

PHILIPS

CertaDrive

LED driver



Datasheet

CertaDrive Linear non-isolated LED driver

CertaDrive 50W 335mA 145V 17 230V

9290 039 11480

The Philips CertaDrive Linear non-isolated LED driver is a perfect solution tailored for the South Korean market, output featuring dual Plugin 2-PIN Connectors, enhancing production efficiency for Original Equipment Manufacturer (OEM) customers.

CertaDrive LED drivers, known for their single current output, provide industry-leading performance and reliability. These drivers are optimized for cost-effectiveness without compromising on quality, making them an ideal choice for high-volume projects.

Features

- Class I application
- Low Ripple less than 1%
- 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

- Recessed, surface and suspended linear lighting

Logistical data

Specification item	Value
Product name	CertaDrive 50W 335mA 145V 17 230V
Logistic code 12NC	9290 039 11480
Pieces per box	100
Weight	58 gram

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	0.25	A	@ rated output power @ rated input voltage
Rated input power	53.0	W	@ rated output power @ rated input voltage
Power factor	0.9C		@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	90.0	%	@ rated output power @ rated input voltage @max. Uout
Input voltage AC	198...264	V _{ac}	Operational range
Input frequency AC	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	108...145	V _{dc}	
Output voltage max.	220	V	Maximum output voltage (rms)
Output current	335	mA	
Output current tolerance ±	8	%	
Output current ripple LF	≤ 1	%	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	36.2...48.6	W	

Control interfaces

Specification item	Value	Unit	Condition
Control method	Fixed		

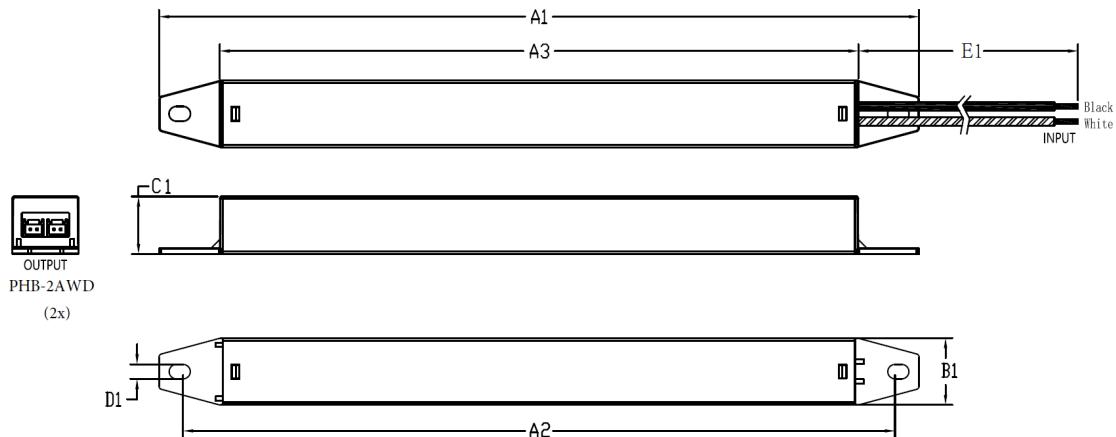
Wiring and Connections

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)	225	mm	
Mounting hole distance (A2)	210.7	mm	
Length (A3)	189	mm	
Width (B1)	19.5	mm	
Height (C1)	16.5	mm	
Mounting hole diameter (D1)	4.3	mm	
Input cable length (E1)	185	mm	
Weight	58	gram	
Housing color	white		

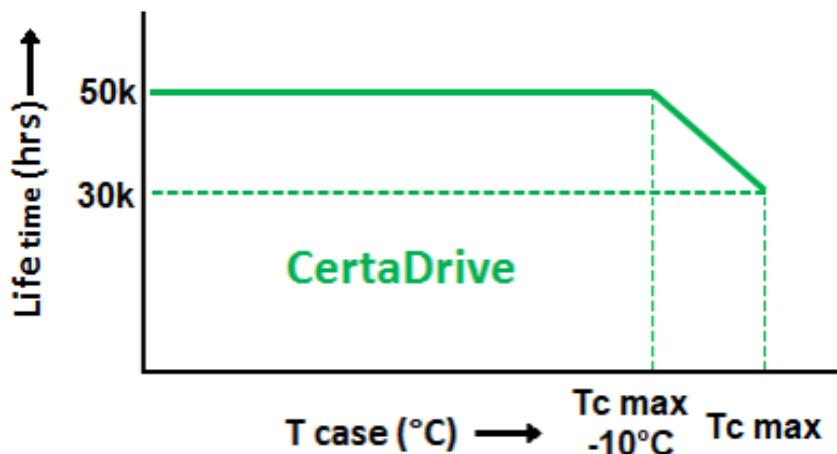


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+45	°C	Higher ambient temperature allowed as long as T _{case-max} is not exceeded
T _{case-max}	80	°C	Maximum temperature measured at T _{case-point}
T _{case-life}	70	°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%



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		

Non-programmable features

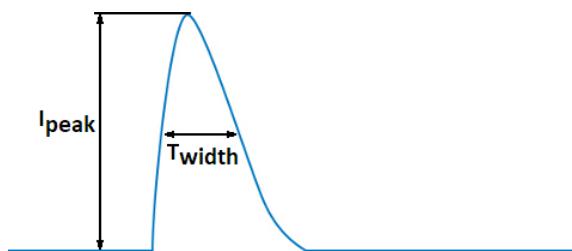
Specification item	Value	Condition
Open load protection	Yes	Automatic recovering
Short circuit protection	Yes	Automatic recovering
Over power protection	Yes	Automatic recovering
Hot wiring	No	
Suitable for fixtures with protection class	I	per IEC60598

Inrush current

Specification item	Value	Unit	Condition
Inrush current	18.8	A	Input voltage 230V
Inrush peak width	200	μs	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 30	pcs	Input voltage 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 Touch Current (ins. Class II)	0.5	mA peak	Acc. IEC61347-1. LED module contribution not included

Surge immunity

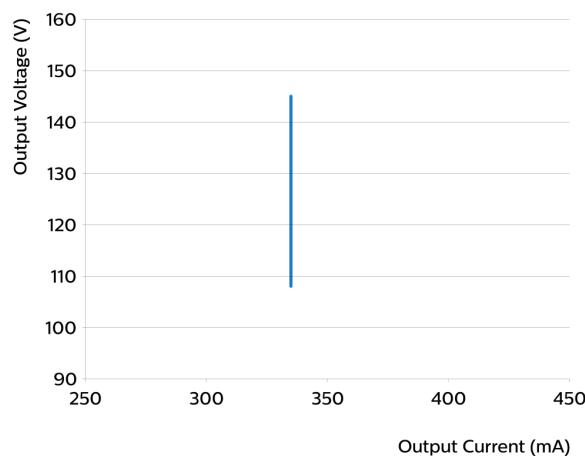
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us

Application Info (Approbation)

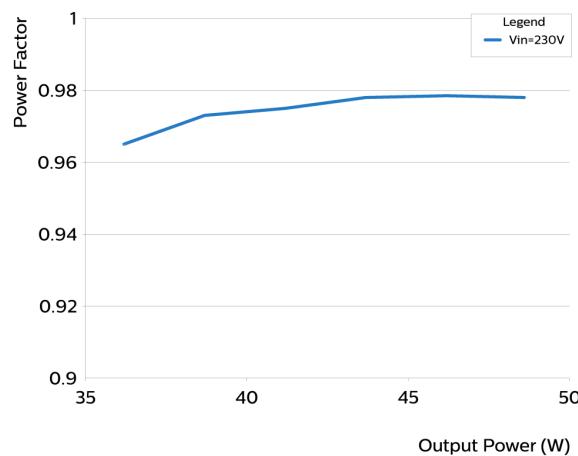
Specification item	Value
Approval marks and Certifications	CB / KC
Ingress Protection classification (IP)	20
Application	Indoor Linear
Mounting Type	Built-in

Graphs

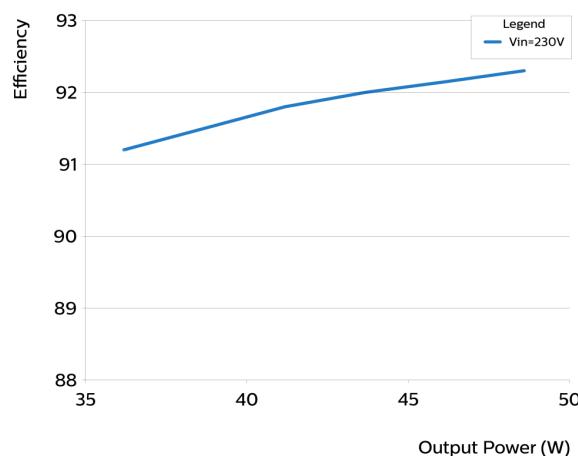
Operating window



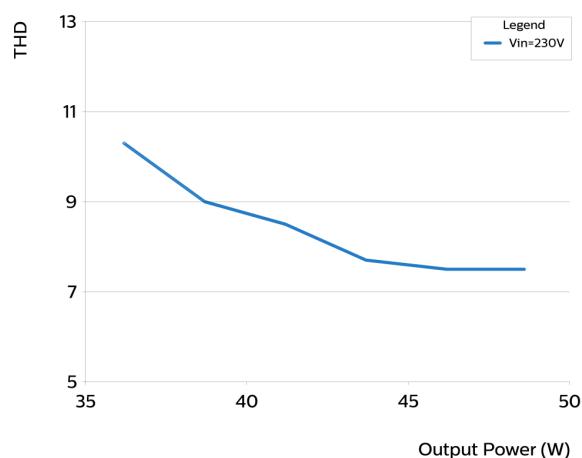
Power factor versus output power



Efficiency versus output power



THD versus output power



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