

L1MLT082S-12E24 (L05020-1224825)
L1MLT070S-12E40 (L05020-1240700)

LED Driver 12W, 3-24 Vdc, 600/825 mA
LED Driver 12W, 3-34 Vdc, 350/700 mA

Engineered for Best Fixture Performance

Fulham LumoSeries drivers are all built on core engineering design principles for exceptional standards of performance and reliability in LED systems. Highest-grade critical components together with design features for thermal management ensure excellent reliability. Our low ripple designs create flicker-free lighting and perfectly smooth dimming. Simplicity of specification and installation is a key characteristic of all Fulham LumoSeries drivers. Hence the wide voltage and current ranges and industry leading low inrush current.



An LED driver in a compact form factor with solid performance ideal for single LED or COB array solutions

Engineered for Performance

- Industry leading efficiency
- Power factor 0.85C
- Up to 83 % efficiency across a wide range of loads

Engineered for Reliability

- Thermal protection (switching off)
- Excellent EMC behavior
- Low inrush current
- Low output current ripple (<3 %) at 100 Hz
- Short and open circuit protection, overload and overvoltage protection

Engineered for Simplicity

- Wide voltage and current range enabling many applications with just one driver product

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

- Wide output voltage range
- Wide range of currents outputs.
- Can be used as CV power supply
- Engineered in the Netherlands
- SELV

Certificates and standards

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

Classifications



Specific technical data

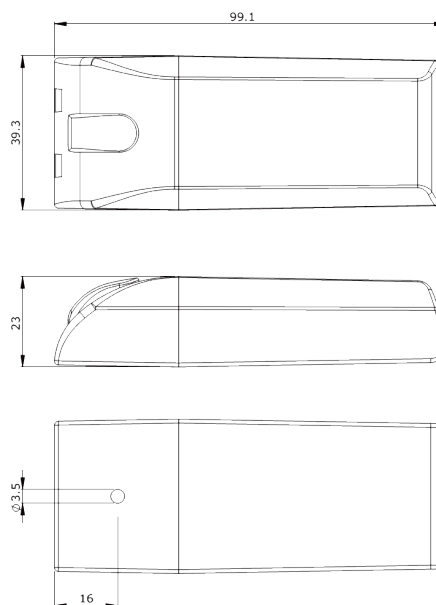
Type		Efficiency at full load	Output current	Output voltage range	Open circuit output voltage	Max. output power	Nominal line current
L1MLT082S-12E24	(L05020-1224825)	82 %	$\frac{600 \text{ mA}}{825 \text{ mA}}$	$\frac{3 - 20 \text{ Vdc}}{3 - 14.5 \text{ Vdc}}$	24 Vdc	12 W @ 240 Vac 10 W @ 115 Vac	80 mA @ 240 Vac 130 mA @ 115 Vac
L1MLT050S-12E40	(L05020-1240500)	82 %	$\frac{400 \text{ mA}}{500 \text{ mA}}$	$\frac{3 - 30 \text{ Vdc}}{3 - 24 \text{ Vdc}}$	40 Vdc	12 W @ 240 Vac 10 W @ 115 Vac	80 mA @ 240 Vac 130 mA @ 115 Vac
L1MLT070S-12E40	(L05020-1240700)	82 %	$\frac{350 \text{ mA}}{700 \text{ mA}}$	$\frac{3 - 34 \text{ Vdc}}{3 - 17 \text{ Vdc}}$	40 Vdc	12 W @ 240 Vac 10 W @ 115 Vac	80 mA @ 240 Vac 130 mA @ 115 Vac
L1MLT020S-10E48	(L05020-1248200)	80 %	$\frac{150 \text{ mA}}{200 \text{ mA}}$	3 - 48 Vdc	48 Vdc	10 W @ 240 Vac 10 W @ 115 Vac	70 mA @ 240 Vac 110 mA @ 115 Vac
L1MLT030S-12E48	(L05020-1248300)	82 %	$\frac{250 \text{ mA}}{300 \text{ mA}}$	$\frac{3 - 48 \text{ Vdc}}{3 - 40 \text{ Vdc}}$	48 Vdc	12 W @ 240 Vac 10 W @ 115 Vac	80 mA @ 240 Vac 130 mA @ 115 Vac

Technical data

Rated supply voltage	220-240 Vac
Input voltage	115-240 Vac / 150-375 Vdc*
Mains frequency	50/60 Hz
Output current tolerance	5%
100 Hz ripple current	<3 % @ 240Vac 10 % @ 115Vac
Power factor at full load	0.85C
Startup time	< 500ms
Warm up time to 95% of light output	< 2 sec
Output isolation	SELV
Surge protection (diff. / comm.)	1.5 kV / 4.5 kV
IP classification	IP 20
Circuit lifetime	50,000 hrs at Tc max.
Case dimensions	99 x 39 23 mm
Case material	Polyamide 6 (PA6)

* External DC fuse is required

Dimensions



Inrush current

Mains max. peak inrush at full load	1.50A per driver on phase 60° (average starting angle) *
	6.24A per driver on phase 90° (worst case starting angle) *

* Tested at 240 Vac 1 driver 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
L1MLT082S-12E24 (L05020-1224825)	133	173	213	267	133	173	213	267
L1MLT050S-12E40 (L05020-1240500)	133	173	213	267	133	173	213	267
L1MLT070S-12E40 (L05020-1240700)	135	176	216	270	135	176	216	270
L1MLT020S-10E48 (L05020-1248200)	160	208	256	320	160	208	256	320
L1MLT030S-12E48 (L05020-1248300)	133	173	213	267	133	173	213	267

Thermal specifications

Ambient temperature range (Ta)	-20 to 50°C
Maximum case temperature (Tc)	< 88°C
Storage temperature range	-20 to 50°C

Overload protection

If the maximum output power is exceeded, the LED driver reduces the LED output current. After elimination of the overload the nominal operation is restored automatically.

Over temperature protection

The LED driver is protected against thermal overload. If the temperature limit is exceeded, the driver switches off. After elimination of the overload the nominal operation is restored automatically.

Secondary switching

The L05020 series drivers are designed to switch the LEDs on/off by switching the mains.

The L05020 series drivers are not designed to switch the LEDs directly on/off in the secondary power line.

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.

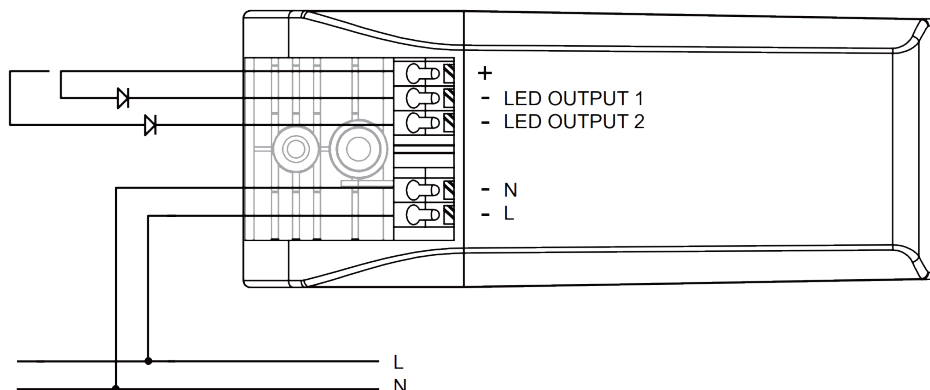
Overcurrent protection

The L05020 series drivers do not support hot swapping of the LEDs.

LED load

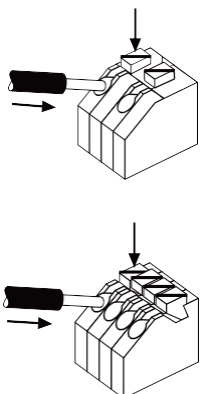
Fulham LumoSeries LED drivers are designed to drive passive LEDs, -COB's and -LED assemblies
Proper function is not guaranteed when (LED)loads with active components are used.

Wiring diagram

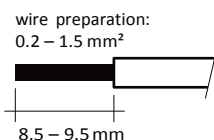


Note: Only connect LEDs to one output at the same time.

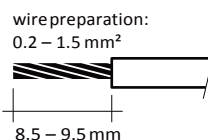
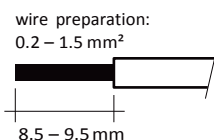
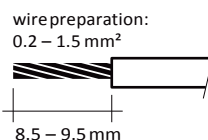
Wiring of device



Solid

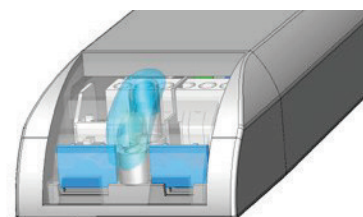


Stranded



Strain relief

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



Ordering data

Part number	Alternate Part number	EAN code	Standard stock item	Packaging carton	Multibox carton	Weight per piece
L1MLT082S-12E24	L05020-1224825	8718801704028	Yes	20 pieces	240 pieces	80 g
L1MLT050S-12E40	L05020-1240500	8718801704035	No	20 pieces	240 pieces	80 g
L1MLT070S-12E40	L05020-1240700	8718801704042	Yes	20 pieces	240 pieces	80 g
L1MLT020S-10E48	L05020-1248200	8718801704059	No	20 pieces	240 pieces	80 g
L1MLT030S-12E48	L05020-1248300	8718801704066	No	20 pieces	240 pieces	80 g

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