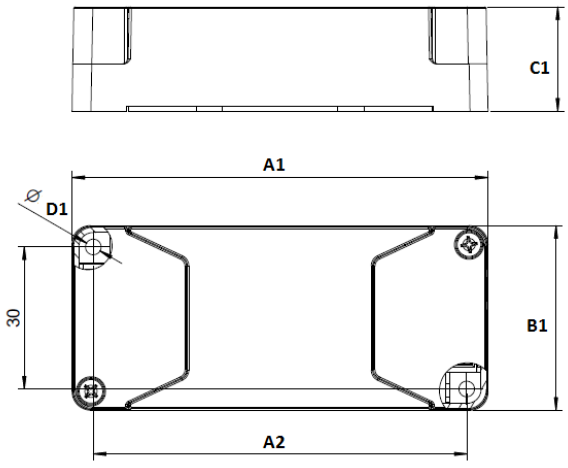
Specification item	Value
Product name	CertaDrive 8W 0.2A 40V LPF I 230V
Order code	
Logistic code 12NC	9290 014 09980
EAN3	
Pieces per box	60

Wiring & Connections

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)	88	mm	
Width (B1)	39	mm	
Height (C1)	22	mm	
Fixing hole diameter (D1)	3.3	mm	
Fixing hole distance (A2)	79	mm	
Weight	45	gram	



Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	+0…+45	°C	Higher ambient temperature allowed as long as Tcase-max is not exceeded.
Tcase-max	75	°C	Maximum temperature measured at T_c-point
Tcase-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: ≤ 200 mA

Features

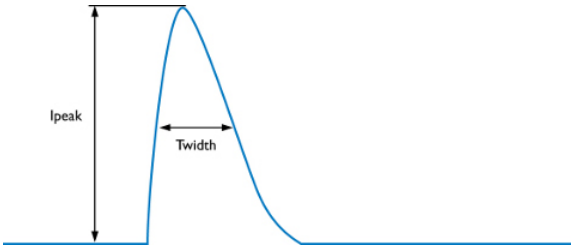
Specification item	Value	Remark	Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	No		
Suitable for fixtures with protection class	II		per IEC60598

Certificates and standards

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

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	12.5	A	Input voltage 230V
Inrush current T_{width}	180	µs	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 56	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

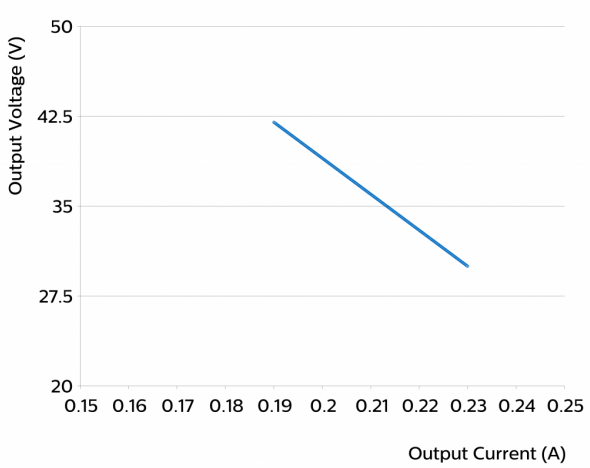
Specification item	Value	Unit	Condition
Typical touch current	0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

Surge immunity

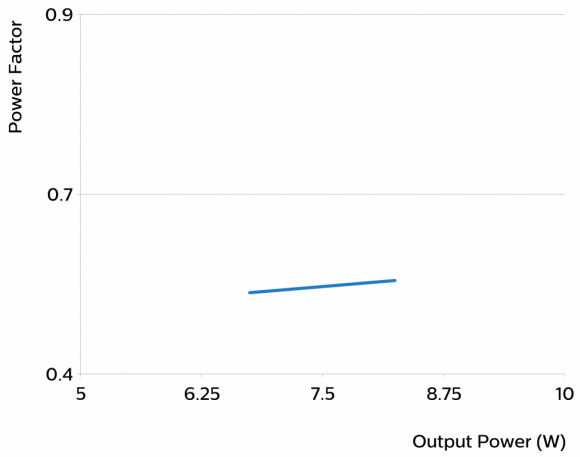
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	0.5	kV	L-N, acc. IEC61000-4-5. 2 Ohm
Mains surge immunity (comm. mode)	1	kV	L/N - GND acc. IEC61000-4-5. 12 Ohm

Graphs

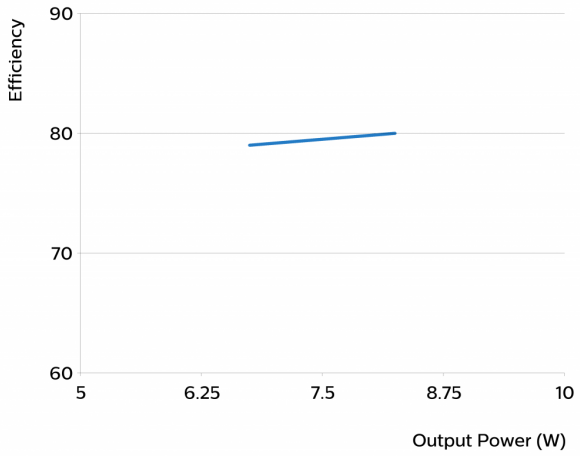
Operating window



Power factor versus output power



Efficiency versus output power



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