



Philips Lighting Electronics

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March 2012

### 9137-006-53166 sh-460 2012-03-29

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# Introduction

The PrimaVision Compact family has been extended to include Connector version as well. The PrimaVision Connector 35W, 50W and 70W fulfil to CISPR 15 ed 7.2. The new drivers have the same footprint as their predecessors to allow easy design-in.

# Version management

This is the design-in sheet for the PrimaVision Compact 35 /C, 50 /C and 70 /C

drivers.

Status of the product: Sampling

**13-10-2010: 9137-006-531 sht-460 2010-10-13**

Added PrimaVision Compact 50 /I

**22-01-2010: 9137-006-531 sht-460 2010-04-21**

Initial document

**29-03-2012: 9137-006-531 sht-460 2010-04-21**

Added PrimaVision Compact 35/C, 50/C and 70/C

# Ordering

Technical name: HID-PV C 35 /I CDM HID-PV C 35 /C CDM

12NC: 9137 006 53166 9137 006 84466

EAN3: 8727900859737 tbd

EOC: 872790085973700 tbd

Technical name: HID-PV C 50 /I CDM HID-PV C 50 /C CDM

12NC: 9137 006 65166 9137 006 84566

EAN3: 8727900933666 tbd

EOC: 872790093365900 tbd

Technical name: HID-PV C 70 /I CDM HID-PV C 70 /C CDM

12NC: 9137 006 53266 9137 006 84666

EAN3: 8727900859881 tbd

EOC: 872790085988100 tbd

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Product | Qtybox/pallet | Net. weight(kg) | Box Dim. LxWxH (mm) | Pallet Dim.LxWxH (mm) |
| HID-PV C 35 /I CDM | 12/648 | 0.360 | 244x193x266 | 1200x800x948 |
| HID-PV C 35 /C CDM | 12/648 | 0.290 | 244x193x266 | 1200x800x948 |
| HID-PV C 50 /I CDM | 12/648 | 0.360 | 244x193x266 | 1200x800x948 |
| HID-PV C 50 /C CDM | 12/648 | 0.290 | 244x193x266 | 1200x800x948 |
| HID-PV C 70 /I CDM | 12/648 | 0.360 | 244x193x266 | 1200x800x948 |
| HID-PV C 70 /C CDM | 12/648 | 0.290 | 244x193x266 | 1200x800x948 |

# Dimensions

## Independent version

The PrimaVision Compact 35W /I, /C, 50W /I, /C and 70W /I, /C share the same dimensions

The mounting holes are on the same position as it predecessor, to enable drop-in

replacement.



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A1 (mm) | A2 (mm) | B1 (mm) | C1 (mm) | D1 (mm) |
| 188 | 170 | 83 | 34.5 | 4.8 |

## Connector version



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A1 (mm) | A2 (mm) | B1 (mm) | C1 (mm) | D1 (mm) |
| 161.7 | 143 | 83 | 32.4 | 4.8 |

# Temperature behaviour

## Tcase

The Tcase point is used as a reference-point, to determine the maximum allowed temperature of the housing. To guarantee safety and lifetime of the driver, it is not allowed to exceed Tcase max.

The position is shown on the picture.

## Independent version



55

43

## Connector version



Lifetime 40k hours/90% survivals:

|  |  |  |
| --- | --- | --- |
|  | Tcase –max | Tambient –max |
| HID-PV 35 /I CDM | 75°C | 50°C |
| HID-PV 35 /C CDM | 75°C | 50°C |
| HID-PV 50 /I CDM | 75°C | 50°C |
| HID-PV 50 /C CDM | 75°C | 50°C |
| HID-PV 70 /I CDM | 75°C | 45°C |
| HID-PV 70 /C CDM | 75°C | 45°C |

## Driver losses

The PrimaVision Compact drivers have been developed to realize the highest power efficiency and operate with low losses for a long reliable lifetime.

## Temperature Testing

Because the driver will regulate the lamp to a constant power, the input current will increase when the input voltage is lower. This ultimately will influence the power losses, so the worst-case temperature should therefore be measured at lowest mains voltage of 198V.

To guarantee, that the maximum value of Tcase. is not exceeded, a thermo-couple should be mounted on the Tc point of the driver.

For more information about lifetime and temperature please consult the HID application guide.

# Wiring

The wiring should be connected according the pictures below. This driver is equipped with a safety earth connection and must be connected to the earth connection of the mains-supply.

For EMI-reasons, it is important to make the “hot” lamp-wire (indicated by the .symbol) as short as possible.

## Independent version

This driver has a loop-through possibility for the mains-wiring.



Connector type: Push-in contacts, WAGO type 804

Wire cross section: 0.75-2.5 mm² massive or stranded

Strip length: 10-11mm

Max cable capacitance lamp-wires: 150 pF

Maximum length lamp-wires: 2.0m

## Connector version



## Mains connector:

Connector type: Wieland GST18i3 Male without
lock.

Color: black

## Lamp connector:

Connector type: Wieland ST18/3 Female with lock

Color: red

Max cable capacitance lamp-wires: 150 pF

Maximum length lamp-wires: 2.0m

# Electro-Magnetic Compatibility

The driver is tested and approved according CISPR 15 ed. 7.2.

However the position of the wiring can negatively influence the EMC performance of this HID-system. Therefore it is advised to pay attention to the following:

* Place the mains wires in such a way, that they are not in parallel with the lamp wires.
* Make the spacing between lamp and mains wires as big as possible.
* Keep the mains wires close together.
* Keep the lamp wires close together and preferably as short as possible. Do not exceed the maximum allowed length of the lamp wires.

# Factory handling

## Traceability

For traceability reasons year and week of production, as well as production-location, can be found on the product-label.







The production-code consists of production year and week.

Example: If a product has been marked 0810 :

* Position 1 and 2 are the last digits from the year of production. The digits 08 indicates that the product has been made in 2008
* Position 3 and 4 indicate the week of production. The number 10 indicates that the product has been made in week 10.
* Furthermore, each product has a serial number, including barcode. (This is depending of the production-location)

# Installation / Mounting

## Lamps that can be driven by the driver

|  |  |
| --- | --- |
| **Driver** | **Lamp** |
| HID-PV C 35W /IHID-PV C 35W /C | All CDM 35W lamps, excluding: CDM-Tm PGJ5 35W lamps |
| HID-PV C 50W /IHID-PV C 50W /C | All CDM 50W lamps |
| HID-PV C 70W /IHID-PV C 70W /C | All CDM 70W lamps |

The drivers are not compatible with the following lamps:

* Metal halide quartz lamps

## Suitable application for this driver

This product is designed mainly for applications that are working in an Indoor environment (IP23 or superior casing).

Typical applications are:

* Spot and accent lighting
* Downlighting and general lighting
* Mini flood lighting
* Main segment is retail (shops)
* Secondary segments are office and health care

The PrimaVision Compact range is not intended for Outdoor use due to the following outdoor constraints:

* High humidity and condensation risks
* Vibrations e.g. when the luminaire is mounted on a public lighting pole
* Lightning surges on the mains. Outdoor electronics gear are 4kV protected but the HID-PV C 35W/50W/70W is protected up to 2kV.

Therefore, it is the responsibility of the luminaire manufacturer and the installer to take into account the above and implement adequate protection for the above. Here are some requirements for Outdoor applications:

* Place the gear in an IP54 or higher environment
* Avoid placing the gear or luminaire in high poles
* Place adequate Lightning protection in the lighting installation
* Planner should take it into account for Cost of Ownership calculations and maintenance plans.

If the above points are not taken into account in the design and the installation, Philips will have the option not to apply the standard guarantee.

## Maximum number of gear per MCB

The maximum number of drivers, which can be connected to a B type 16A is 24x

35W, 24x 50W or 20x 70W. For other types apply conversion table below:

Conversion table for max. Quantities of driver on other types

of Miniature Circuit Breaker



Remark: L, G and U are old type MCB.

## DC-operation

This driver is not designed for DC operation.

## Mounting

The strain reliefs can be closed by means of 2 (pre-assembled) slotted crosshead screws of the PZ1 type. The maximum allowed torque for mounting the screws is 1.0Nm.



There are several methods to install the driver:

* The driver can be mounted on a solid surface by means of 2 M4 screws.
* The driver can be placed on the ceiling, without any means to fix it. (It is advised, not to place the driver upside down)
* A metal hook can be applied to one of the mounting holes of the driver, to hang it on the construction of the ceiling. (it is advised to have the wires/connectors facing down)

In all this situations, it is important not to cover the driver by any (isolating) material.

# Operating in abnormal conditions

**Active Thermal protection**

If the driver is used at a too high temperature an internal thermal protection will

protect the driver against damage; the driver will switch off the lamp. Mains

voltage needs to be reset in order to reset thermal protection.The thermal protection becomes active at Tcase > 95°C.

## Mains voltage

The gear is designed to operate within a operational/safety range of 180-264V. However the performance is guaranteed within the performance range of 198-254V. Within this range, the lamp power is regulated within ±3% of its nominal power. (Valid for a lamp voltage between 80 and 90V)

**Over voltage**

The driver has a limited protection against over voltage, it is advised to prevent

higher mains voltages than +10%. This will however negatively influence the

lifetime and reliability.

## Lightning and power surges

Protection against surges because of lightning are built in the gear.

IEC61547, surge levels: 1.0kV Line to Line and 2.0kV Line to GND

## End Of Life (EOL) lamp protection

The driver has a protection against an End Of Life Lamp. The driver will detect the failing lamp and switch to standby. After re-lamping, the mains has to be switched off and on, in order to reset the driver.

**Mains dips**

If mains dips occur that cause the lamp to extinguish, the driver will automatically

re-ignite the lamp for a maximum of three times after a cooling-down period of

approximately 10 minutes. After the last attempt the mains power needs to be

cycled to reset the internal ignition timer of the driver.

# Advised communication

Philips Lighting Electronics advises to communicate the following information to your customers via your preferred media: Catalogues, brochures, Product datasheets, Mounting instructions, Internet and Intranet.

## Technical

Due to lamp characteristics, this driver needs some time to re-ignite (10…15 minutes) after switch-off.

When the lamp has reached end of life, the driver will switch off the lamp in order to avoid lamp overheating. After lamp replacement, the mains voltage will have to be reset and the system will work normally. The driver does not need to be replaced. The PrimaVision driver range is equipped with an internal thermal-sensor, that will prevent loss of driver lifetime due to overheating in the luminaire/installation.

**Marketing**

The use of PrimaVision Compact in your luminaire will provide your customer the

following benefits:

• **Optimum system performance**

Development of CDM lamps and driver is in one hand. Every product is

tested extensively, requiring a million burning hours before a system can

be released. The result is an optimal light performance with Philips

MASTERColour CDM lamps.

• **Flicker free operation**

• **30 to 40% longer lamp lifetime**

• **10% energy saving compared to a Electromagnetic system**

• **Safe and comfortable behaviour when lamp reaches End of Life**

Furthermore, the PrimaVision Compact range has low losses, which guarantees

maximum energy savings and limit heat generation, translating into a longer driver lifetime.

## Guarantee

The guarantee of 3 and 5 years for Philips Electronics is applicable for this product. For more information about guarantee, please visit our website:

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

# Frequently Asked Questions

**Is the new HID-PV Compact Independent compatible with the existing**

**generation?**

Yes. The outer dimensions of the PrimaVision Compact I are the same as the

predecessor; enabling drop-in replacement.

The EMC performance is complying with the new CISPR 15 ed 7.2 requirements.

**Does the HID-PV Compact Independent also offer SOFT START?**

No, this feature is only available in AspiraVision range.

**Does the HID-PV Compact Independent offer the possibility for loopthrough**

**mains wiring?**

No, this feature is only available in the AspiraVision-range.

**The housing is plastic. Does this give problems with EMC or temperature?**

No, the gear is specially developed for the housing. Therefore, no problems with

EMC and temperature occur.

# For more information

Please contact your local sales representative.

Check OEM application guide for general information about electronic gear.

Visit our web-site [www.philips.com/ehid](http://www.philips.com/ehid)