

**LMI G2 48V 700-1050mA 3-20V FO Slim**  
localDIM

**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 212 °F
- 5 years guarantee (conditions at [www.tridonic.com](http://www.tridonic.com))

**Housing properties**

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

**Interfaces**

- Terminal blocks: 0° push terminals
- Potentiometer equipped

**Features**

- 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

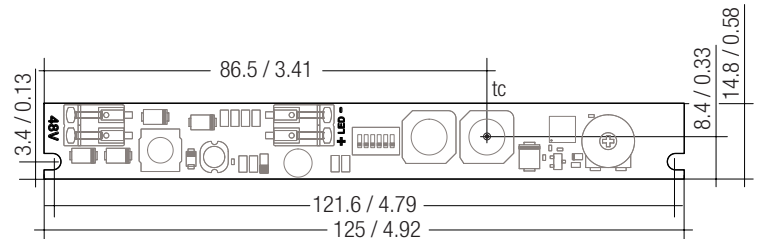


## LMI G2 48V 700-1050mA 3-20V FO Slim

localDIM

### Technical data

|   |                               |
|---|-------------------------------|
| DC voltage input  | 48 V                          |
| DC voltage range  | 46 – 50 V                     |
| Max. input power  | 23.5 W                        |
| Typ. efficiency (full load) <sup>①</sup>  | 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 <sup>②</sup>   | ± 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   | 212 °F                        |
| Guarantee (conditions at <a href="http://www.tridonic.com">www.tridonic.com</a> ) | 5 years                       |
| Dimensions L x W x H  | 4.92 x 0.58 x 0.49 inch       |



Dimensions in mm / inch

### 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).     | 0.035 lbs      |

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

### Driver:

| Type                         | Article number | Packaging carton | Packaging pallet | Weight per pc. |
|------------------------------|----------------|------------------|------------------|----------------|
| LC 48V 100W DC-STR UNV FO Ip | 28001983       | 15 pc(s).        | 540 pc(s).       | 0.756 lbs      |

### 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  |

<sup>①</sup> Depending on the selected output current.

<sup>②</sup> Valid at 100 % dimming level.

## 1. Standards

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

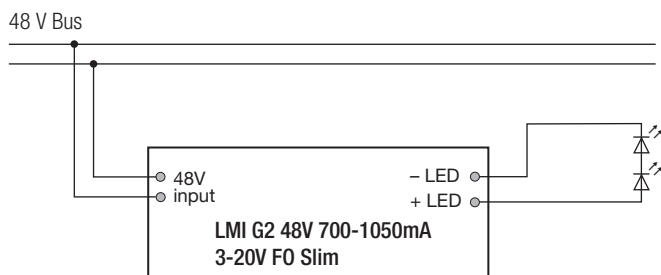
## 2. Thermal details and lifetime

### 2.1 Expected lifetime

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

## 3. Installation / wiring

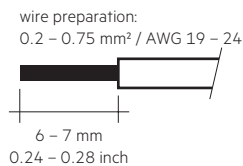
### 3.1 Circuit diagram



### 3.2 Wiring type and cross section

Solid or stranded wire with a cross section of 0.2 – 0.75 mm<sup>2</sup> / AWG 19 – 24.  
Strip 6 – 7 mm / 0.24 – 0.28 inch 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

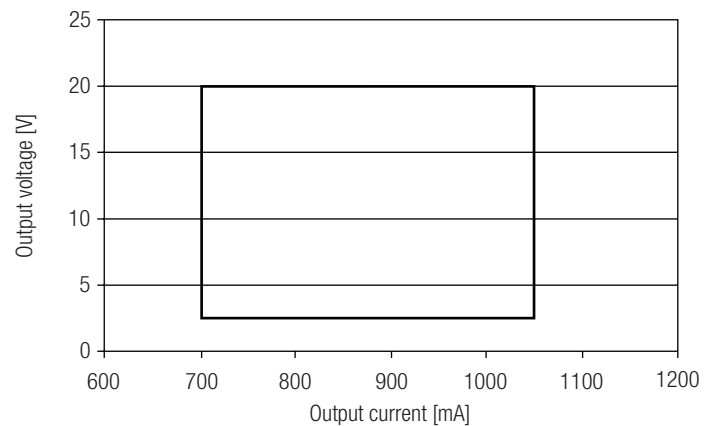


The device / module contains components that are sensitive to electrostatic discharge and may only be installed in the factory and on site if appropriate EOS/ESD protection measures have been taken. No special measures need be taken for devices/modules with enclosed casings (contact with the pc board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

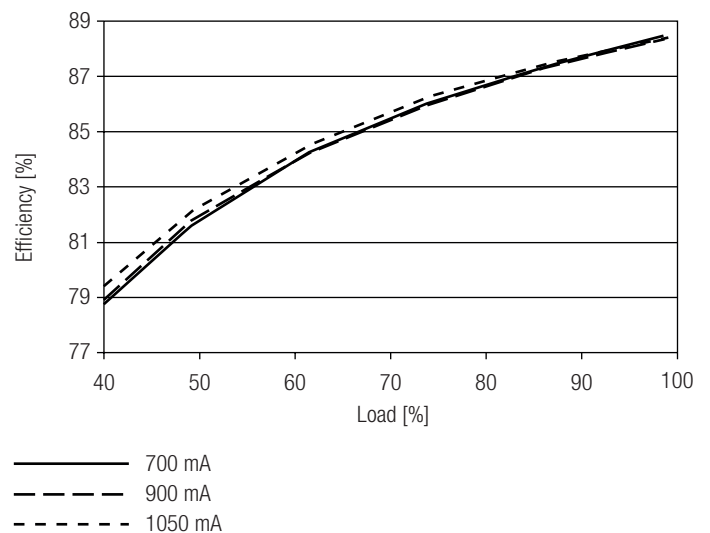
For further information for EOS/ESD safety guidelines and the ESD classification please refer to the brochure entitled <http://www.tridonic.com/esd-protection>.

## 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 °F up to max. +176 °F

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](http://www.tridonic.com) → Technical Data

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