

LMI G2 48V 700–1050mA 3–20V FO Slim

Fixed output

Product description

- Dimmable via potentiometer
- Up to 89 % efficiency
- Output voltage range 3 – 20 V
- Adjustable output current between 700 and 1,050 mA via DIP switch
- Output current tolerance $\pm 5\%$
- Max. tc point temperature 100 °C
- 5 years guarantee (conditions at www.tridonic.com)

Housing properties

- Pure PCB for built-in application
- Suitable for class III applications

Interfaces

- Terminal blocks: 0° push terminals
- Potentiometer equipped

Functions

- Adjustable output current
- Protective features (short-circuit, no-load)

Benefits

- Application-oriented operating window
- Small dimensions for miniaturization of luminaires
- Same form factor as DALI variant for easy design-in



Standards, page 4

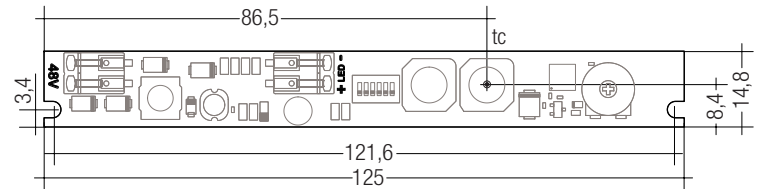


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Technical data

DC voltage input	48 V
DC voltage range	46 – 50 V
Max. input power	23.5 W
Output power range (P_{rated})	2.1 – 21 W
Typ. efficiency (full load) ^①	89.5 %
Typ. input current in no-load operation	10 mA
Typ. input power in no-load operation	< 0.5 W
Time to light (full load)	< 0.6 s
Hold on time at power failure	< 5 ms
Output current tolerance ^②	± 5 %
Max. peak output current	≤ output current + 30 %
Output LF current ripple	same as LF ripple on 48 V bus
Max. output voltage (no-load voltage)	48 V
Surge voltage at output side (against PE)	same as on 48 V bus
ESD classification	Severity level 2
Max. tc point temperature	100 °C
Guarantee (conditions at www.tridonic.com)	5 years
Dimensions L x W x H	125 x 14.8 x 12.5 mm



Ordering data

Type	Article number	Packaging box	Packaging carton (contains 10 boxes)	Packaging pallet	Weight per pc.
LMI G2 48V 700-1050mA 3-20V FO Slim	28001582	5 pc(s).	50 pc(s).	3,000 pc(s).	0.016 kg

We recommend using following LCU DC power supply together with this LMI LED driver:

Type	Article number	Packaging carton	Packaging pallet	Weight per pc.
LCU 48V 75W DC-STR FO Ip	28000816	10 pc(s).	760 pc(s).	0.274 kg
LCU 48V 75W DC-STR FO SR	28001232	10 pc(s).	300 pc(s).	0.346 kg
LCU 48V 150W DC-STR FO Ip	28001234	20 pc(s).	600 pc(s).	0.340 kg
LCU 48V 150W DC-STR FO SR	28001045	10 pc(s).	300 pc(s).	0.365 kg

Specific technical data

Type	Output current	Min. forward voltage	Max. forward voltage	Max. output power (at 48 V, full load)	Typ. power consumption (at 48 V, full load)	Typ. current consumption (at 48 V, full load)
LMI G2 48V 700-1050mA 3-20V FO Slim	700 mA	2.5 V	20 V	14 W	15.1 W	315 mA
	750 mA	2.5 V	20 V	15 W	16.2 W	338 mA
	800 mA	2.5 V	20 V	16 W	17.4 W	363 mA
	850 mA	2.5 V	20 V	17 W	18.4 W	383 mA
	900 mA	2.5 V	20 V	18 W	19.6 W	409 mA
	950 mA	2.5 V	20 V	19 W	20.9 W	436 mA
	1,000 mA	2.5 V	20 V	20 W	22.1 W	461 mA
	1,050 mA	2.5 V	20 V	21 W	23.5 W	491 mA

^① Depending on the selected output current.

^② Valid at 100 % dimming level.

1. Standards

EN 61347-1
EN 61347-2-13
EN 62384

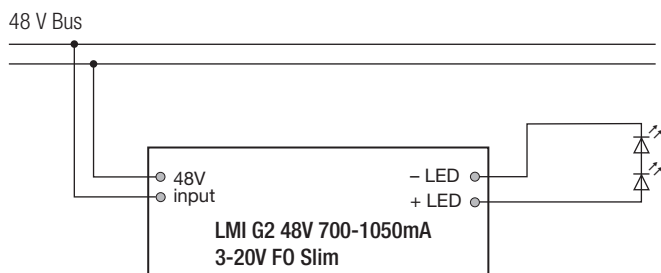
2. Thermal details and lifetime

2.1 Expected lifetime

Lifetime is limited by DC power supply.
Max. tc point temperature must not be exceeded.

3. Installation / wiring

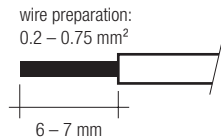
3.1 Circuit diagram



3.2 Wiring type and cross section

For wiring use stranded wire with ferrules or solid wire from 0.2 – 0.75 mm². Strip 6 – 7 mm of insulation from the cables to ensure perfect operation of terminals.

LED module/LED driver/supply



3.3 Wiring guidelines

- Run the 48 V cables separately from the mains connections and mains cables to ensure good EMC conditions.
- Keep the 48 V DC output wiring as short as possible to ensure good EMC. Tridonic did successfully EMC test with more than 30 m on grounded metal housings.
- For plastic housing reduce the cable length if the EMC gets worse.
- The max. cable length, including track light, is limited only by voltage drop: Supply the last LMI 48V in the track light with minimum 46 V. More details in the voltage drop application note!
- Secondary switching is not permitted.
- To avoid the damage of the Driver protect the wiring against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.).
- Additional systems or lines can compromise or disrupt the PLC communication in the DC string system. Therefore do not install any other systems or cables parallel to the DC string system cables.

3.4 Hot plug-in of LED module

Hot plug-in is not supported due to residual output voltage of > 0 V.
The LED driver could be damaged and there is a risk of destroying the LED module.

3.5 EOS/ESD safety guidelines

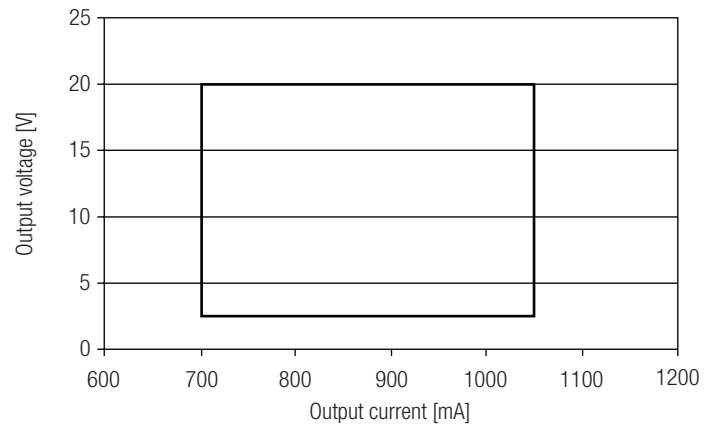


The device / module contains components that are sensitive to electrostatic discharge and may only be installed in the factory and on site if appropriate EOS/ESD protection measures have been taken. No special measures need be taken for devices/modules with enclosed casings (contact with the pc board not possible), just normal installation practice.

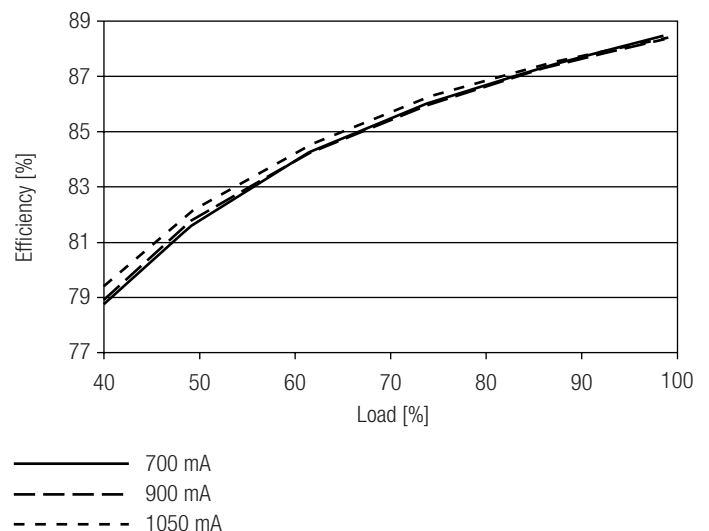
For further information for EOS/ESD safety guidelines and the ESD classification please refer to the brochure entitled <http://www.tridonic.com/esd-protection>.

4. Electrical values

4.1 Operating window



4.2 Efficiency vs load



100 % load corresponds to the max. output power (full load) according to the table on page 2.

5. Functions

5.1 Adjustable current

The output current of the LED driver can be adjusted in a certain range.

1. step: set current with on board dip switch S1-1 to S1-4
2. step: choose function fixed current or potentiometer with on board dip switch S1-5 and S1-6

Step 1 and 2 have to be done to configure LED driver properly.

The factory default setting (no dip switch are set) is 700 mA $\pm 5\%$. This is normal operation.

		S1-1	S1-2	S1-3	S1-4	S1-5	S1-6
Output current	700 mA	OFF	OFF	OFF	ON or OFF	–	–
	725 mA	OFF	OFF	ON	OFF	–	–
	750 mA	OFF	OFF	ON	ON	–	–
	775 mA	OFF	ON	OFF	OFF	–	–
	800 mA	OFF	ON	OFF	ON	–	–
	825 mA	OFF	ON	ON	OFF	–	–
	850 mA	OFF	ON	ON	ON	–	–
	875 mA	ON	OFF	OFF	OFF	–	–
	900 mA	ON	OFF	OFF	ON	–	–
	925 mA	ON	OFF	ON	OFF	–	–
	950 mA	ON	OFF	ON	ON	–	–
	975 mA	ON	ON	OFF	OFF	–	–
	1,000 mA	ON	ON	OFF	ON	–	–
	1,025 mA	ON	ON	ON	OFF	–	–
	1,050 mA	ON	ON	ON	ON	–	–
Function	Potentiometer	–	–	–	–	ON	OFF
	Fixed current	–	–	–	–	OFF	ON
	700 mA	–	–	–	–	ON	ON
	700 mA	–	–	–	–	OFF	OFF

If potentiometer function is used 100 % output current level can be set by on board dip switch.

With potentiometer current can be dimmed down to 10 % (amplitude modulation only). Max. torque for potentiometer is 5 Ncm.

5.2 Short-circuit behaviour

LED driver shuts down. Restart is needed.

5.3 No-load operation

LED driver shuts down. Restart is needed.

6. Miscellaneous

6.1 Conditions of use and storage

Humidity: 5 % up to max. 85 %, not condensed (max. 56 days/year at 85 %)

Storage temperature: -40 °C up to max. +80 °C

The LED drivers have to be acclimatised to the specified temperature range (ta range of DC power supply) before they can be operated.

The LED driver is declared as inbuilt LED controlgear, meaning it is intended to be used within a luminaire enclosure.

If the product is used outside a luminaire, the installation must provide suitable protection for people and environment (e.g. in illuminated ceilings).

6.2 Additional information

Additional technical information at www.tridonic.com → Technical Data

Lifetime declarations are informative and represent no warranty claim. No warranty if device was opened.