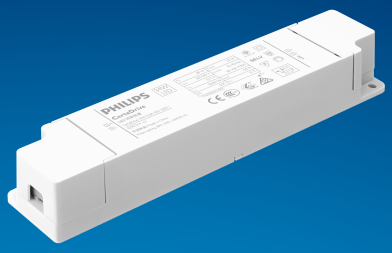
PHILIPS

CertaDrive

LED driver



Datasheet

CertaDrive Linear Isolated LED Drivers Single Current

CertaDrive 34W 0.8A 42V 230V I

Independent

Single current LED drivers for essential lighting applications.

CertaDrive LED drivers are designed to fulfill the market need for essential lighting with reliable performance. The CertaDrive LED drivers offer basic specifications with specific current and voltage settings which are easy to use for high volume applications. The CertaDrive range is optimal to operate mid-power LEDs from different manufacturers.

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

- SELV output for simpler approval process and easy design-in
- Specific current and voltage
- 30,000 hours life time
- Fast Time to Market
- Affordable LED Drivers

Application

- Office
- Public areas
- For luminaires of protection class II

August 2016

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	0.17	A	@230V @ full load
Input voltage	230	V_{ac}	
Nominal input power	38	W	@230V @ full load
Power factor	≥ 0.9		@ full load. See graph.
Total harmonic distortion	≤ 20	%	@ full load. See graph.
Efficiency	90	%	@230V @ full load
Input voltage AC	202…254	V_{ac}	Operational range
Input frequency AC	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	32…42	V_{dc}	
Output voltage max.	60	V	Peak voltage at open load
Output current	0.8	A	Full output current setting
Output current tolerance	± 8	%	
Output current ripple LF	≤ 30	%	Ripple = peak / average
Output power	25.6…34	W	Full output
Dynamic Resistance	5.8	Ω	typical

Electrical data controls input

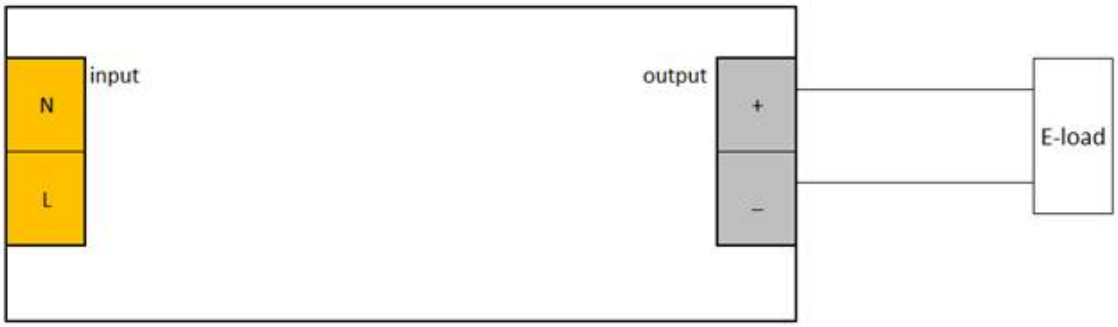
Specification item	Value	Unit	Condition
Control method	Fixed		
Galvanic Isolation	No		

Logistical data

Specification item	Value
Product name	CertaDrive 34W 0.8A 42V 230V I
Order code	
Logistic code 12NC	9290 014 16180
EAN3	
Pieces per box	50

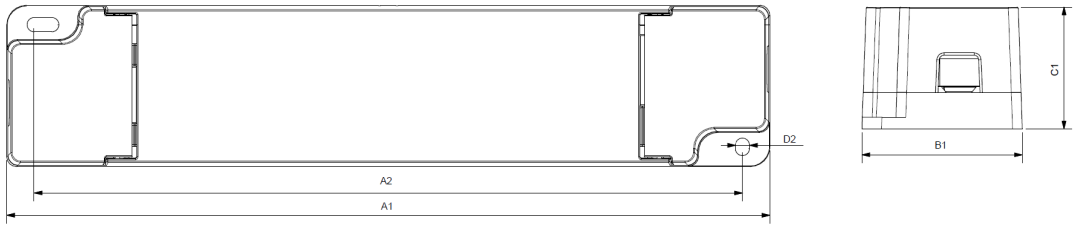
Wiring & Connections

Specification item	Value	Unit	Condition
Input wire cross-section	0.2…1.5	mm^2	WAGO250 (3.5 mm), solid / stranded wire
	16…24	AWG	WAGO250 (3.5 mm), solid / stranded 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 / stranded wire
	16…24	AWG	WAGO250 (3.5 mm), solid / stranded 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)	195	mm	
Width (B1)	41	mm	
Height (C1)	31	mm	
Fixing hole diameter (D1)	3.6	mm	
Fixing hole distance (A2)	181	mm	
Weight	115	gram	



Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20…+40	°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	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_{case}-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: = 800 mA
LED module temperature derating (MTP)	No		
Constant Lumen Over Lifetime (CLO)	No		
DC emergency dimming (DCemDIM)	No		

Features

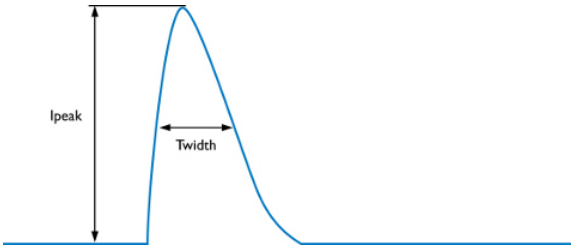
Specification item	Value	Remark	Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		
Hot wiring	No		
Suitable for fixtures with protection class	II		per IEC60598

Certificates and standards

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

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	4.8	A	Input voltage 230V
Inrush current T_{width}	60	µs	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 40	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

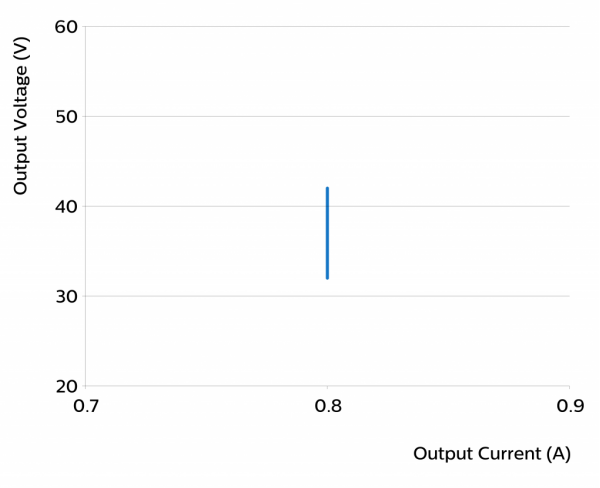
Specification item	Value	Unit	Condition
Typical touch current	< 0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

Surge immunity

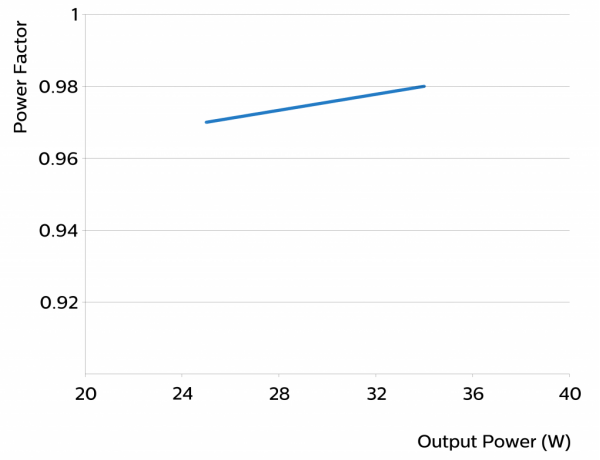
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us
DALI surge immunity (comm. mode)		kV	DALI - L/N/Ls acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Graphs

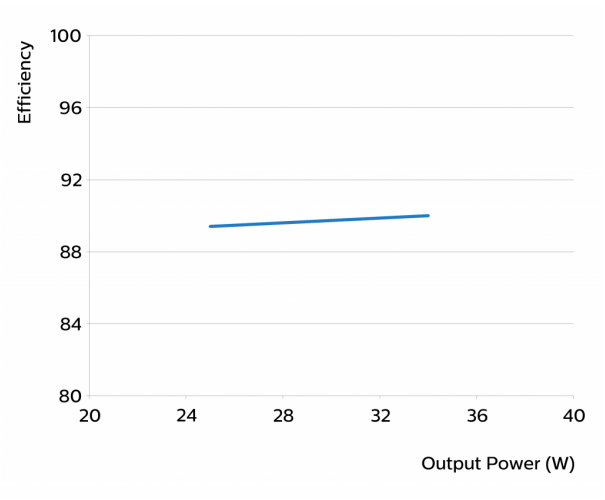
Operating window



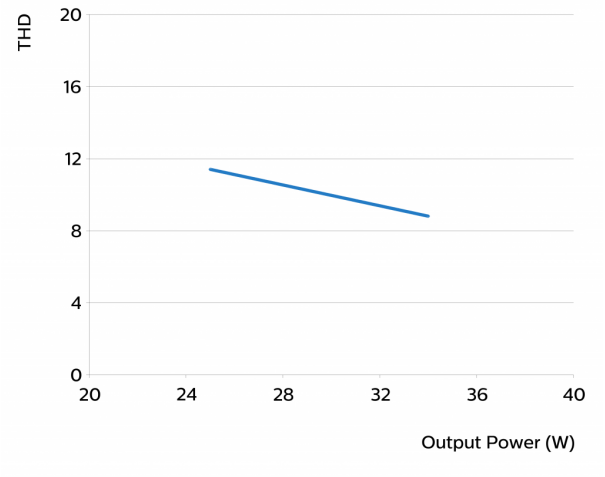
Power factor versus output power



Efficiency versus output power



THD versus output power



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