

<b>L05021(E)</b>	LED Driver mains dimmable 12W, 3-32Vdc, 350/700mA	<b>L1E1230070S-12E(Z)</b>
<b>L05021-40250</b>	LED Driver mains dimmable 10W, 20-40Vdc, 200/250mA	<b>L1E1230025S-10E</b>
<b>L05021-40300</b>	LED Driver mains dimmable 12W, 20-40Vdc, 180/300mA	<b>L1E1230030S-12E</b>

## Engineered for Best Fixture Performance

Fulham LumoSeries 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, e.g. hot wiring, 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 drivers, flexibility in luminaire design is assured thanks to adjustable output currents.



**A versatile driver with small form factor and a wide voltage Output range ideally suited for COB arrays and LED strips.**

## Engineered for Performance

- Industry leading efficiency
- Excellent EMC behavior
- Very high power factor
- Hot swapping of LEDs > 6W

## 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
- Future-proof flexibility – industry leading voltage and current range enabling seamless support of LED generations and minimizing chain complexity

## 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 guaranteed reliability and performance. Fulham 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 3 - 32Vdc or 20 - 40Vdc
- Wide range of currents 180, 200, 250, 300, 350 and 700mA
- Designed for maximum compatibility with trailing edge dimmers
- Very compact size
- Suitable for earthed/ grounded fixtures (L05021E)
- Max inrush current 0.43A
- Thermal protection
- Open circuit output voltage protection
- Up to 82 % efficiency across a wide range of loads
- Power factor 0.9C
- 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



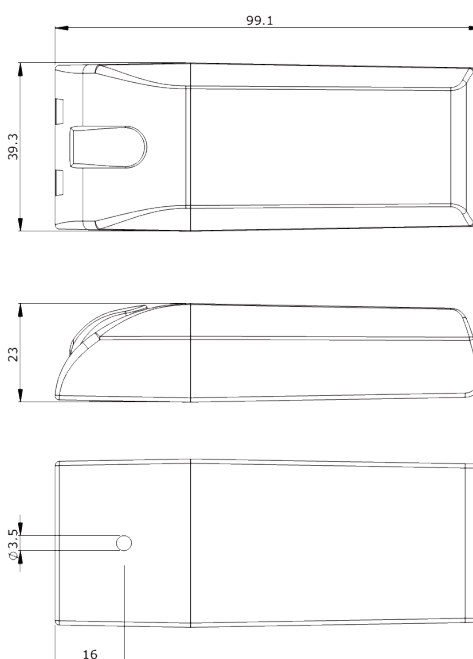
## Specific technical data

Type	Efficiency at full load	Output current	Output voltage range	Open circuit output voltage	Max. output power	Nominal line current
L05021(E)	82%	350 or 700mA	3 - 32 Vdc	32Vdc	12W	70mA
L05021-40250	80%	200 or 250mA	20 - 40 Vdc	50Vdc	10W	65mA
L05021-40300	81%	180 or 300mA	20 - 40 Vdc	50Vdc	12W	70mA

## Technical data

Rated supply voltage	220-240Vac
Input voltage	220-240Vac
Mains frequency	50/60Hz
Output current tolerance	5%
100 Hz ripple current	100%
Power factor at full load	0.9C
THD	%
Dimming method	Mains, trailing edge
Startup time	< 500 ms
Warm up time to 95% of light output	< 2 sec
Output isolation	SELV
Surge protection (diff. / comm.)	2 kV / 6kV
IP classification	IP 20
Circuit lifetime	50,000 hrs at Tc max.
Case dimensions	99 x 39 x 23 mm
Case material	Polyamide 6 (PA6)

## Dimensions



## Inrush current

Mains max. peak inrush at full load	0.192A per driver on phase 60° (average starting angle)*
	0.430A per driver on phase 90° (worst case starting angle)*
	0.169A per driver on phase 60° (average starting angle)**
	0.113A 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
L05021(E)	127	165	203	253	127	165	203	253
L05021-40250	160	208	256	320	160	208	256	320
L05021-40300	135	176	216	270	135	176	216	270

## Thermal specifications

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

### Over temperature protection

The LED driver is protected against thermal overload. If the temperature limit is exceeded, circuit the LED driver switches to protection mode. When the temperature drops within the operating limits, the LED driver will recover automatically.

### Active overload protection

If the maximum output power is exceeded, the LED driver reduces the LED output to a current level within the specifications of the driver. This prevents overload at all times.

### Active overcurrent protection

Active overcurrent protection to allow hot swapping of LEDs higher than 6 Watt.

### Secondary switching

The L05021 series drivers are designed to switch the LEDs on/off by switching the mains (with the dimmer).

The L05021 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.

### LED load

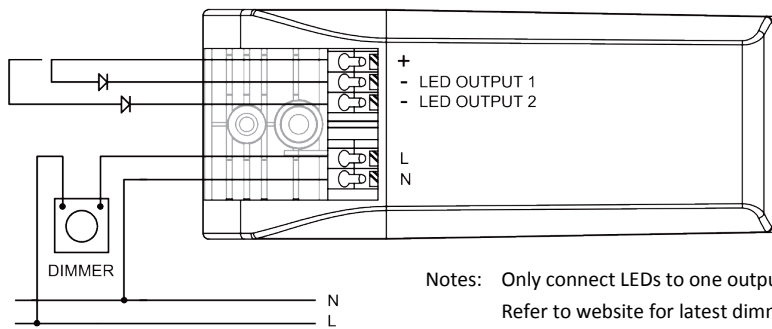
Fulham LumoSeries LED drivers are designed to drive passive LEDs, -COB's and -LED assemblies  
Proper function is not guaranteed when (LED)loads with active components are used.

### L05021E

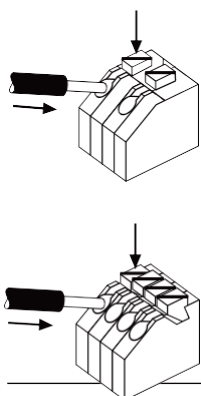
The L05021E is specially designed for mounting inside metal luminaires, grounded or ungrounded luminaires. The L05021E has improved EMC behavior mounted inside metal fixtures.

The drivers itself does not have a ground connection and does not need to be grounded.

## Wiring diagram



### Wiring of device



#### Solid

wire preparation:  
0.2 – 1.5 mm<sup>2</sup>  
8.5 – 9.5 mm

#### Stranded

8.5 – 9.5 mm

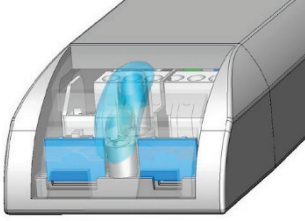
### Strain relief

The strain relief inserts can be removed to  
wire preparation: 0.2 – 1.5 mm<sup>2</sup>

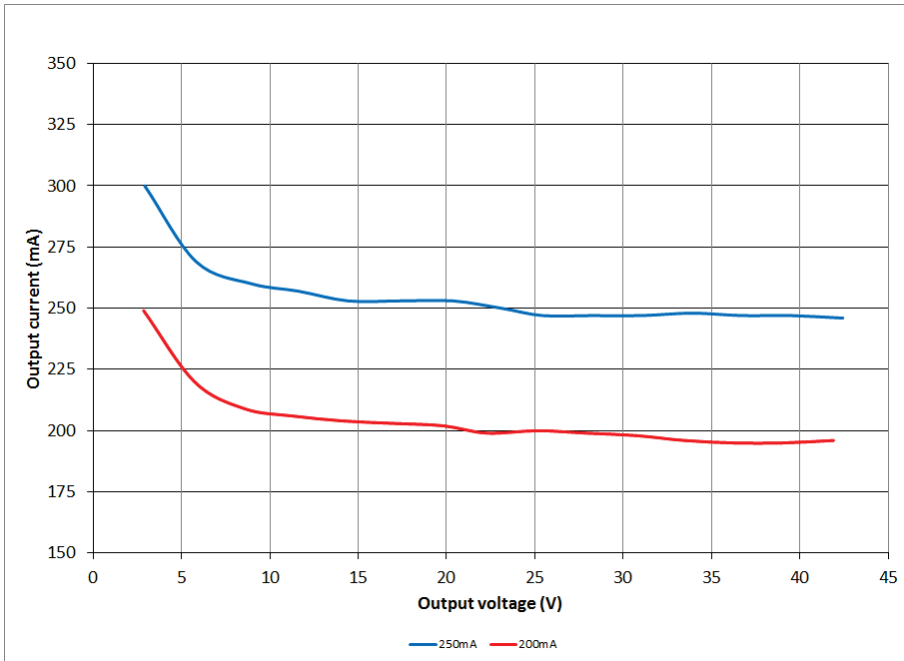
8.5 – 9.5 mm

wire preparation: 0.2 – 1.5 mm<sup>2</sup>

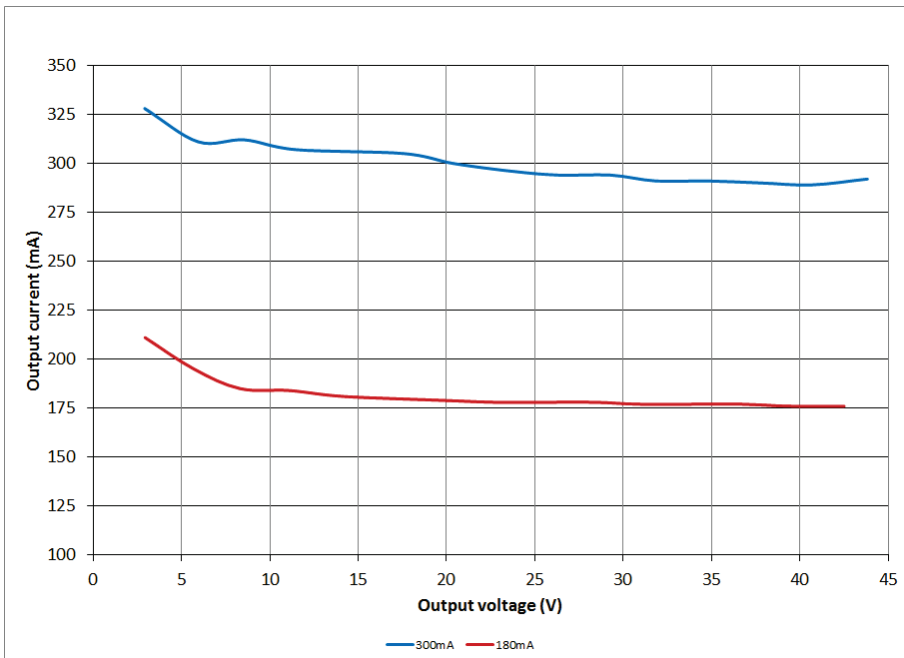
8.5 – 9.5 mm



**Output current vs LED forward voltage L05021-40250** (measured @ 230Vac without dimmer)



**Output current vs LED forward voltage L05021-40300** (measured @ 230Vac without dimmer)



## Ordering data

Part		Part number	Alternate part number	EAN code	Packaging carton	Multibox carton	Weight per piece
L05021	LED Driver mains dimmable 12W, 3-32Vdc, 350 or 700mA	L05021	L1E1230070S-12E	8718801703328	20 pieces	240 pieces	80g
L05021NS	LED Driver mains dimmable 12W pre-wired with mains cable and 2 way JST-XH connector box set to 700mA	L05021NS	L1E1230070S-12C	8718801703335	n/a	25	185g
L05021NS-350	LED Driver mains dimmable 12W pre-wired with mains cable and 2 way JST-XH connector box set to 350mA	L05021NS-350	L1E1230035S-12C	8718801704004	n/a	25	185g
L05021E	LED Driver mains dimmable 12W, 3-32Vdc, 350 or 700mA For mounting inside metal fixtures	L05021E	L1E1230070S-12EZ	8718801703588	20 pieces	240 pieces	80g
L05021-40250	LED Driver mains dimmable 12W, 20-40Vdc, 200 or 250mA	L05021-40250	L1E1230025S-10E	8718801703755	20 pieces	240 pieces	80g
L05021-40300	LED Driver mains dimmable 12W, 20-40Vdc, 180 or 300mA	L05021-40300	L1E1230030S-12E	8718801703762	20 pieces	240 pieces	80g

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**Formerly Lumotech**

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