

# PHILIPS

## CertaDrive

### LED driver



## Datasheet

### CertaDrive G2

CertaDrive 44W 1.05A 42V I 230V

#### 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

## Electrical input data

| Specification item        | Value     | Unit            | Condition               |
|---------------------------|-----------|-----------------|-------------------------|
| Nominal input voltage     | 220...240 | V <sub>ac</sub> | performance range       |
| Nominal input frequency   | 50...60   | Hz              |                         |
| Nominal input current     | 0.22      | A               | @230V @ full load       |
| Input voltage             | 230       | V <sub>ac</sub> |                         |
| Nominal input power       | 49        | W               | @230V @ full load       |
| Power factor              | ≥ 0.9     |                 | @ full load. See graph. |
| Total harmonic distortion | ≤ 20      | %               | @ full load. See graph. |
| Efficiency                | 90        | %               | @230V @ full load       |
| Input voltage AC          | 198...264 | V <sub>ac</sub> | Operational range       |
| Input frequency AC        | 45...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 <sub>dc</sub> |                             |
| Output voltage max.      | 60               | V               | Peak voltage at open load   |
| Output current           | 1.05             | A               | Full output current setting |
| Output current tolerance | ± 8              | %               | @230V @ full load           |
| Output current ripple LF | ≤ 30             | %               | Ripple = peak / average     |
| Output power             | 31.5...44        | W               | Full output                 |

## Electrical data controls input

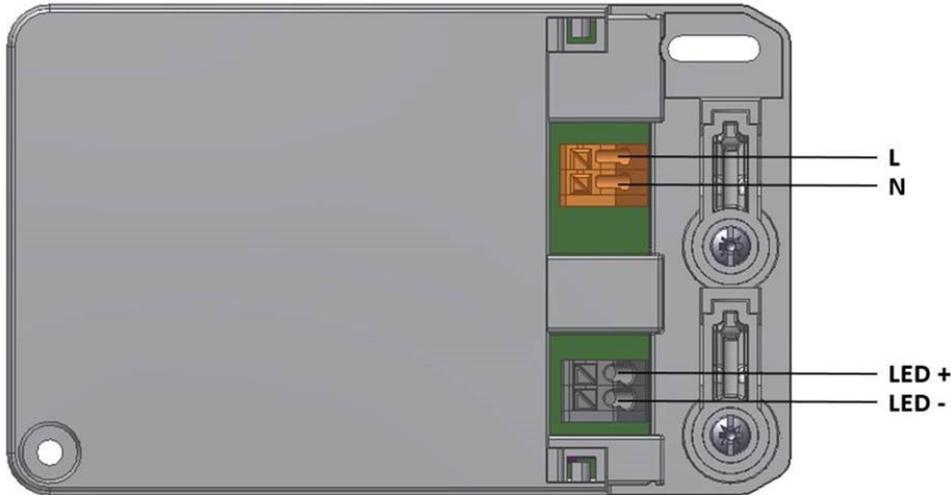
| Specification item | Value | Unit | Condition |
|--------------------|-------|------|-----------|
| Control method     | Fixed |      |           |
| Galvanic Isolation | NA    |      |           |

## Logistical data

| Specification item | Value                           |
|--------------------|---------------------------------|
| Product name       | CertaDrive 44W 1.05A 42V I 230V |
| Order code         |                                 |
| Logistic code 12NC | 9290 014 14580                  |
| EAN3               |                                 |
| Pieces per box     | 40                              |

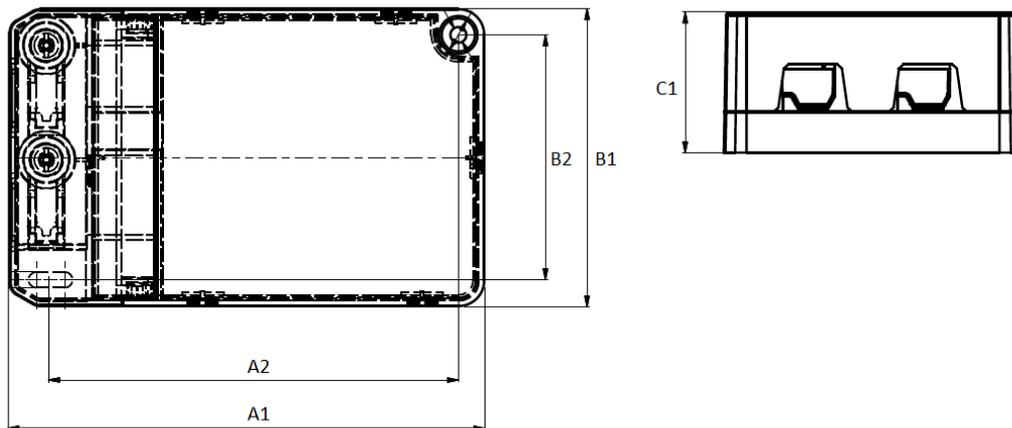
## Wiring & Connections

| Specification item        | Value     | Unit            | Condition                                            |
|---------------------------|-----------|-----------------|------------------------------------------------------|
| Input wire cross-section  | 0.2...1.5 | mm <sup>2</sup> | 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 <sup>2</sup> | 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      | 600       | mm              | Total length of wiring including LED module, one way |



## Dimensions and weight

| Specification item        | Value | Unit | Condition |
|---------------------------|-------|------|-----------|
| Length (A1)               | 108   | mm   |           |
| Width (B1)                | 68    | mm   |           |
| Width (B2)                | 56.1  | mm   |           |
| Height (C1)               | 32    | mm   |           |
| Fixing hole diameter (D1) | 3.6   | mm   |           |
| Fixing hole distance (A2) | 92.9  | mm   |           |
| Weight                    | 120   | gram |           |



## Operational temperatures and humidity

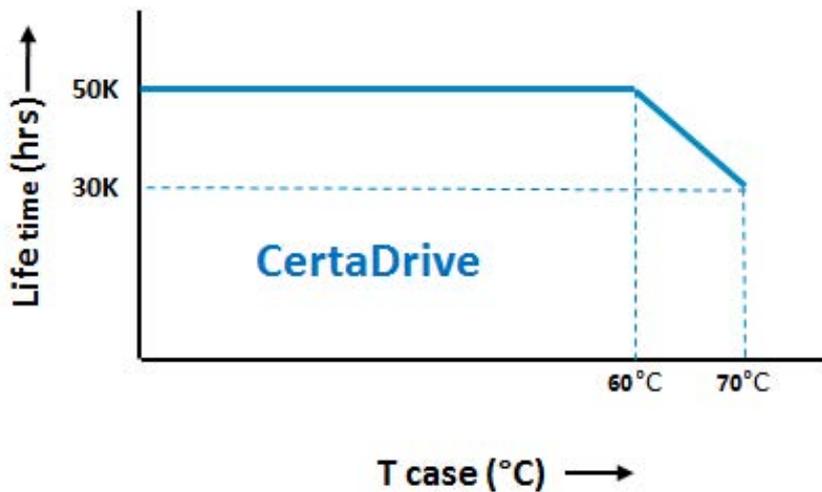
| Specification item          | Value     | Unit | Condition                                                                |
|-----------------------------|-----------|------|--------------------------------------------------------------------------|
| Ambient temperature         | -20...+50 | °C   | Higher ambient temperature allowed as long as Tcase-max is not exceeded. |
| Tcase-max                   | 80        | °C   | Maximum temperature measured at T <sub>case</sub> -point                 |
| Tcase-life                  | 70        | °C   | Measured at T <sub>case</sub> -point                                     |
| Maximum housing temperature | 130       | °C   | In case of a failure                                                     |
| Relative humidity           | 10...90   | %    | Non-condensing                                                           |

## Storage temperature and humidity

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

## Lifetime

| Specification item | Value  | Unit  | Condition                                                                                              |
|--------------------|--------|-------|--------------------------------------------------------------------------------------------------------|
| Driver lifetime    | 30,000 | hours | Measured temperature at T <sub>case</sub> -point is T <sub>case</sub> -life.<br>Maximum failures = 10% |



## Programmable features

| Specification item                    | Value | Remark               | Condition                         |
|---------------------------------------|-------|----------------------|-----------------------------------|
| Set output current (AOC)              |       | See Design-in guide. | Default output current: = 1050 mA |
| LED module temperature derating (MTP) | No    |                      |                                   |
| Constant Lumen Over Lifetime (CLO)    | No    |                      |                                   |
| DC emergency dimming (DCemDIM)        | No    |                      |                                   |

## Features

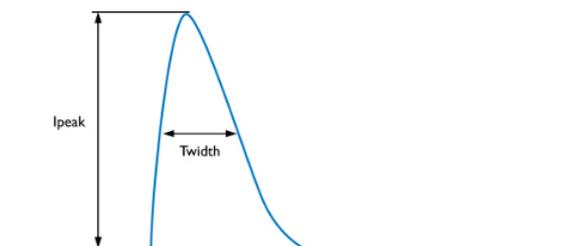
| Specification item                          | Value    | Remark | Condition            |
|---------------------------------------------|----------|--------|----------------------|
| Open load protection                        | Yes      |        | Automatic recovering |
| Short circuit protection 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

## Certificates and standards

| Specification item                | Value                                      |
|-----------------------------------|--------------------------------------------|
| Approval marks                    | C-tick / CB / CCC / CE / ENEC / RCM / TISI |
| Ingress Protection classification | 20                                         |

## Inrush current

| Specification item         | Value     | Unit    | Condition                                      |
|----------------------------|-----------|---------|------------------------------------------------|
| Inrush current $I_{peak}$  | 4.8       | A       | Input voltage 230V                             |
| Inrush current $T_{width}$ | 60        | $\mu$ s | Input voltage 230V, measured at 50% $I_{peak}$ |
| Drivers / MCB 16A type B   | $\leq 40$ | pcs     |                                                |



| MCB | Rating | Relative number of LED drivers |
|-----|--------|--------------------------------|
| B   | 10A    | 63%                            |
| B   | 13A    | 81%                            |
| B   | 16A    | 100% (stated in datasheet)     |
| B   | 20A    | 125%                           |
| B   | 25A    | 156%                           |
| C   | 10A    | 104%                           |
| C   | 13A    | 135%                           |
| C   | 16A    | 170%                           |
| C   | 20A    | 208%                           |
| C   | 25A    | 260%                           |

## Driver touch current

| Specification item    | Value | Unit    | Condition                                             |
|-----------------------|-------|---------|-------------------------------------------------------|
| Typical touch current | < 0.7 | mA peak | Acc. IEC61347-1. LED module contribution not included |

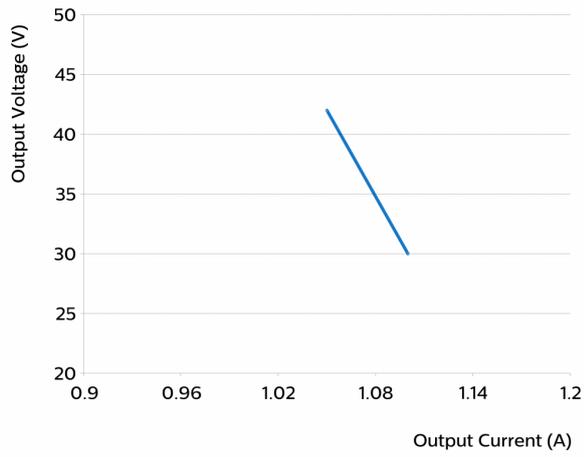
## Surge immunity

| 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  |

## Graphs

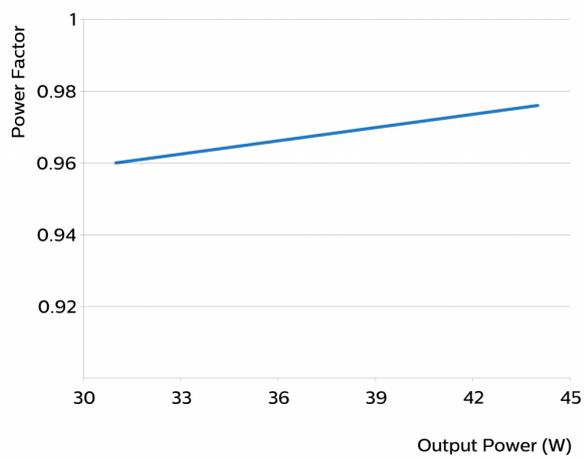
### Operating window

---



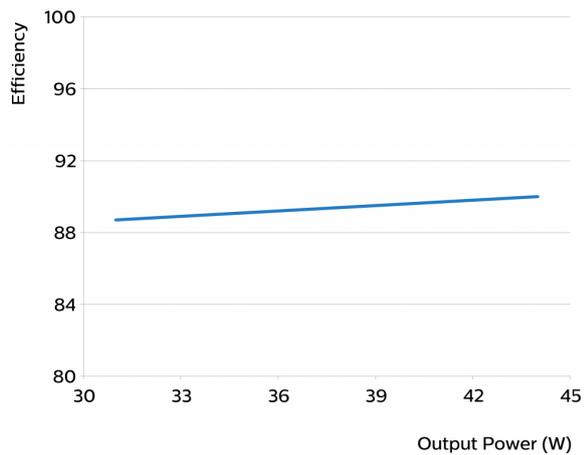
### Power factor versus output power

---



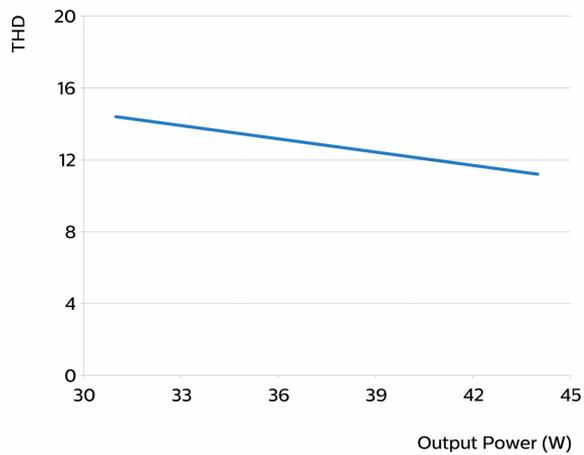
## Efficiency versus output power

---



## THD versus output power

---



©2017 Philips Lighting B.V.

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the publisher for any consequence of its use. Publication thereof does not convey nor imply any license under patent- or other industrial or intellectual property rights. Data subject to change.

Date of release: January 23, 2017

[www.philips.com/technology](http://www.philips.com/technology)

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [LED Power Supplies](#) category:*

*Click to view products by [Philips](#) manufacturer:*

Other Similar products are found below :

[ESS015W-1000-12](#) [EUC-075S105DT](#) [PDA-WIFI](#) [PIFC-K250F](#) [PITB-K222A](#) [ALD-514012PJ134](#) [LB240S24KH](#) [LMH020-SPLC-0000-0000001](#) [79534](#) [79535](#) [EUG-200S210DT](#) [ESS030W-1050-21](#) [ESS030W-0900-32](#) [BPOXL 4-12-035](#) [SLM160W-3.9-40-ZA](#) [ESS010W-0180-42](#) [ESS010W-0350-24](#) [ESS010W-0200-42](#) [PDA080B-1A0G](#) [ESS010W-0500-12](#) [PDA150B-S1A5G](#) [ZPS-20](#) [SLM140W-1.05-130-ZA](#) [ESS040W-1400-27](#) [ESS015W-0700-18](#) [ESS010E-0250-42](#) [EVM120W-2700-42-ECN2](#) [EDC-100S105SV-0007](#) [79278](#) [EUD-150S350DVA](#) [LWA320-C420-ARK-B](#) [50304](#) [HVG-320-36AB](#) [OT FIT 50/220-240/300 D L](#) [OT FIT 35/220-240/350 D CS L](#) [OT FIT 65/220-240/350 D CS L](#) [ELEMENT 30/220-240/700 S](#) [LC 75W 100-400MA 1-10V LP EXC](#) [LCA 35W 150-700MA ONE4ALL LP PRE](#) [LCA 50W 100-400MA ONE4ALL LP PRE](#) [LCA 50W 350-1050MA ONE4ALL LP PRE](#) [LCA 50W 350-1050MA 2XCH LP PRE](#) [LCI 150/325-1050/300 O4A SL PRE](#) [LCA 75W 100-400MA ONE4ALL LP PRE](#) [LCA 45W 500-1400MA ONE4ALL SC PRE](#) [LC 50W 100-400MA FLEXC LP EXC](#) [LCA 75W 350-1050MA ONE4ALL LP PRE](#) [LC 50W 350-1050MA FLEXC LP EXC](#) [LC 75W 350-1050MA FLEXC LP EXC](#) [LCA 75W 900-1800MA ONE4ALL LP PRE](#)