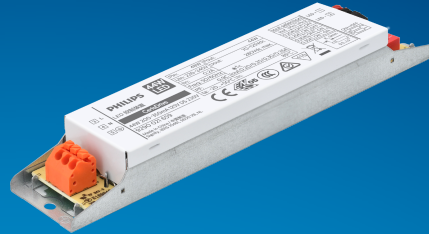


PHILIPS

CertaDrive

LED driver



Preliminary Datasheet

CertaDrive LED drivers – Linear HV non-isolated

CertaDrive 44W 200-350mA 125V DS 230V

9290 021 65980

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.

Electrical input data

Specification item	Value	Unit	Condition
Rated input voltage range	220...240	V _{ac}	Performance range
Rated input voltage	230	V _{ac}	
Rated input frequency range	50...60	Hz	Performance range
Rated input current	0.2	A	@ rated output power @ rated input voltage
Rated input power	48	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	≥ 93	%	@ full power @ rated input voltage
Input voltage AC range	202...254	V _{ac}	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	70...125	V _{dc}	
Output voltage max.	210	V	Maximum output voltage (rms)
Output current	0.20/0.25/0.30/0.35	A	
Output current tolerance	± 8	%	
Output current ripple LF	≤ 30	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 30	%	
Output power	14...43.7	W	

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 44W 200-350mA 125V DS 230V
Logistic code 12NC	9290 021 65980
Pieces per box	50

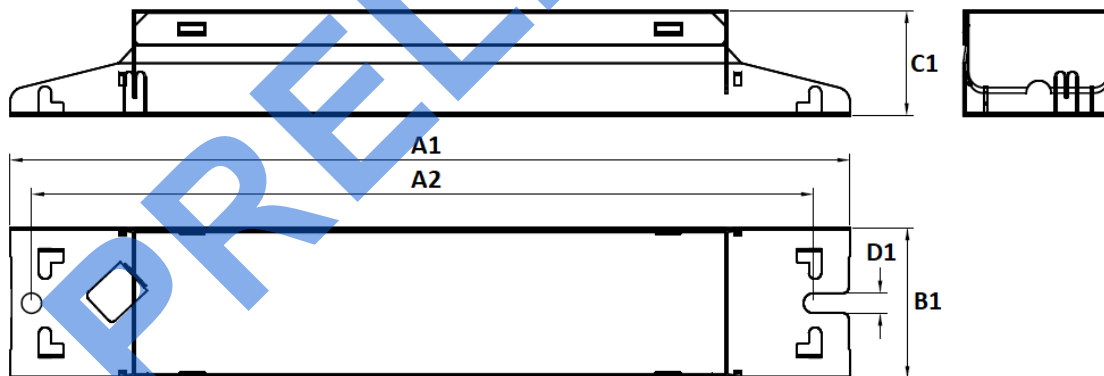
Wiring and Connections

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	2000	mm	Total length of wiring including LED module, one way



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	124	gram	



Logistical data

Specification item	Value
Product name	CertaDrive 44W 200-350mA 125V DS 230V
Logistic code 12NC	9290 021 65980
Pieces per box	50

Logistical data

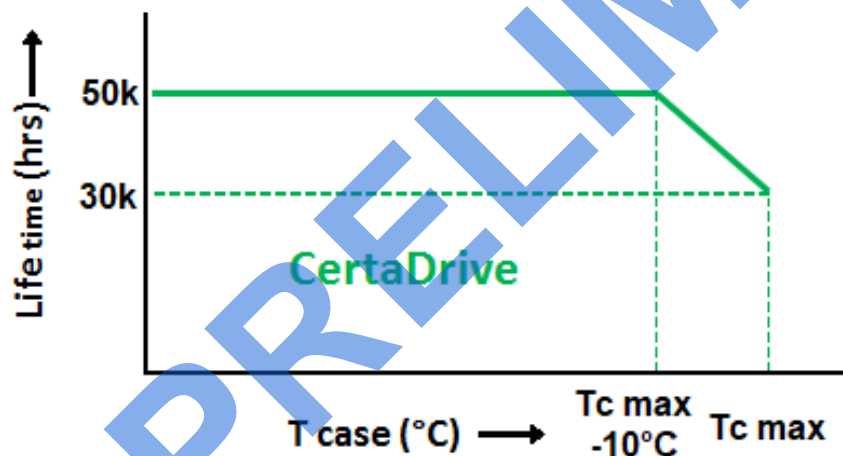
Specification item	Value
Product name	CertaDrive 44W 200-350mA 125V DS 230V
Logistic code 12NC	9290 021 65980
Pieces per box	50

Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as T _{case} -max is not exceeded
Starting Ambient temperature	-20...+50	°C	
T _{case} -max	85	°C	Maximum temperature measured at T _{case} -point
T _{case} -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 T _{case} -point is T _{case} -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

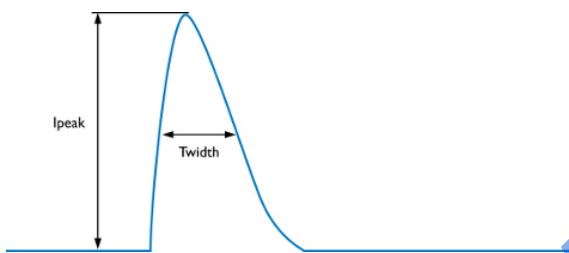
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	No	350 mA	
LED Module Temperature Protection (MTP)	No		
Constant Lumen Over Lifetime (CLO)	No		
DC emergency dimming (DCemDim)	No		
Corridor mode	No		

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

Inrush current

Specification item	Value	Unit	Condition
Inrush current I_{peak}	19.2	A	Input voltage 230V
Inrush current T_{width}	134	μs	Input voltage 230V, measured at 50% I_{peak}
Drivers / MCB 16A type B	≤ 46	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%

Surge immunity

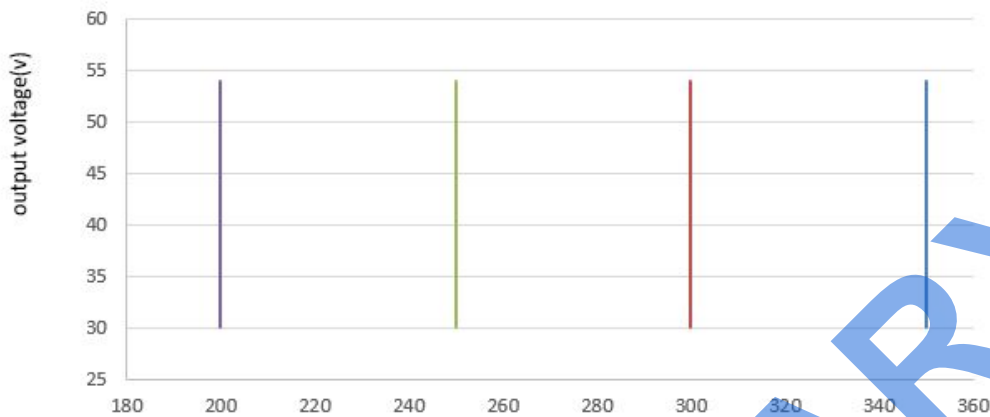
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us

Application Info

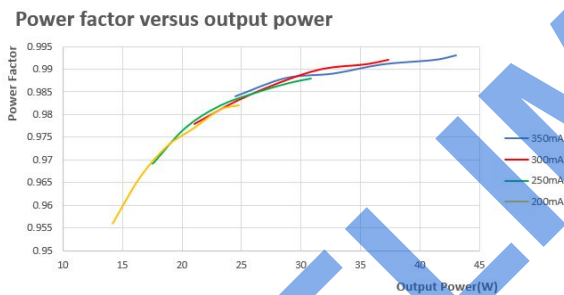
Specification item	Value
Approval marks	CB / CCC / CE / ENEC / RCM / TISI
Ingress Protection classification (IP)	20

Graphs

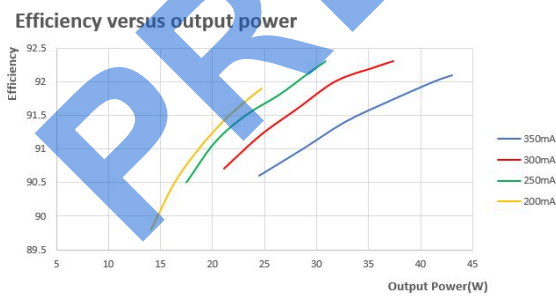
Operating window



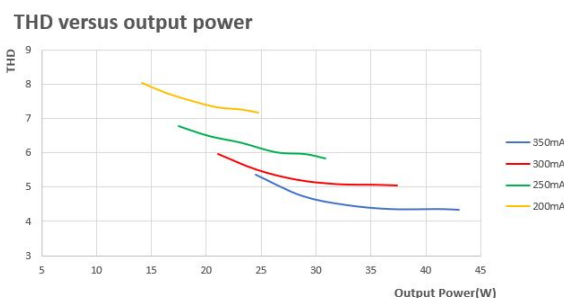
Power factor versus output power



Efficiency versus output power



THD versus output power





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