

LMI 48V 350–700mA 20–42V FO Slim Fixed output

Product description

- Dimmable via potentiometer
- Up to 93 % efficiency
- Output voltage range 20 – 42 V
- Adjustable output current between 350 and 700 mA via DIP switch
- Output current tolerance $\pm 8\%$
- Max. tc point temperature 115 °C
- 5-year guarantee

Housing properties

- Pure PCB for built-in application

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



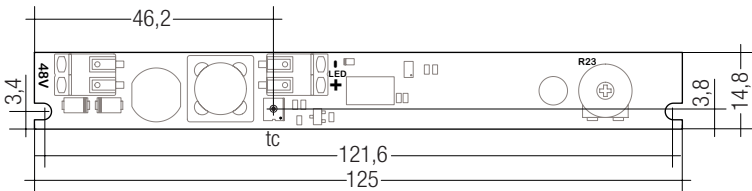
Standards, page 4



LMI 48V 350–700mA 20–42V F0 Slim
Fixed output

Technical data

| | |
|---|-------------------------------|
| DC voltage input | 48 V |
| DC voltage range | 46 – 50 V |
| Max. input power | 32 W |
| Typ. efficiency (full load) ^① | 93 % |
| Typ. input current in no-load operation | 2.8 mA |
| Typ. input power in no-load operation | 0.135 W |
| Time to light (full load) | < 0.6 s |
| Hold on time at power failure | < 5 ms |
| Output current tolerance ^② | ± 8 % |
| Max. peak output current | ≤ output current + 20 % |
| Output LF current ripple | same as LF ripple on 48 V bus |
| Max. output voltage (no-load voltage) | 50 V |
| Surge voltage at output side (against PE) | same as on 48 V bus |
| ESD classification | Severity level 2 |
| Max. tc point temperature | 115 °C |
| 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 48V 350-700mA 20-42V F0 Slim | 28000947 | 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 F0 lp | 28000816 | 10 pc(s). | 760 pc(s). | 0.274 kg |
| LCU 48V 150W DC-STR F0 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 48V 350-700mA 20-42V F0 Slim | 350 mA | 20 V | 42 V | 14.7 W | 15.6 W | 325 mA |
| | 400 mA | 20 V | 42 V | 16.8 W | 17.9 W | 372 mA |
| | 450 mA | 20 V | 42 V | 18.9 W | 20.1 W | 420 mA |
| | 500 mA | 20 V | 42 V | 21.0 W | 22.4 W | 467 mA |
| | 550 mA | 20 V | 42 V | 23.1 W | 24.7 W | 515 mA |
| | 600 mA | 20 V | 42 V | 25.2 W | 27.0 W | 563 mA |
| | 650 mA | 20 V | 42 V | 27.3 W | 29.4 W | 612 mA |
| | 700 mA | 20 V | 42 V | 29.4 W | 31.7 W | 660 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

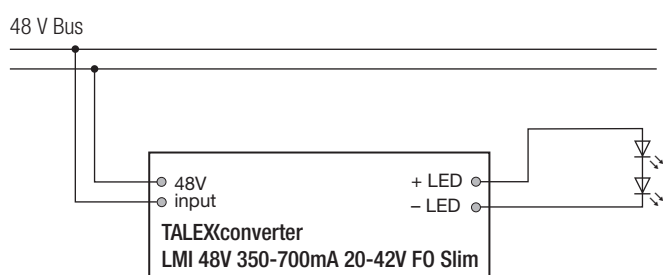
2. Thermal details and life-time

2.1 Expected life-time

Life-time is limited by DC power supply.
Max. tp point temperature must not be exceeded.

3. Installation / wiring

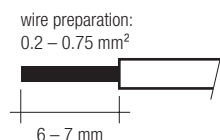
3.1 Circuit diagram



3.2 Wiring type and cross section

Solid or stranded wire with a cross section of 0.2 – 0.75 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

- The cables (48 V bus and LED module connection cables) should be run separately from the mains.
- Mixing of two or more cables from different DC power supplies in the same conduit to light track may interfere.
- The LED wiring should be kept as short as possible.
The max. secondary cable length is 2 m (4 m circuit).
- Secondary switching is not permitted.
- The LED Driver has no inverse-polarity protection on the secondary side.
Wrong polarity can damage LED modules with no inverse-polarity protection.
- Wrong wiring of the LED Driver can lead to malfunction or irreparable damage.

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 will not be damaged but there is a risk of destroying the LED module.

3.5 EOS/ESD safety guidelines

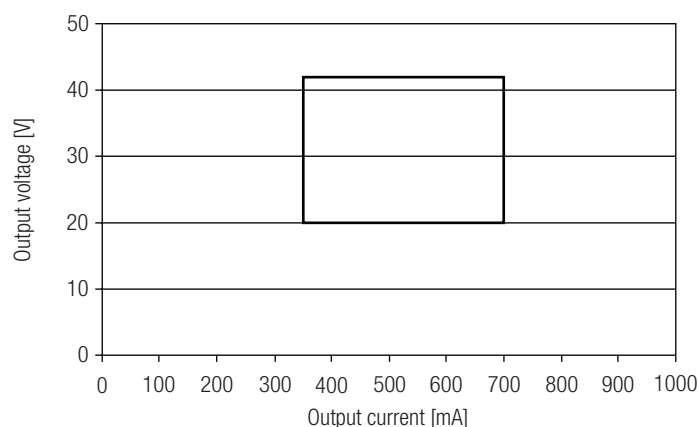


The device / module contains components that are sensitive to electrostatic discharge and may only be installed in the factory and on site if appropriate EOS/ESD protection measures have been taken. No special measures need be taken for devices/modules with enclosed casings (contact with the pc board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

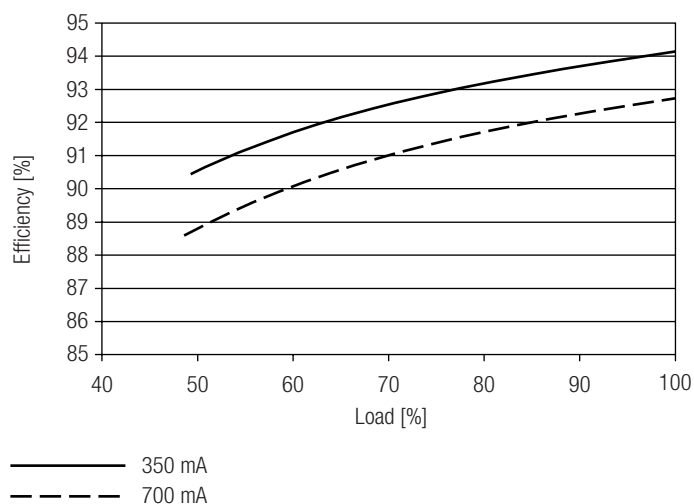
For further information for EOS/ESD safety guidelines and the ESD classification please refer to the brochure entitled <http://www.tridonic.com/esd-protection>.

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 325 mA \pm 20 %.
This is no normal operation.

| | | S1-1 | S1-2 | S1-3 | S1-4 | S1-5 | S1-6 |
|----------------|---------------|------|------|------|------|------|------|
| Output current | 350 mA | OFF | OFF | OFF | ON | — | — |
| | 375 mA | OFF | OFF | ON | OFF | — | — |
| | 400 mA | OFF | OFF | ON | ON | — | — |
| | 425 mA | OFF | ON | OFF | OFF | — | — |
| | 450 mA | OFF | ON | OFF | ON | — | — |
| | 475 mA | OFF | ON | ON | OFF | — | — |
| | 500 mA | OFF | ON | ON | ON | — | — |
| | 525 mA | ON | OFF | OFF | OFF | — | — |
| | 550 mA | ON | OFF | OFF | ON | — | — |
| | 575 mA | ON | OFF | ON | OFF | — | — |
| | 600 mA | ON | OFF | ON | ON | — | — |
| | 625 mA | ON | ON | OFF | OFF | — | — |
| | 650 mA | ON | ON | OFF | ON | — | — |
| | 675 mA | ON | ON | ON | OFF | — | — |
| | 700 mA | ON | ON | ON | ON | — | — |
| Function | Potentiometer | — | — | — | — | ON | OFF |
| | Fixed current | — | — | — | — | OFF | ON |

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 70 mA (amplitude modulation only). Max. torque for potentiometer is 5 Ncm.

5.2 Short-circuit behaviour

In case of a short-circuit at the LED output the LED Driver will not be damaged.

As soon as short-circuit is removed the LED Driver turns on.

No restart is needed.

5.3 No-load operation

The LED Driver will not be damaged in no-load operation. The output will not be deactivated. Before a LED load is connected again turn off DC power supply.

6. Miscellaneous

6.1 Conditions of use and storage

Environmental conditions: 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.

6.2 Additional information

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

Guarantee conditions at www.tridonic.com → Services

Life-time declarations are informative and represent no warranty claim.
No warranty if device was opened.