

L05032-24CV1050 Constant Voltage LED Driver, 24Vdc, 25W

L1K1MID024V-25E

Engineered for Best Fixture Performance

Fulham LumoSeries LED drivers are designed to efficiently power and control LED solutions for general lighting applications. System reliability is enhanced by features that protect the connected LED module. Reduced ripple current and thermal derating. In the coming years LEDs will continue to increase in efficiency, creating new challenges for OEMs. With Fulham LumoSeries LED drivers, flexibility in luminaire design is assured thanks to adjustable output currents.



Dimmable Constant voltage LED driver with industry leading efficiency built to the highest standards ideally suitable for LED-strips.

Engineered for Performance

- Industry leading efficiency
- Excellent EMC behavior
- Very high power factor

Engineered for Reliability

- Thermal protection (automatic current limiter)
- Short and open circuit protection, overload and overvoltage protection

Engineered for Simplicity

- High quality low cost product with low inrush current and high efficiency

5 year warranty

Fulham LumoSeries takes pride in the quality of its products. We not only develop all products in house, they are also produced to ensure guaranteed reliability and performance. Fulham LumoSeries drivers come with the assurance of a 5 year warranty. After all, with typical LED lifetimes of 50,000 hours, it is critical to have a power supply with equal reliability.



Product features

- Constant voltage 24 Vdc
- Output current up to 1050mA
- Max inrush current 0.96 A
- Dimmable with a (passive electronic) potentiometer
- Thermal protection: dimming instead of switching off
- Open circuit output voltage protection
- Up to 88.5 % efficiency across a wide range of loads
- Power factor > 0.95
- ENEC certified
- Engineered and Manufactured in Europe
- SELV

Certificates and standards

- ENEC05, CE
- EN55015 / EN61000-3-2 / EN61347-2-13 / EN61347-1 / EN61547 / EN62384 / SELV

Classifications



Specific technical data

Type	Efficiency at full load	Output current	Output voltage	Open circuit output voltage	Max. output power	Dimming
L05032-24CV1050	88.5 %	50- to 1050 mA	24 Vdc	25 Vdc	25 W	(electronic)* potentiometer

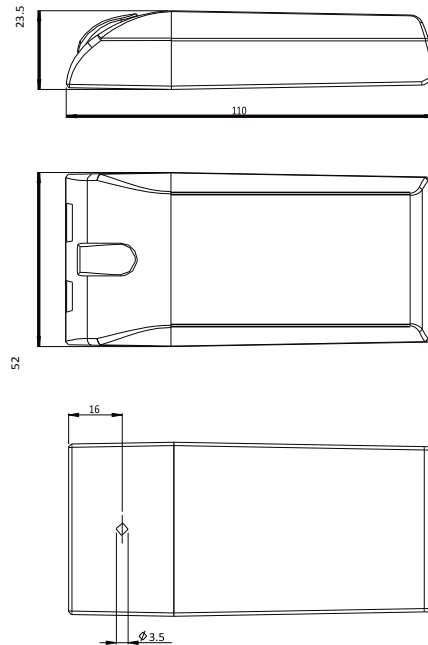
* Do not connect a 1-10V voltage to the dim input, ONLY use passive components.

Technical data

Rated supply voltage	220 - 240 Vac
Input voltage	130 - 240 Vac / 150 - 275 Vdc*
Mains frequency	50/60 Hz
Output current tolerance	7% (1050 - 700mA) 10% (650 - 500 mA)
100 Hz ripple current	23.4% @ 1050mA 20.8% @ 650mA
Power factor at full load	> 0.95
Nominal line current at 240 Vac	135 mA
Startup time	< 500ms
Warm up time to 95% of light output	< 2 sec
Output isolation	SELV
Surge protection (diff. / comm.)	2 kV / 6 kV
IP classification	IP 20
Circuit lifetime	50,000 hrs at Tc max.
Case dimensions	110 x 52 x 23.5 mm
Case material	Polyamide 6 (PA6)

* External DC fuse required

Dimensions



Inrush current

Mains max. peak inrush at full load	0.220A per driver on phase 60° (average starting angle)*
	0.904A per driver on phase 90° (worst case starting angle)*
	0.396A per driver on phase 60° (average starting angle)**
	0.868A per driver on phase 90° (worst case starting angle)**

** Tested at 240 Vac 1 driver connected, with TTI HA1600A analyzer.

* Tested at 240 Vac 10 drivers parallel connected, with TTI HA1600A analyzer.

Maximum number of drivers on automatic circuit breakers

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20
L05032-24CV1050	70	92	113	141	70	92	113	141

Thermal specifications

Ambient temperature range (Ta)	-20 to 45°C*
Maximum case temperature (Tc)	< 85°C
Storage temperature range	-20 to 50°C

* When mounted on a heat conductive surface of at least 200cm², otherwise Ta max = 40°C.

Over temperature protection

The LED driver is protected against thermal overload. If the temperature limit is exceeded, the output current is reduced.

Ambient temperature, and cooling

The rated ambient temperature is defined for a driver mounted on a thermally conductive surface of 200cm² for each driver.

When the driver is not cooled, thermal protection might trigger at a lower temperature and the output power will be reduced. Always check if the surface is sufficient enough before installing the driver. When not mounted on a thermally conductive surface it is recommended to limit the output power at 20W at the maximum rated ambient temperature.

Dimming

Instead of a resistor to set the current a potentiometer or a passive electronic dimmer can be used to dim the driver.

Do **not** connect a 1-10V voltage to the dim input.

Only dimmers with a minimum class II protection may be used when combined with a switch.

Short-circuit protection

In case of a short circuit the LED driver switches to protection mode. After the removal of the short-circuit the LED driver will recover automatically.

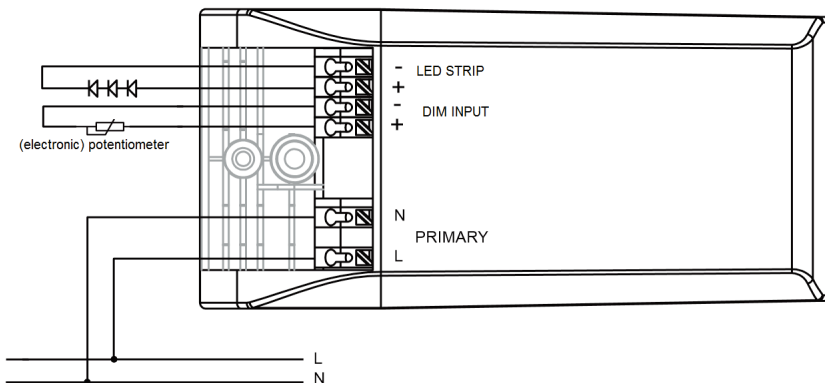
No-load operation

In no-load operation the output voltage will not exceed the specified open circuit output voltage.

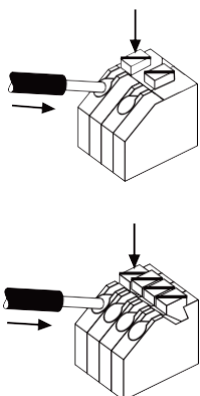
LED load

Fulham LumoSeries constant voltage LED drivers are designed to drive passive Constant voltage LEDs, COBs and LED assemblies. Proper function is not guaranteed when (LED)loads with active components are used.

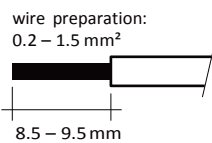
Wiring diagram



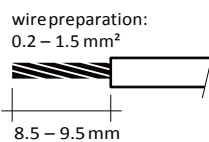
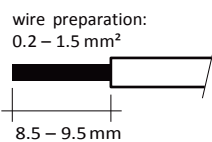
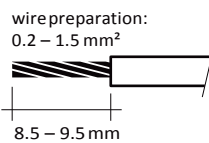
Wiring of device



Solid

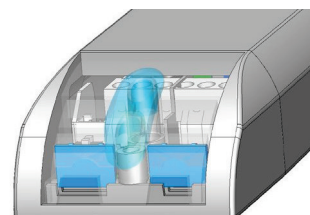


Stranded



Strain relief

The strain relief inserts can be removed to accommodate wiring of larger diameters.



Output current vs resistance

Resistance (kΩ)	Output current (mA)
∞ (open)	1050 +/- 7%
470	1025 +/- 7%
220	1020 +/- 7%
150	980 +/- 7%
120	950 +/- 7%
100	930 +/- 7%
82	900 +/- 7%
68	870 +/- 7%
56	830 +/- 7%
47	790 +/- 7%
39	750 +/- 7%
33	700 +/- 7%
27	650 +/- 10%
22	600 +/- 10%
18	550 +/- 10%
15	500 +/- 10%
12	450 +/- 10%
10	415 +/- 10%
8.2	370 +/- 10%
6.8	330 +/- 10%
5.6	295 +/- 10%
4.7	265 +/- 10%
3.9	230 +/- 10%
3.3	210 +/- 10%
2.7	195 +/- 10%
2.2	165 +/- 10%
1.8	145 +/- 10%
1.5	130 +/- 10%
1.2	115 +/- 10%
1	100 +/- 10%
0Ω (short circuit)	50 +/- 10%

Measured with a 24Vdc ledstrip.
When connected to other LED products
the current may deviate

Use a 1% type resistor for more accurate current setting

Ordering data

Part	Part number	Alternate part number	EAN code	Packaging carton	Multibox carton	Weight per piece
L05032-24CV1050 Constant Voltage LED Driver 25W 24 Vdc	L05032-24CV1050	L1K1MID024V-25E	8718801703700	20 pieces	240 pieces	125 g

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