

CoolLED

LED DRIVERS

CLK20 Phase Cut Mains Dimmable

Up to 20W

**260mA, 350mA, 400mA, 500mA, 700mA,
1050mA & 1400mA**

CoolLED drivers provide a high performance solution for powering LEDs from a mains supply.

The power factor corrected, class II driver has a fully isolated, SELV output delivering up to 20W of power.

The driver employs new advanced technology providing support for both Leading Edge & Trailing Edge Phase Cut dimmers, with a high efficiency & low LED ripple current.

The high efficiency allows operation in 50°C ambient. The compact enclosure is available in Integral (B) & Remote (C) version.

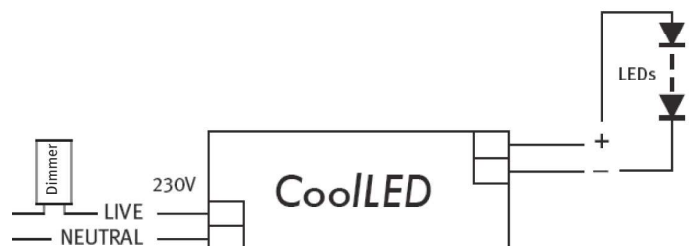
CoolLED Drivers are open and short-circuit protected and have self-resetting over temperature trip.



Product Description

- 220-240 Input Voltage
- Isolated SELV output
- Leading Edge (TRIAC) Phase Cut Dimming
- Trailing Edge (IGBT) Phase Cut Dimming
- 83% efficiency
- Surge protection up to 4kV
- Power factor corrected (0.95)
- Constant current output
- Dimming from <3% to 100% (dependent on dimmer performance)
- Low LED Ripple Current - less than 5% pk/pk and less than 1% rms
- Self resetting thermal trip
- Double insulated (Class II)

Wiring diagram



Harvard Technology Ltd.

EU - Tyler Close, Normanton, Wakefield, WF6 1RL, UK Tel: +44 (0)113 383 1000 Fax: +44 (0)113 383 1010

USA - 9171 Towne Centre Drive, Suite #330, San Diego, California, 92122 Tel: (858) 882 - 3844

www.HarvardTechnology.com

Technical Specification

Mains input voltage	220 to 240V ac RMS Nominal
Mains frequency	50 - 60Hz
Mains surge protection	4kV common-mode 2kV differential
Input-output isolation	3.75kV ac rms
Mains inrush current	45A peak decaying over 20us
Humidity	95% max non-condensing
Thermal trip	110°C - internal self-resetting
Ambient temperature range	-25°C to 50°C
Maximum Tc temperature	80°C
LED ripple current (at full load)	<10% peak to peak (<5% RMS)
Terminal blocks	Rising clamp 5mm Pitch
Enclosure	White polycarbonate UL94-V0 rated
Wire size	0.5mm to 1.5mm ²

Case Style	Dimensions	Weight	Box Quantity
B - Integral	97mm x 43mm x 30mm	75g	55
C - Remote	141mm x 43mm x 30mm	95g	55

Tolerance: + or - 0.3mm

Variants

Part number	Current	LED String Voltage	Output power range	Off Load Voltage	Power factor at full load	Efficiency at full load
CLK20-260P-240-B/C	260mA (±8%)	30V to 52V	7.8W - 13.5W	60V max	0.92 typical	80% typical
CLK20-350P-240-B/C	350mA (±8%)	30V to 52.5V	10W - 18.2W	60V max	0.95 typical	82% typical
CLK20-400P-240-B/C	400mA (±8%)	27V to 44V	10.8 - 17.6W	58V max	0.95 typical	82% typical
CLK20-500P-240-B/C	500mA (±8%)	20V to 40V	10W - 20W	50V max	0.95 typical	83% typical
CLK20-700P-240-B/C	700mA (±8%)	14V to 28.5V	9.8W - 20W	36V max	0.95 typical	83% typical
CLK20-1050P-240-B/C	1050mA (±8%)	10V to 19V	10.5 - 20W	25V max	0.95 typical	80% typical
CLK20-1400P-240-B	1400mA (±8%)	7V to 13V	9.8W - 18W	21V max	0.95 typical	75% typical

Compliance

Approval	Standards
CE (Europe)	LVD:2014/35/EU; EMC:2014/30/EU; RoHS:2011/65/EU; ECOD/2009/125/EC
ENEC (Europe)	EN61347-1:2008+A1:2011+A2:2013, EN61347-2-13:2014, EN62384:2006+A1:2009
CB (International)	IEC 61347-1:2007 (second edition)+A1:2010 +A2:2012; IEC 61347-2-13:2014 (second edition); IEC 62384:2006 (first edition)+A1:2009
RCM (Australia/NZ)	AS/NZS 61347.1; AS/NZS 61347.2.13:2013; AS/NZS-CISPR22+A1; AS/NZS 4417.1



Harvard Technology Ltd.

EU - Tyler Close, Normanton, Wakefield, WF6 1RL, UK Tel: +44 (0)113 383 1000 Fax: +44 (0)113 383 1010

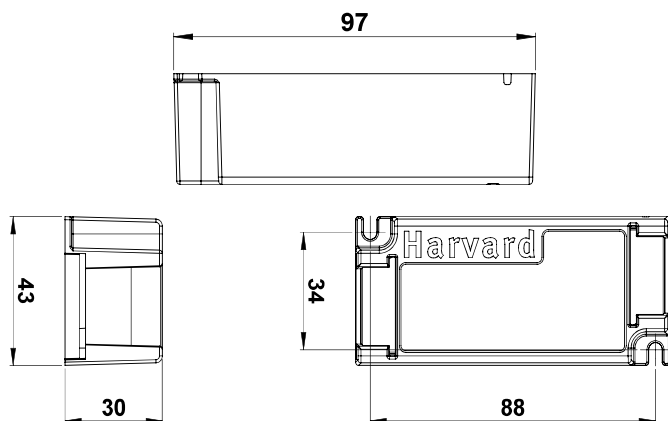
USA - 9171 Towne Centre Drive, Suite #330, San Diego, California, 92122 Tel: (858) 882 - 3844

www.HarvardTechnology.com

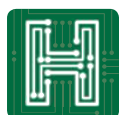
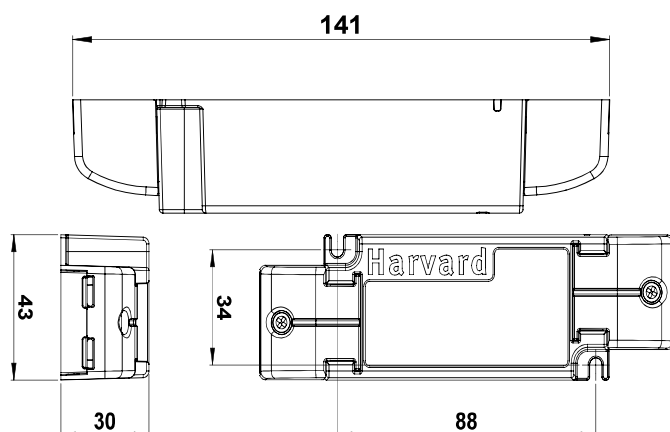


Dimensions

B Style



C Style



Harvard Technology Ltd.

EU - Tyler Close, Normanton, Wakefield, WF6 1RL, UK Tel: +44 (0)113 383 1000 Fax: +44 (0)113 383 1010

USA - 9171 Towne Centre Drive, Suite #330, San Diego, California, 92122 Tel: (858) 882 - 3844

www.HarvardTechnology.com