Harvard Technology

REV 1.1

CoolLED LED DRIVERS CL40

Up to 40W with Fan Output

700mA, 750mA, 900mA, 1000mA & 1400mA

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

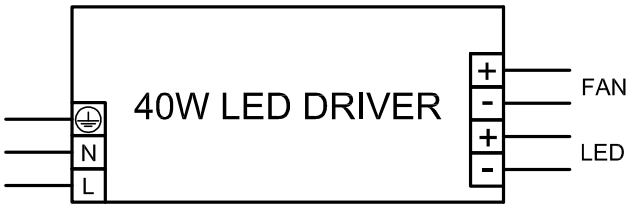
The power factor corrected, class II driver (C style) (B style) and class I (OF style) has fully isolated, SELV output delivering up to 40W of power.

Fan Output - Auxiliary 5V or 12V 1W output suitable for powering fans.

Product Description

- 220V - 240V Input voltage
- Power factor corrected (0.98)
- Self resetting thermal trip
- Up to 88% efficiency
- Surge protection up to 4kV
- SELV isolation (3kV)
- Open and short-circuit protected
- Self-resetting over temperature trip

Wiring diagram



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Technical Specification

Mains input voltage	220 to 240V ac RMS Nominal
DC input voltage	190V - 265V
Mains frequency	0-50 - 60Hz
Mains surge protection	4kV common-mode 2kV differential
Input-output isolation	3kV ac rms
Mains inrush current	45A peak decaying over 20us (Up to 33W variants)
Humidity	95% max non-condensing
Thermal trip	110°C - internal self-resetting
Maximum Tc temperature	80°C
Terminal blocks	Rising clamp 5mm pitch and 10mm pitch mains (B&C)
Enclosure	White polycarbonate UL94-V0 rated (B & C style) or aluminum chassis (OF style)
Fan output voltage	5V or 12V +/- 5% (Factory Set)
Wire size	0.5mm to 1.5mm^2

Case Style	Dimensions	Weight	Box Quantity
*OF - Open Frame	95.50mm x 45.65mm x 29mm	125g	50
B - Integral	114mm x 47.5mm x 32mm	133g	50
C - Remote	144mm x 47.5mm x 32mm	158g	50

Tolerance: + or - 0.3mm

* OF models are class 1 products and therefore they must have their chassis connected to electrical earth.

Variants

Part number	Current	LED String Voltage	Output power range	Power factor at full load	Efficiency at full load
CL40-700F-240-OF/B/C	700mA (±5%)	24V to 57V	16.8 - 40W (+1W fan output)	>0.95 (0.98 typical)	88%
CL40-750F12-240-OF/B/C	750mA (±5%)	24V to 48V	13.5 - 36W (+1W fan output)	>0.95 (0.98 typical)	85%
CL40-900F-240-OF/B/C	900mA (±5%)	24V to 40V	20.16 - 36W (+1W fan output)	>0.95 (0.98 typical)	86%
CL40-1000F-240-OF/B/C	1000mA (±5%)	24V to 40V	24 - 40W (+1W fan output)	>0.95 (0.98 typical)	88%
CL40-1400F-240-OF/B/C	1400mA (±5%)	13V to 28V	18.2 - 40W (+1W fan output)	>0.95 (0.98 typical)	88%

* Drivers are suitable for DC & AC operation at 0/50/60 Hz and compliant to EN50172 and EN 60598-2-22. However, the luminaire manufacturer needs to check if the luminaire would be compliant with the 'high risk task lighting' requirements based on the LED load used in the luminaire and the battery backup system.

The auxiliary fan output is turned off when the product is dimmed below 20% of maximum output. It is switched back on whenever the dim level exceeds 25% to save energy.

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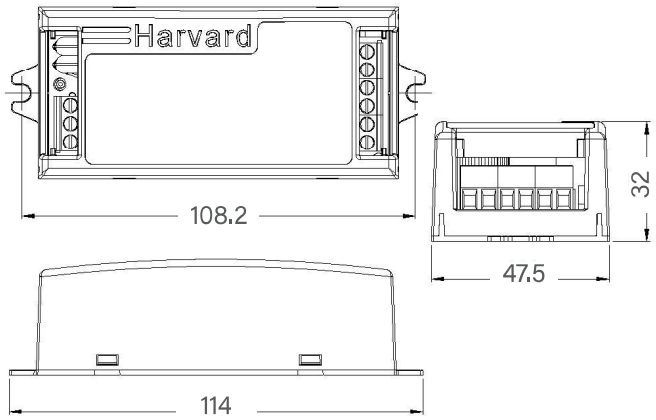
Compliance

Approval	Standards
CE (Europe)	EN61347-1:2008+A1:2011 +A2:2013, EN61347-2-13:2014, EN62384:2006+A1:2009
ENEC (Europe)	LVD:2014/35/EU; EMC:2014/30/EU;RoHS:2011/65/EU;ECOD/2009/125/EC
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; ASNZS-CISPR22+A1; ASNZS4417.1

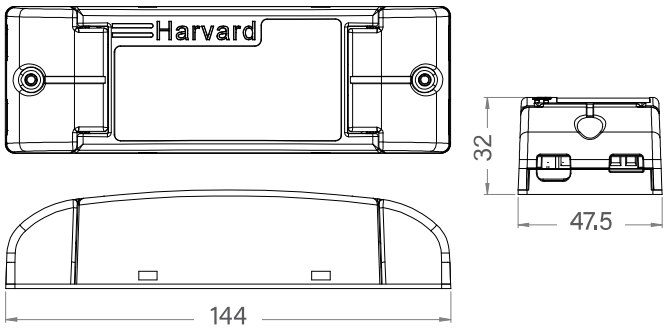
CB SCHEME

Dimensions

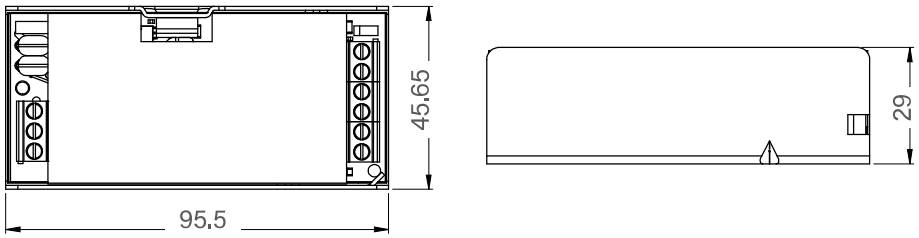
B Style



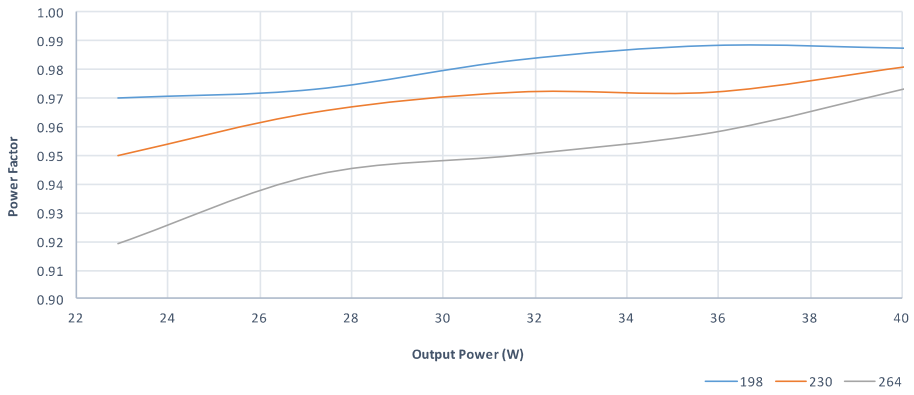
C Style



OF Style



Power Factor Vs Output power (CL40-1400F12-240)



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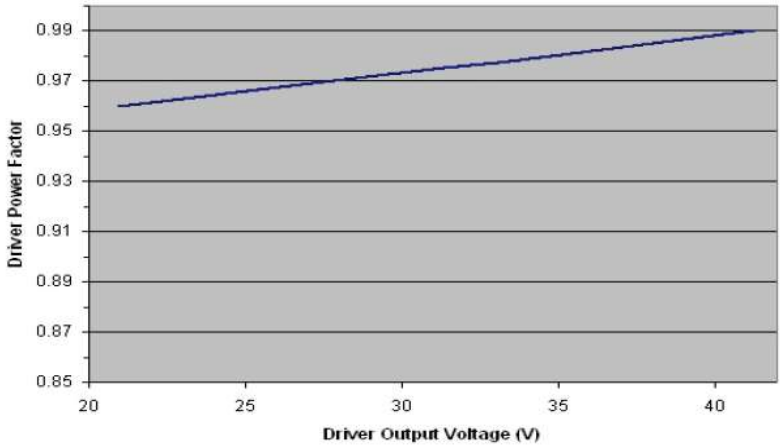
Power Factor Vs Output Voltage CL40-1000F - 240



Efficiency Vs Output Voltage CL40-1000F - 240