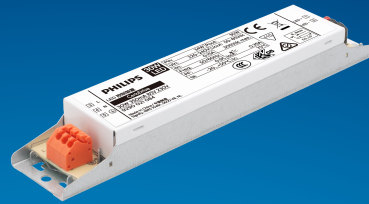


# PHILIPS

## CertaDrive

### LED driver



## Datasheet

### CertaDrive LED drivers – Linear HV non-isolated

CertaDrive 30W 350mA 85V 230V

9290 021 08480

#### 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. Life time of the driver is set at 50,000 hours. Philips will extend the portfolio of CertaDrive LED drivers to match high volume CertaFlux LED line propositions as well as high volume opportunities of other LED board manufactures.

#### Benefits

- Design freedom
- Optimized to operate CertaFlux LED lines
- 3-years warranty

#### Features

- Small dimensions
- Specific current and voltage
- 50,000 hours life time
- Fast Time to Market

#### Application

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

## Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220...240	V <sub>ac</sub>	Performance range
Rated input voltage	230	V <sub>ac</sub>	
Rated input frequency range	50...60	Hz	Performance range
Rated input current	0.15	A	@ rated output power @ rated input voltage
Rated input power	34	W	@ rated output power @ rated input voltage
Power factor	0.9		@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	88	%	@ rated output power @ rated input voltage @max. Uout
Input voltage AC range	202...254	V <sub>ac</sub>	Operational range
Input frequency AC range	47.5...63	Hz	Operational range
Isolation input to output	No		

## Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	50...85	V <sub>dc</sub>	
Output voltage max.	300	V	Peak voltage at open load
Output current	0.35	A	Full output current setting
Output current tolerance	± 8	%	
Output current ripple LF	≤ 30	%	Ripple = peak / average
Output current ripple HF	≤ 30	%	
Output P <sub>st</sub> <sup>LM</sup>	≤ 1.90		In entire operating window
Output SVM	≤ 0.1		In entire operating window
Output power	17.5...30	W	Full output

## Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		
Isolation controls input to output	No		

## Logistical data

Specification item	Value
Product name	CertaDrive 30W 350mA 85V 230V
EOC	871869970326400
Logistic code 12NC	9290 021 08480
Pieces per box	50

## Wiring & Connections

Specification item	Value	Unit	Condition
Input wire cross-section	0.5...1.5	mm <sup>2</sup>	Type250, solid / stranded wire
	16...20	AWG	Type250, solid / stranded wire
Input wire strip length	8...9	mm	
Output wire cross-section	0.5...1.5	mm <sup>2</sup>	Type250, solid / stranded wire
	16...20	AWG	Type250, solid / stranded wire
Output wire strip length	8...9	mm	
Maximum cable length	4000	mm	Total length of wiring including LED module, one way

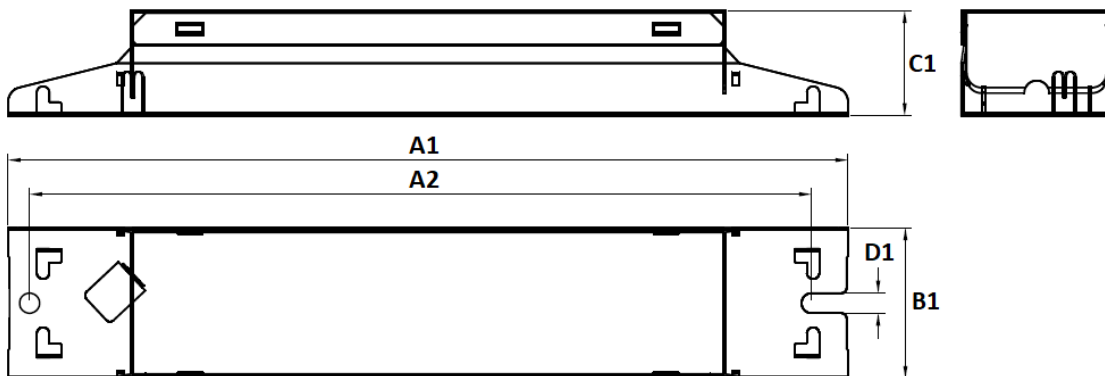


## Insulation

Insulation	Input	Output
Input		Non
Output	Non	

## Dimensions and weight

Specification item	Value	Unit	Condition
Length (A1)	168	mm	
Width (B1)	30.2	mm	
Height (C1)	21	mm	
Fixing hole diameter (D1)	4	mm	
Fixing hole distance (A2)	156.4	mm	
Weight	110	gram	

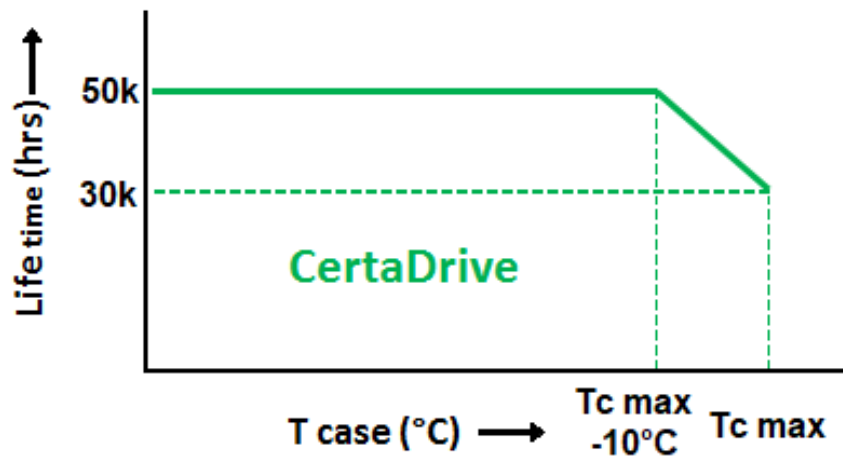


## Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as T <sub>case-max</sub> is not exceeded
T <sub>case-max</sub>	75	°C	Maximum temperature measured at T <sub>case-point</sub>
T <sub>case-life</sub>	65	°C	Measured at T <sub>case-point</sub>
Maximum housing temperature	110	°C	In case of a failure
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	Value	Remark	Condition
Set Adjustable Output Current (AOC)		See Design-in guide.	Default output current: = 350 mA
LED Module Temperature Protection (MTP)	No		
Constant Lumen Over Lifetime (CLO)	No		
DC emergency Dimming (DCemDim)	No		
Corridor mode	No		
Energy metering	No		
Diagnostics	No		

## Features

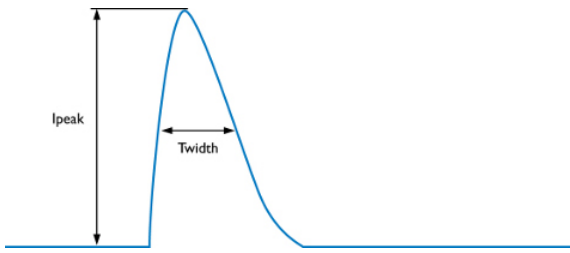
Specification item	Value	Remark	Condition
Open load protection	Yes		Automatic recovering
Short circuit protection	Yes		Automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	No		
Suitable for fixtures with protection class	I		per IEC60598

## Certificates and standards

Specification item	Value
Approval marks	C-tick / CB / CCC / CE / ENEC / KC / TISI
Ingress Protection classification (IP)	20

## Inrush current

Specification item	Value	Unit	Condition
Inrush current $I_{peak}$	5.16	A	Input voltage 230V
Inrush current $T_{width}$	47	$\mu$ s	Input voltage 230V, measured at 50% $I_{peak}$
Drivers / MCB 16A type B	$\leq 60$	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 touch current (ins. Class II)	0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

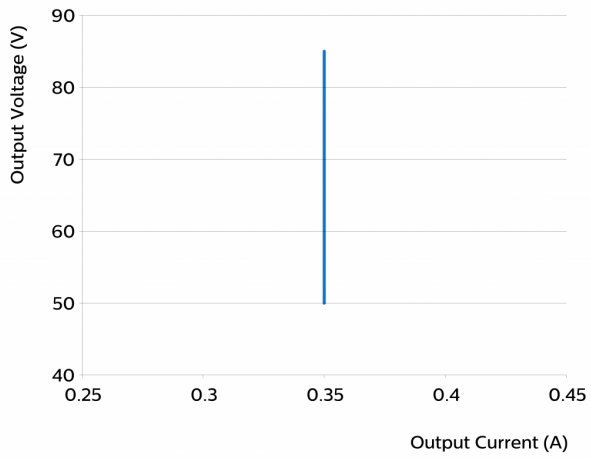
## Surge immunity

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

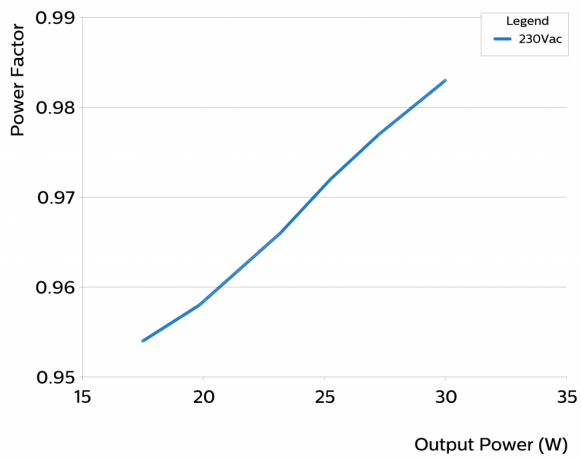
### Operating window

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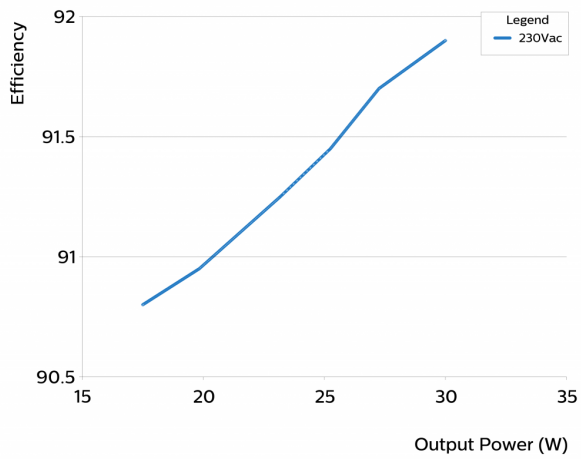
### Power factor versus output power

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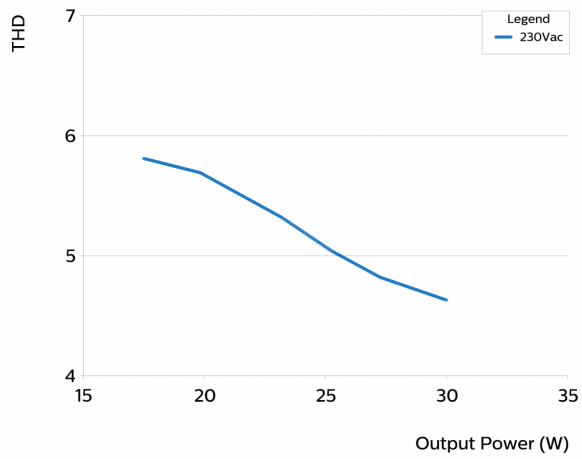
### Efficiency versus output power

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## THD versus output power

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