

CoolLED

PROGRAMMABLE DRIVERS

CLS40 Low Voltage SELV

Up to 40W

CLS40: 200mA - 700mA

CoolLED drivers provide a high performance solution for powering high-brightness LEDs from a mains supply. The power factor corrected, SELV driver, delivers up to 40W of power.

The output features smooth linear dimming over the entire output range with low output ripple. The output current is adjustable by either resistive programming or software programming.

Dimming port (0-10V) is provided with BASIC insulation to mains, supplementary insulation to output (in accordance with EN61347 / FELV (Functional extra low voltage) circuit. Dimming wires can be run alongside mains cables.

All CoolLED Drivers have a high efficiency design, which ensures cool operation and long life. The compact enclosure is available in integral (B) versions.

CoolLED Drivers are open and short-circuit protected and have a over temperature fold back.

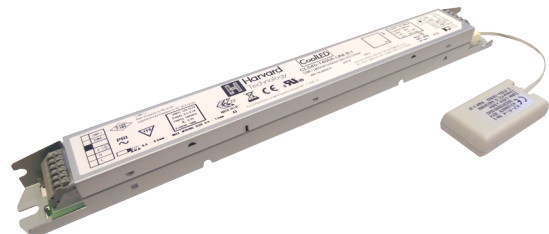


Product Description

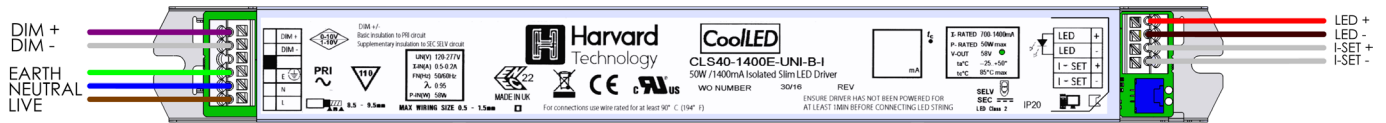
- Universal Input voltage
- Analogue dimming 1-10/0-10V
- Also suitable for non-dimming applications
- Suitable for luminaries of protection class I
- Suitable for use in emergency lighting systems as per EN 50172
- SELV isolated output
- Power factor corrected (0.95)
- Constant current output
- Over temperature foldback
- Low output ripple (flicker)
- Push wire terminal blocks
- Up to 88% efficiency
- Surge protection up to 4kV
- Programmable features -
  - Output current
  - Minimum dim current
  - Dim to off
  - Linear or log-arithmetic dim curve
  - Emergency mode with DC input supply
  - Resistive current programme on/off

- Advanced features -
  - Eyenuit wireless Zigbee controls ready (can override 0-10V wired dimming control when connected to a PEBL adaptor)

Find out more about EyeNut at [www.harvardps.com](http://www.harvardps.com)



## Wiring diagram



## Technical Specification

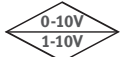
Mains input voltage	120 / 220 - 240 / 277 V AC rms
Maximum input range	108 - 305 V AC rms
AC input current (at rated load)	0.5 / 0.25 / 0.2 A rms
Mains frequency	0 / 50 - 60Hz
DC input voltage	175 - 265 V DC
Emergency input current (EOFX 10%, rated load)	37 - 24mA
100/120 Hz ripple	<1%
Flicker	IEEE1789:2015 compliant with NO RISK category
Mains surge protection	4kV common-mode 2kV differential Class 4
Input-output isolation	3 kV
Humidity	95% max non-condensing
Switch on time	0.5 s
Off load voltage	59V
Ambient temperature range	-25°C to 50°C
Maximum Tc temperature	85°C
Dimming range	100% - 1% (across full programmable current range)
Dimming method	Analogue current control (No output PWM)
Dimming port classification	FELV, Basic insulation to mains, Supplementary insulation to output
Terminal blocks	Push wire
Wire size	0.5mm - 1.5mm <sup>2</sup> / 16 - 24 AWG
Enclosure	Zintec steel

**Please note:** the ISET port has a failsafe feature whereby if a programming resistor is not fitted, the driver will DEFAULT to the minimum output current of 100mA. A programming resistor **MUST** be fitted to deactivate the failsafe. This failsafe mode may also be deactivated using the PDI software tool and suitable programming jig. The programming resistor is calculated as  $I_{out} = 5000 / R_{set}$  where I out is in Amps and Rset is in Ohms.

Case Style	Dimensions	Weight	Box Quantity
B - Integral	280mm x 30mm x 21mm	240g	40

Tolerance: + or - 0.5mm

## Variants

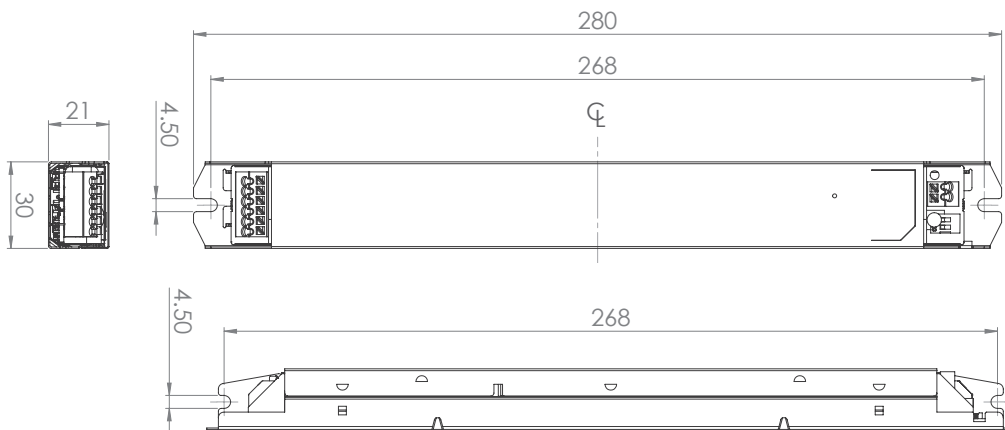
	Part number	Current	LED String Voltage	Output power range	Maximum off load voltage	Power Factor	Efficiency
	CLS40-700A-UNI-B-I	200 - 700mA	15 - 58V	40W	59V	>0.95	88%

## Compliance

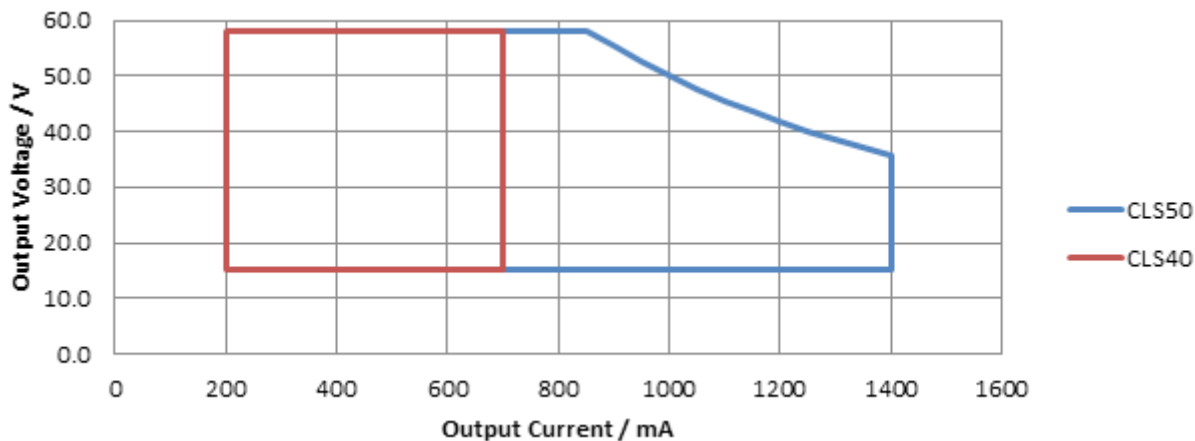
Approval	Standards
UL	UL 8750, UL 1310 & UL 60950-1
ENEC/CE	EN61347-1:2015, EN61347-2-13:2014, EN61547:2009, EN62384:2006+A1:2009, EN61000-3-2:2014, EN55015:2006+A1:2009, EN61000-3-3:2013, EN61000-4-2:2009, EN61000-4-3:2009, EN61000-4-4:2004, EN61000-4-5:2006, EN61000-4-6:2009, EN61000-4-11:2004
AS/NZS	AS/NZS 4417



## Dimensions



## CLS40 Operating Range



## Programmable Driver Set-up

The programmable CLS utilises 2 pieces of hardware. A **windows based PC** is required to run the programming software, which gives two options: individual or automatic group programming. This is connected via USB to the **programming jig** (*USB to USB Type B*) that is used to rapidly program drivers or check driver settings. The driver can be inserted into the enclosure which will automatically program it when detected.



CLS Programming Jig

## PLEASE NOTE

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