

PHILIPS

CertaDrive

LED driver



Datasheet

CertaDrive Linear Isolated LED Drivers Single Current G2

CertaDrive 50W 1.2A 42V 17 230V G2

9290 034 62680

Single current LED drivers for essential lighting applications.

CertaDrive LED drivers come with single current output and offer industry leading performance and reliability at optimized cost. They are ideal for high volume applications while delivering to quality requirements that you can expect from the Philips brand. Key improved feature is the low output current ripple, which ensures that your customers experience high quality of light without visual flicker and stroboscopic effects.

Features

- Class I application
- Low Ripple less than 4%
- High efficiency
- 50,000 hours lifetime @ Tc-life

Benefits

- Provides options for different luminaire designs
- Comfortable for the eyes
- Energy saving
- Peace of mind with proven reliability

Application

- Panel lighting
- Recessed, surface and suspended linear lighting

Logistical data

Specification item	Value
Product name	CertaDrive 50W 1.2A 42V 17 230V G2
Logistic code 12NC	9290 034 62680
Pieces per box	54

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	50...60	Hz	Performance range
Rated input current	0.3	A	@ rated output power @ rated input voltage
Rated input power	56.0	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	88.0	%	@ rated output power @ rated input voltage @max. Uout
Input voltage AC	198...264	V _{ac}	Operational range
Input frequency AC	45...66	Hz	Operational range
Isolation input to output	SELV		

Electrical output data

Specification item	Value	Unit	Condition
Regulation method	Constant Current		
Output voltage	23...42	V _{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	1200	mA	
Output current tolerance ±	8	%	
Output current ripple LF	≤ 4	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 15	%	Ripple = peak / average total
Output P _{st} ^{LM}	≤ 0.1		In entire operating window
Output SVM	≤ 0.1		In entire operating window
Output power	27.6...50.4	W	

Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		

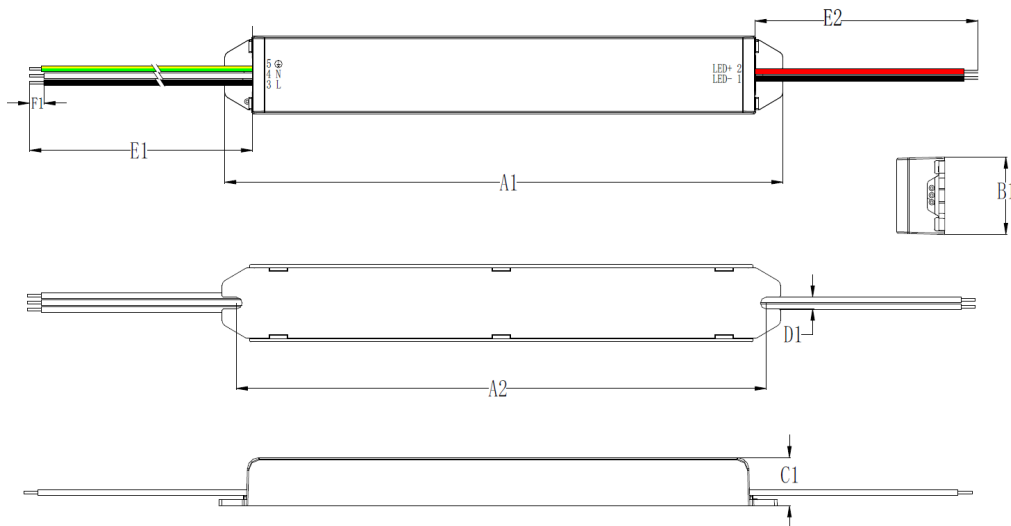
Wiring and Connections

Specification item	Value	Unit	Type
Maximum cable length	0.6	m	Total length of wiring including LED module, one way



Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	197.8	mm	
Mounting hole distance (A2)	187.8	mm	
Width (B1)	27.4	mm	
Height (C1)	17	mm	
Mounting hole diameter (D1)	4.2	mm	
Input cable length (E1)	300	mm	
Output cable length (E2)	200	mm	
Input cable wire length (F1)	10	mm	
Weight	109	gram	
Housing color	white		

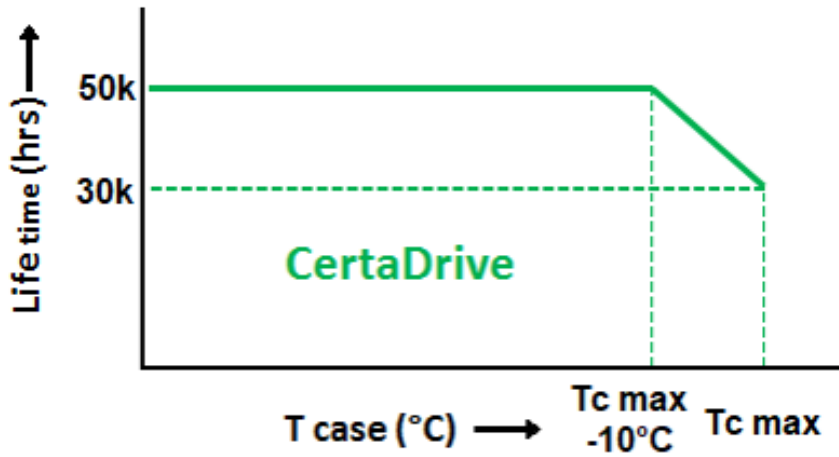


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°C	Higher ambient temperature allowed as long as T _{case-max} is not exceeded
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 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	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	No		
LED Module Temperature Protection (MTP)	No		
Constant Light Output (CLO)	No		
DC emergency (DCemDim)	No		

Features

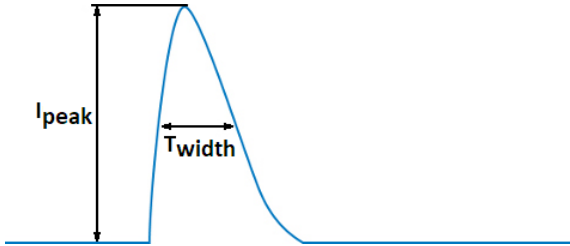
Specification item	Value	Condition
Open load protection	Yes	Automatic recovering
Short circuit protection	Yes	Automatic recovering
Over power protection	Yes	Automatic recovering
Hot wiring	No	
Suitable for fixtures with protection class	I	per IEC60598

Inrush current

Specification item	Value	Unit	Condition
Inrush current	30	A	Input voltage 230V
Inrush peak width	178	μs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	≤ 21	pcs	Indicative value at 230V

Please refer to the driver design in guide if you use other MCB-types.

If several mini circuit breakers are used directly side-by-side (without distance pieces) a correction factor of 80% has to be applied to the rated current



Driver touch current / protective conductor current / earth leakage current

Specification item	Value	Unit	Condition
Typical Protective Conductor Current (ins. Class I)	0.5	mA rms	Acc. IEC60598-1. LED module contribution not included

Surge immunity

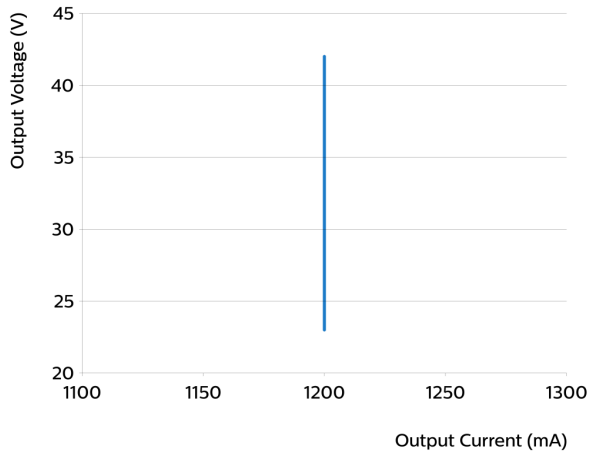
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us

Application Info

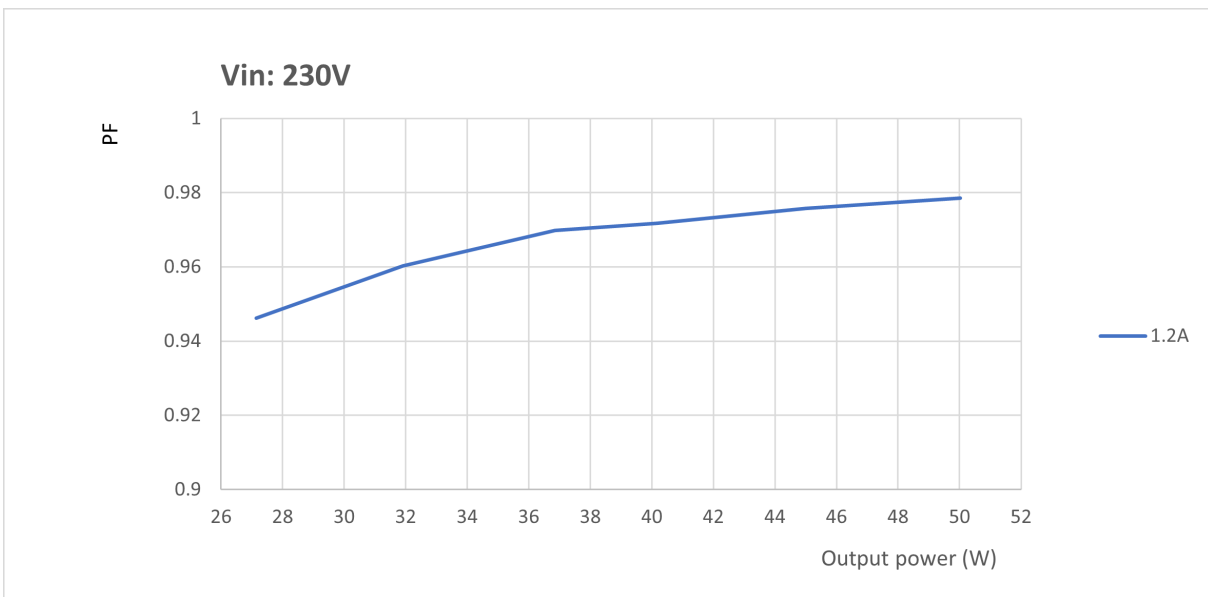
Specification item	Value
Approval marks and Certifications	CB / CE / KC / SELV
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

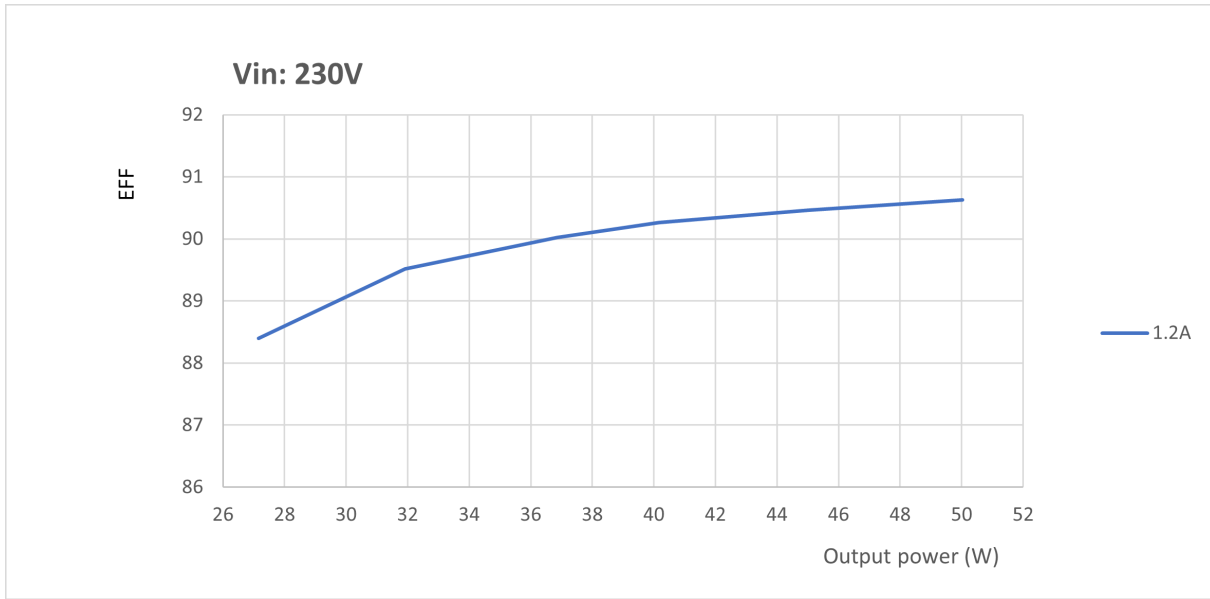
Operating window



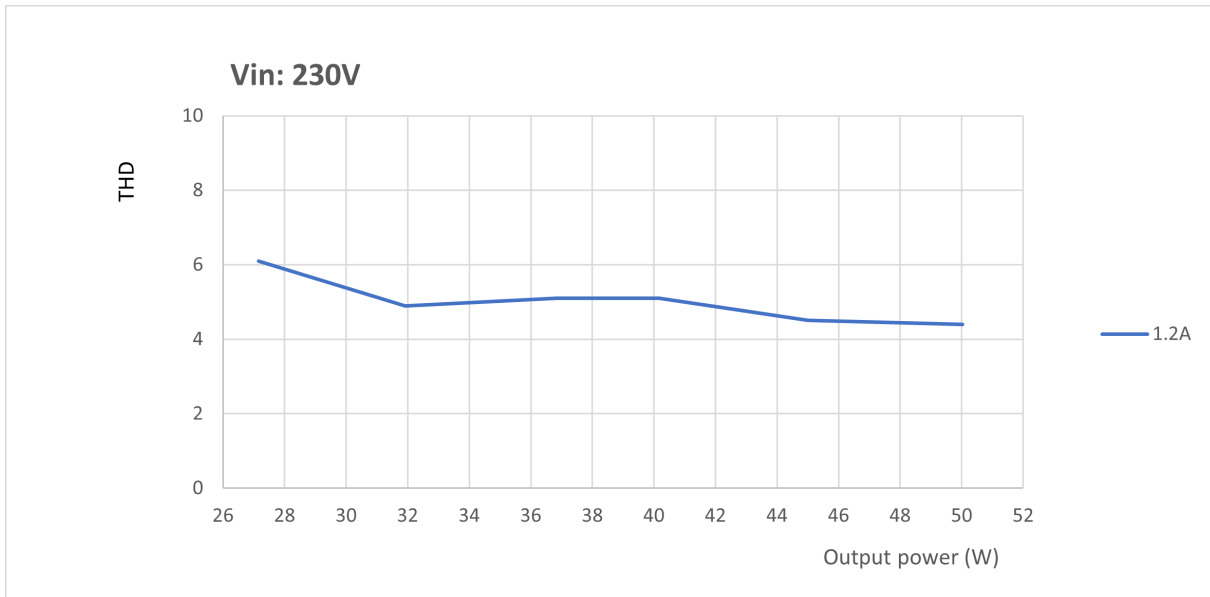
Power factor versus output power



Efficiency versus output power



THD versus output power



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Date of release: October 31, 2023 v2

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