xitanium



Datasheet

CertaDrive G2

CertaDrive 21W 0.5A 42V I 230V
9290 033 92380

Affordable and reliable LED Drivers
Affordable LED Driver range offering Philips reliability. The CertaDrive range is compatible with COB and mid-power LEDs from any LED manufacturer.

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

- High reliability
- Luminaire design flexibility to keep stable/constant
- Lumen output and light quality levels
- Fast Time to Market
- One supplier for professional general lighting LED Drivers
- Affordable LED Drivers

Application

- Public buildings (airports, cinemas, theaters, exhibition halls)
- Retail (supermarkets, shops)
- Office

Logistical data

Specification item	Value
Product name	CertaDrive 21W 0.5A 42V I 230V
Logistic code 12NC	9290 033 92380
Pieces per box	64
Weight	65 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	0.12	A	@ rated output power @ rated input voltage
Rated input power	25.0	W	@ rated output power @ rated input voltage
Power factor performance range	≥ 0.96		@ rated output power @ rated input voltage@ rated output power @ rated input voltage
Total harmonic distortion	20	%	@ rated output power @ rated input voltage
Efficiency	85.0	%	@ rated output power @ rated input voltage @max. Uout
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	30...42	V_{dc}	
Output voltage max.	60	V	Maximum output voltage (rms)
Output current	500	mA	
Output current tolerance ±	8	%	@full load
Output current ripple LF	≤ 8	%	Ripple = peak / average, < 3kHz
Output current ripple HF	≤ 15	%	
Output P_{st}^{LM}	≤ 0.3		In entire operating window
Output SVM	≤ 0.3		In entire operating window
Output power	15.0...21.0	W	

Control interfaces

Specification item	Value	Unit	Condition
Control method	Fixed		

Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.75...1.5 / 18...16	mm² / AWG	solid / stranded wire
Input wire strip length	8.5...9.5	mm	
Output wire cross-section	0.75...1.5 / 18...16	mm² / AWG	solid / stranded wire
Output wire strip length	8.5...9.5	mm	
Maximum cable length	0.6	m	Total length of wiring including LED module, one way

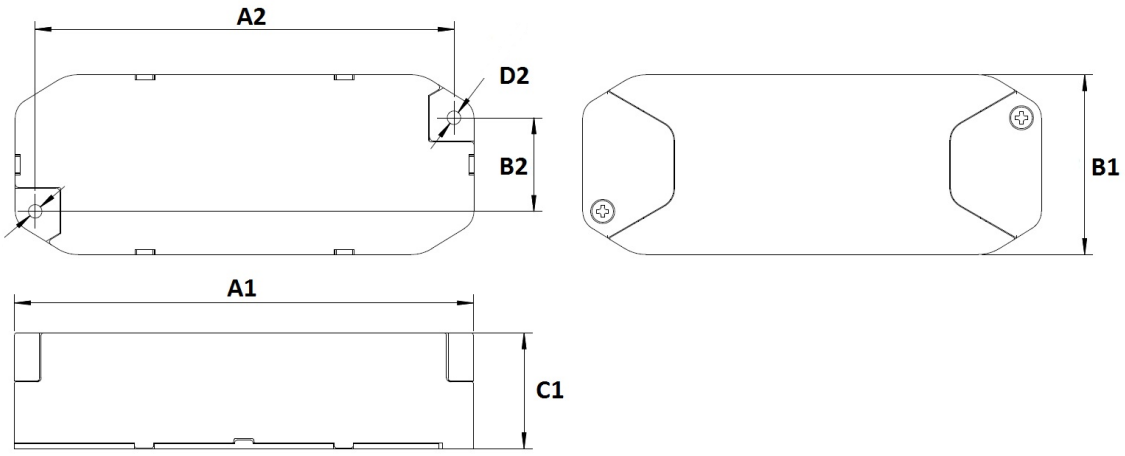


Isolation

Insulation per IEC61347-1	Input	Output
Input	-	SELV
Output	SELV	-

Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	115	mm	
Mounting hole distance (A2)	105	mm	
Width (B1)	45	mm	
Width (B2)	34.4	mm	
Height (C1)	29	mm	
Mounting hole diameter (D1)	3.4	mm	
Weight	65	gram	

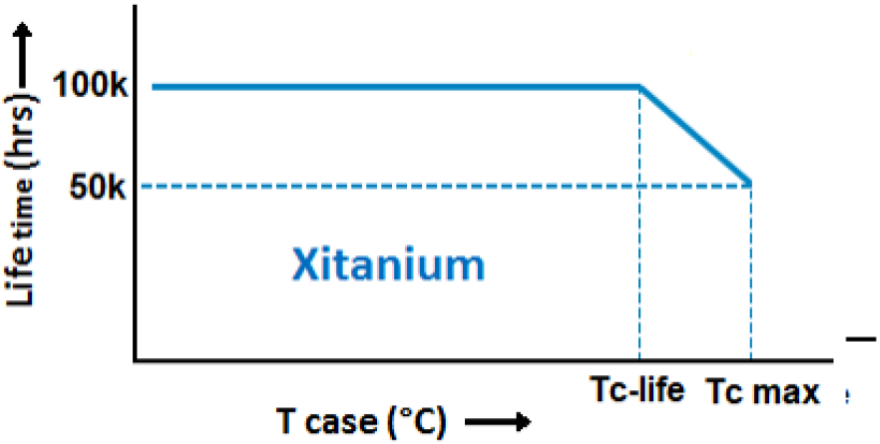


Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-20...+50	°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	65	°C	Measured at T_{case}-point
Maximum housing temperature	130	°C	In case of a failure, inherent by design
Relative humidity	10...90	%	Non-condensing

Lifetime

Specification item	Value	Unit	Condition
Driver lifetime	30,000	hours	Measured temperature at Tcase-point is Tcase-life. Maximum failures = 10%



Maximum failures = 10%

Temperature [°C]	Lifetime	Unit	Condition
75	15000	hr	
70	21000	hr	
65	30000	hr	Temperature measured @Tc point
60	>30000	hr	
55	>30000	hr	

Storage temperature and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-25...+85	°C	
Relative humidity	5...95	%	Non-condensing

Programmable features

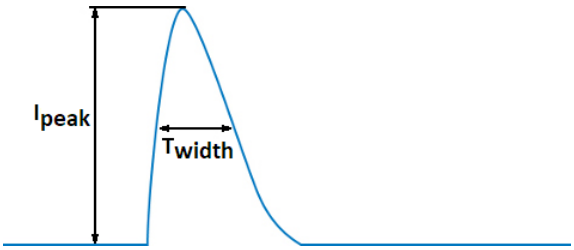
Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	No	500 mA	
Constant Light Output (CLO)	No		
DC emergency (DCemDim)	No		

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	II	per IEC60598

Inrush current

Specification item	Value	Unit	Condition
Inrush current	9.91	A	Input voltage 230V
Inrush peak width	128	µs	Input voltage 230V, measured at 50% height
Drivers / MCB 16A type B @230V AC	≤ 98	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)	0.7	mA peak	Acc. IEC61347-1. LED module contribution not included

Surge immunity

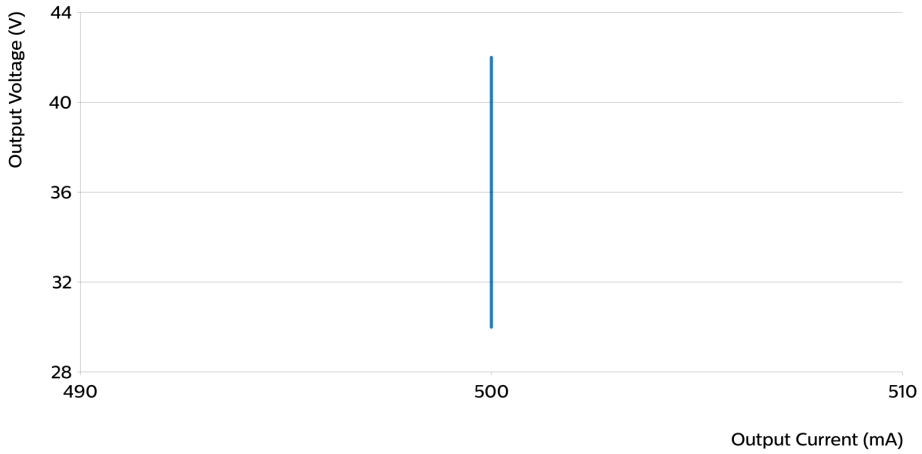
Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us
Mains surge immunity (comm. mode)	2	kV	Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us

Application Info (Approbation)

Specification item	Value
Approval marks and Certifications	CCC / CE / ENEC / RCM / SELV / TISI / UKCA
Ingress Protection classification (IP)	20
Application	Indoor Point
Mounting Type	Built-in / Independent

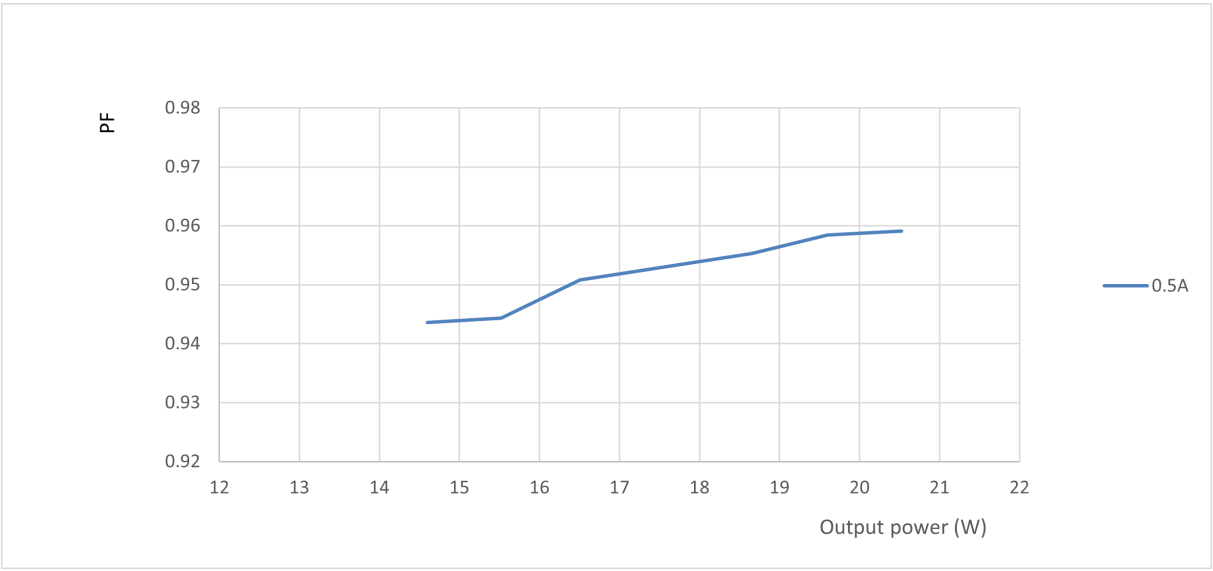
Graphs

Operating window

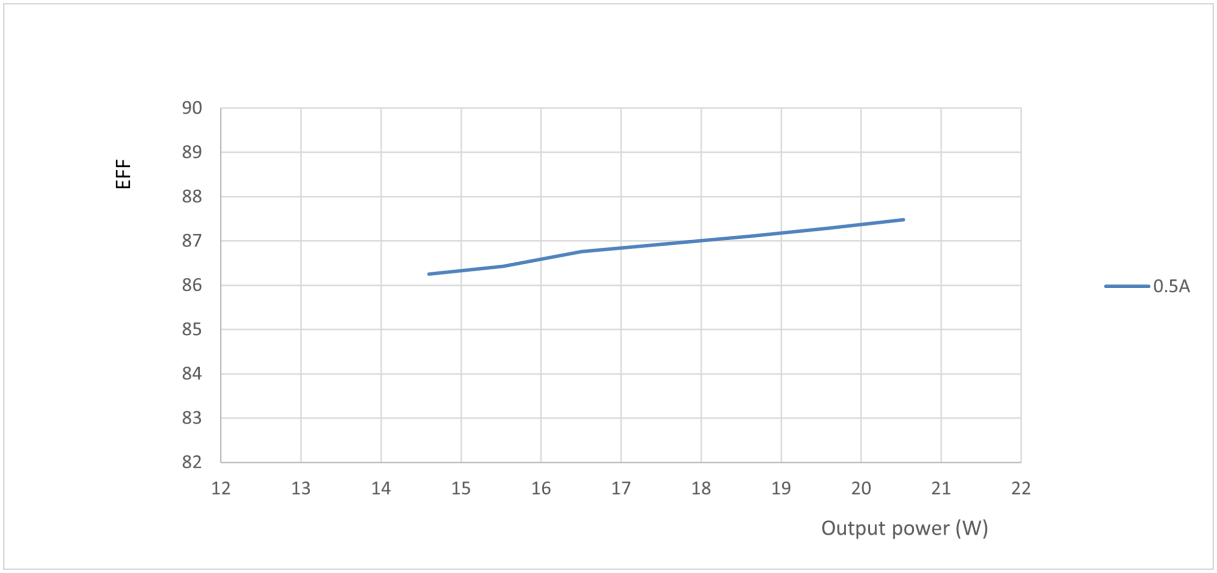


Type	Output current (mA)	Min. output voltage (V)	Max. output voltage (V)	Max. output power (W)
CertaDrive 21W 0.5A 42V I 230V	500	30	42	21
CertaDrive 21W 0.5A 42V I 230V	500	30	42	21

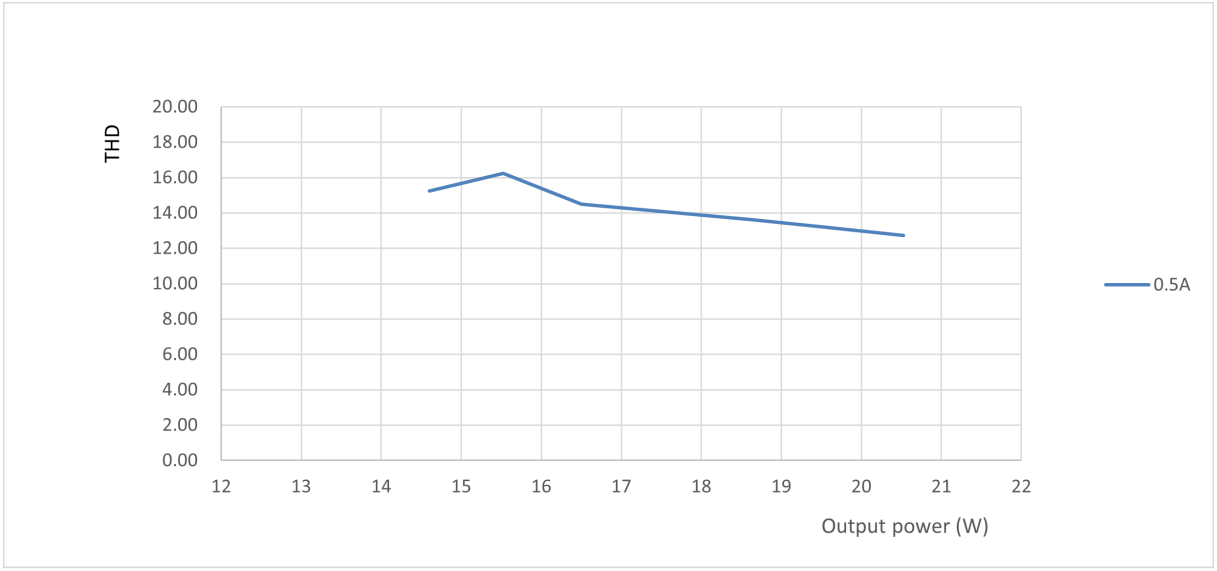
Power factor versus output power



Efficiency versus output power



THD versus output power



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