

# PHILIPS

## CertaDrive

### LED Transformers



## Datasheet

### CertaDrive LED Transformer G2

#### CertaDrive LED Transformer 120W 24VDC

9290 034 26680

Philips full-electronic constant voltage CertaDrive LED Transformers are designed to operate 24VDC LED solutions used both in built-in and independent applications such as refrigerated display lighting, retail display lighting and linear accent lighting. They are specifically designed to ensure good performance with high robustness.

#### Benefits

- SELV operating voltages, ensuring safety even if wiring or LED boards become damaged
- Energy savings through high efficiency
- High robustness, offering peace of mind and lower maintenance costs
- Easy to design-in and install with parallel wiring

#### Features

- Use for Insulation Class II applications
- Stable output voltage
- Wide ambient temperature range
- Protection against overpower and overvoltage
- Output short-circuit shutdown feature with automatic restart

#### Application

- Retail display lighting, linear accent lighting and refrigerated display lighting
- Shelf lighting
- Cove lighting
- Facade accent lighting
- Coolers and freezers

## 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	47...63	Hz	Performance range
Rated input current	0.57	A	@ rated output power @ rated input voltage
Max. input current	0.65	A	@ rated output power @ minimum performance input voltage
Rated input power	130	W	@ rated output power @ rated input voltage
Nominal Power factor	0.95		
Total harmonic distortion	10	%	@ rated output power @ rated input voltage
Efficiency	92	%	@ rated output power @ rated input voltage
Input voltage AC range	198...264	V <sub>ac</sub>	Operational range
Input frequency AC range	45...66	Hz	Operational range
Isolation input to output	SELV		

## Electrical output data

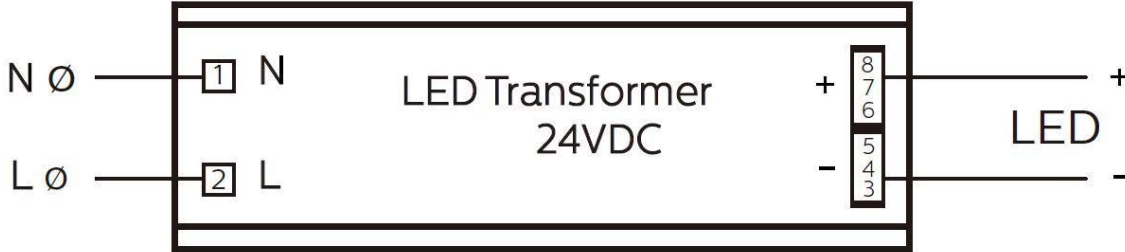
Specification item	Value	Unit	Condition
Regulation method	Constant Voltage		
Output voltage	24	V <sub>dc</sub>	Output voltage range: 22.8 ... 25.2VDC
Output voltage max.	26	V	
Output current	0.5...5	A	Minimum output current > 0.5A for stable operation
Output voltage ripple	≤ 350	mV <sub>pp</sub>	
Output power	12...120	W	Minimum output power > 12W for stable operation
Turn-on delay	≤ 1	s	@ rated output power @ rated input voltage
Output voltage rise time	≤ 100	ms	
Hold-up time	≥ 10	ms	

## Electrical data controls input

Specification item	Value	Unit	Condition
Control method	Fixed		

## Wiring and Connections

Specification item	Value	Unit	Type
Input wire cross-section	0.75...1.5	mm <sup>2</sup> / AWG	solid / stranded wire
Input wire strip length	8	mm	
Output wire cross-section	0.5...1.5	mm <sup>2</sup> / AWG	solid / stranded wire
Output wire strip length	8	mm	
Maximum cable length	1	m	Total cable length between driver and LED modules per CISPR15

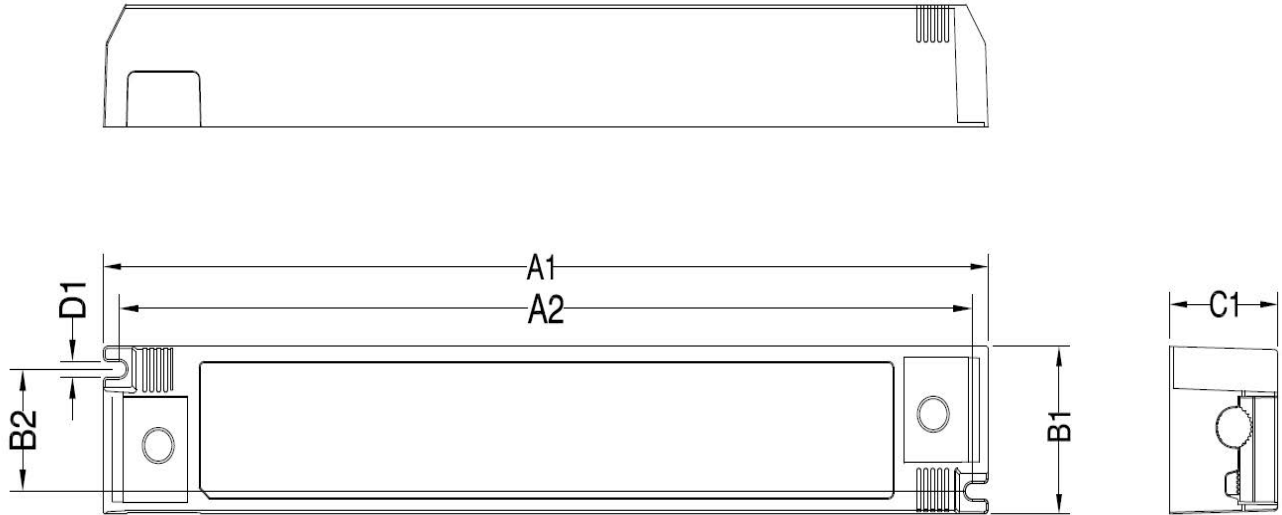


## Isolation

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

## Dimensions and weight

Specification item	Value	Unit	Tolerance (mm)
Length (A1)	253.2	mm	± 1
Mounting hole distance (A2)	244.2	mm	± 1
Width (B1)	42.5	mm	± 0.5
Width (B2)	31	mm	± 0.5
Height (C1)	31	mm	± 0.5
Mounting hole diameter (D1)	4	mm	± 0.5
Weight	440	gram	



## Logistical data

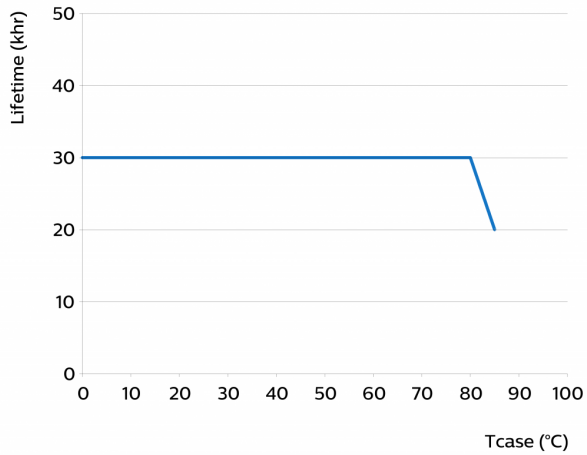
Specification item	Value
Product name	CertaDrive LED Transformer 120W 24VDC
Logistic code 12NC	9290 034 26680
Pieces per box	6

## Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-25...+50	°C	Higher ambient temperature allowed as long as T <sub>case-max</sub> is not exceeded
T <sub>case-max</sub>	85	°C	Maximum temperature measured at T <sub>case-point</sub>
T <sub>case-life</sub>	80	°C	Measured at T <sub>case-point</sub>
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%



## Storage temperature and humidity

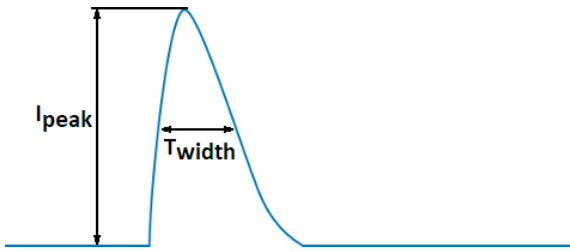
Specification item	Value	Unit	Condition
Ambient temperature	-25...+80	°C	
Relative humidity	5...95	%	Non-condensing

## Features

Specification item	Value	Unit	Condition
Open load protection	Yes		Uout (open circuit) = 26V max.
Short circuit protection	Yes		Hiccup mode, automatic recovering
Over power protection	Yes		Automatic recovering
Hot wiring	Yes		
Suitable for fixtures with protection class	II		per IEC60598

## Inrush current

Specification item	Value	Unit	Condition
Inrush current	44	A	Input voltage 230V
Inrush peak width	204	$\mu$ s	Input voltage 230 V, measured at 50% height
Drivers / MCB 16A type B	$\leq 12$	pcs	Indicative value at 230V



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

## 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. IEC60598-1. LED module contribution not included

## Surge immunity

Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	1	kV	L-N acc. IEC61000-4-5. 2 Ohm
Mains surge immunity (comm. mode)	2	kV	L/N-PE, acc. IEC61000-4-5. 12 Ohm

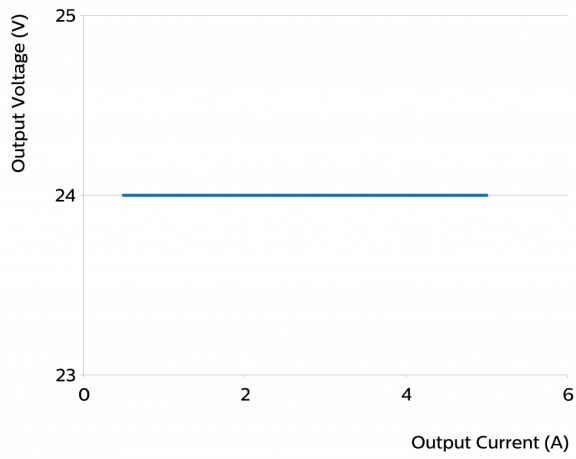
## Application Info

Specification item	Value
Approval marks and Certifications	CCC / CE / ENEC / RCM / SELV / UKCA / MM
Ingress Protection classification (IP)	20
Noise and hum dB(A)	20
Application	Indoor Constant Voltage
Mounting Type	Built-in / Independent

## Graphs

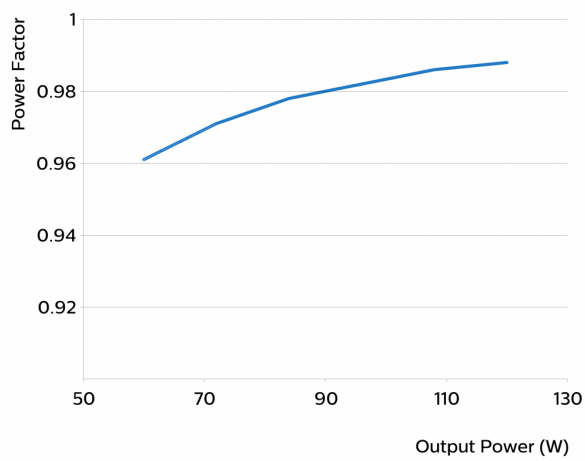
### Operating window

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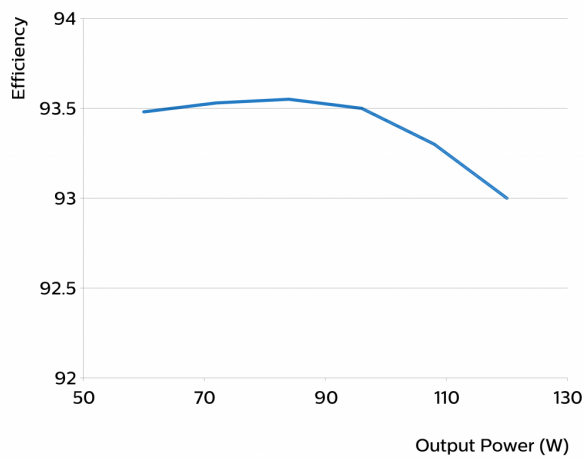
### Power factor versus output power

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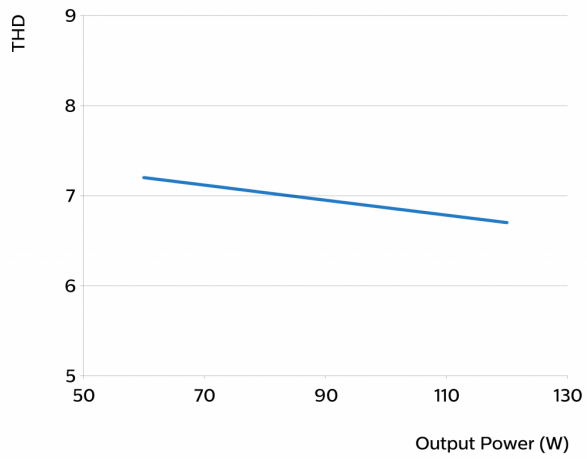
### Efficiency versus output power

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## THD versus output power

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