LL1x26-CC

Helvar

freedom in lighting

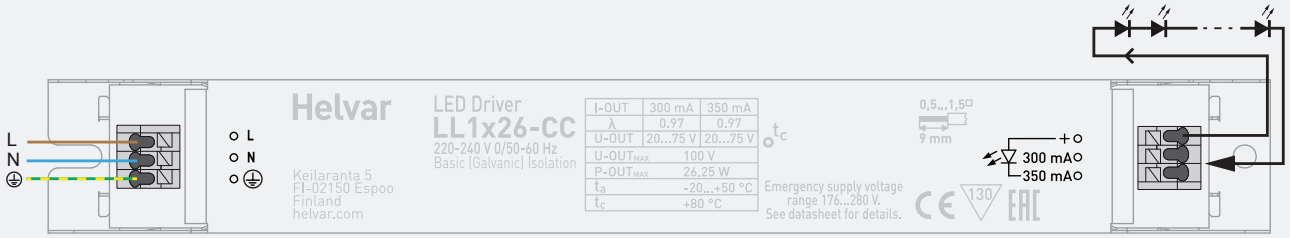
1x26 W **Constant Current** LED driver

- Open & short circuit protection
- Selectable constant current outputs: 300 mA and 350 mA
- Low current ripple, complying with IEEE 1789 standard
- Maximum 26.2 W load
- Suitable for Class I luminaires
- Load output is basic isolated from the mains
- Protected up to 2 kV power network fast transients

UK CA CE

26 W
220-240 VAC
50-60 Hz

Connections



Note:

- *Not suitable for load side switching operation.*

Mains Characteristics

Voltage range	198-264 VAC, Min 176 VAC (max 1 hour)
DC range	176 - 280 VDC, starting voltage > 190 VDC
Max mains current at full load	0.11 A - 0.14 A
Frequency	0 / 50 - 60 Hz
$U\text{-}OUT_{max}$ (abnormal)	100 V

Load Output (Basic (galvanic) isolation)

PstLM	< 1*
SVM	< 0.4*

*) At full load

Output current (I-OUT)	300 mA or 350 mA
Max output power	26.25 W
Efficiency, at full load, typical	≥ 0.90

I-OUT	300 mA	350 mA
P-out (max)	22.5 W	26.25 W
U-OUT	20 - 75 V	20 - 75 V
λ	0.97	0.97
Efficiency (η) @ max	0.90	0.90

Connections and Mechanical Data

Wire size	0.5 - 1.5 mm^2
Wire type	solid core and fine-stranded
Maximum driver to LED wire length	1 m
Weight	160 g
IP rating	IP20

Operating Conditions and Characteristics

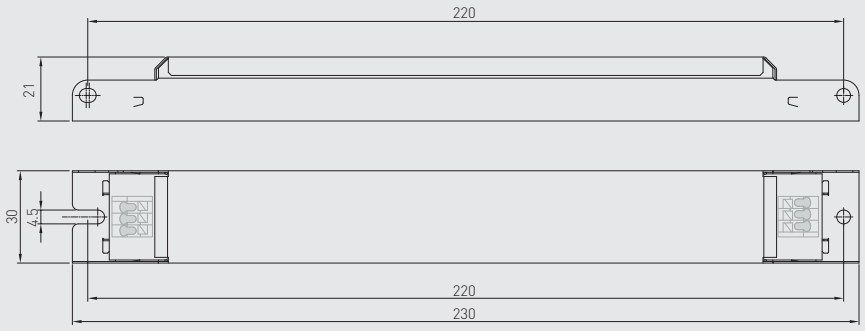
Max. temperature at Tc point	80 °C
Ambient temperature range	-20...+50 °C
Storage temperature range	-40...+80 °C
Maximum relative humidity	no condensation
Life time	50 000 h, at Tc 80 70 000 h, at Tc 75 100 000 h, at Tc 70 (90 % survival rate)

Conformity & standards

General and safety requirements	EN 61347-1
Particular safety requirements for DC or AC supplied electronic control gear for LED modules	EN 61347-2-13
Thermal protection class	EN61347, C5e
Mains current harmonics	EN 61000-3-2
Limits for Voltage Fluctuations and Flicker	EN 61000-3-3
Radio Frequency Interference	EN 55015
Immunity standard	EN 61547
Performance requirements	EN 62384
Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers	IEEE 1789-2015
Compliant with relevant EU directives	
CE / UKCA marked	

Note: See page 2 for dimensions and additional information

Dimensions



Quantity of drivers per miniature circuit breaker 16 A Type C

Based on I_{Cont} (pcs.)	Based on I_{peak} (pcs.)	Typ.inrush current I_{peak} (A)	1/2 value time Δt (µs)	Calculated energy $I_{peak}^2 \Delta t$ (A^2s)
80	95	8	28	0.0012

Wiring & connectivity

LL1x26-CC LED driver is suited for in-built luminaire usage. In order to have safe and reliable LED driver operation, the LED luminaires will need to comply with the relevant standards and regulations (e.g. IEC/EN 60598-1). The LED luminaire shall be designed to adequately protect the LED driver from dust, moisture and pollution. The luminaire manufacturer is responsible for the correct choice and installation of the LED drivers according to the application and product datasheets. Specifications of the LED drivers may never exceed the operating conditions as per the product datasheets.

Wiring considerations

Wire type and cross section

- Please refer to datasheets connections & mechanical data

Wiring insulation

- According to recommendations in EN 60598

Maximum wire lengths

- Please refer to datasheets connections & mechanical data

Wire connections

- Please refer to datasheets connections diagram

Miniature Circuit Breakers (MCB)

- Type-C MCB's with trip characteristics in according to EN 60898 are recommended.

LED driver earthing

- LED drivers are designed to support different luminaire classifications, like Class I or Class II fittings (no earth required). Please check the individual LED driver type for its exact safety class rating.
- For Helvar LED drivers to have a reliable operation and EMC performance, the luminaires are expected to have an earth connection.

Installation & operational considerations

Maximum Tc temperature

- Reliable operation and lifetime is only guaranteed if the maximum Tc point temperature is not exceeded under the conditions of use.

Installation site

- Ensure that the LED driver does not exceed temperature higher than specified on the product datasheets.
- The general preferred installation position of LED drivers for independent use is to have the top cover facing upwards.