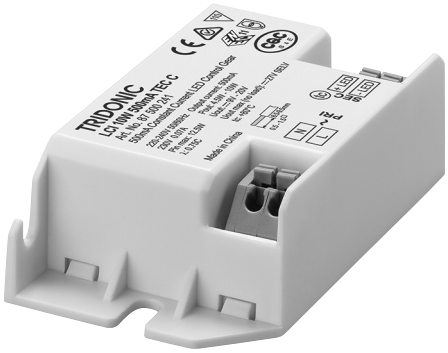
IP20 SELV RoHS

TALEXdriver LCI 10 W 350/500/700 mA TEC C

TEC series

Product description

- Fixed output built-in LED Driver
- Constant current LED Driver
- Output current 350, 500 or 700 mA
- Max. output power 10 W
- Nominal life-time up to 50,000 h
- For luminaires of protection class I and protection class II
- Temperature protection as per EN 61347-2-13 C5e
- 5-year guarantee

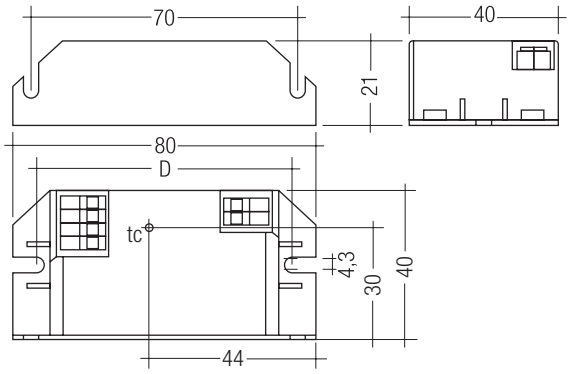


Properties

- Casing: polycarbonat, white
- Type of protection IP20

Functions

- Overtemperature protection
- Overload protection
- Short-circuit protection
- No-load protection



Technical data

Rated supply voltage	220 – 240 V
AC voltage range	198 – 264 V
Input current (at 230 V, 50 Hz, full load)	0.07 A
Mains frequency	50 / 60 Hz
Overvoltage protection	300 V AC, 1 h
Typ. power consumption (at 230 V, 50 Hz, full load)	11.5 W
Max. input power	12.5 W
Typ. output power	10 W
Output current tolerance	± 7.5 %
Turn on time (at 230 V, 50 Hz, full load)	≤ 0.7 s
Turn off time (at 230 V, 50 Hz, full load)	≤ 0.7 s
Hold on time at power failure (output)	0 s
Ambient temperature ta	-20 ... +50 °C
Ambient temperature ta (at life-time 50,000 h)	40 °C
Max. casing temperature tc	80 °C
Storage temperature ts	-40 ... +80 °C
Dimensions L x W x H	80 x 40 x 21 mm

Ordering data

Type	Article number	Packaging, carton	Packaging, low volume	Packaging, high volume	Weight per pc.
LCI 10W 350mA TEC C	**87500239**	25 pc(s).	1,100 pc(s).	7,700 pc(s).	0.043 kg
LCI 10W 500mA TEC C	**87500241**	25 pc(s).	1,100 pc(s).	7,700 pc(s).	0.044 kg
LCI 10W 700mA TEC C	**87500243**	25 pc(s).	1,100 pc(s).	7,700 pc(s).	0.044 kg

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Wiring diagrams and installation examples, page 3

Specific technical data

Type	Output current	Power factor at full load[1]	Efficiency at full load[1]	Power factor at min. load[1]	Efficiency at min. load[1]	Min. forward voltage[1]	Max. forward voltage[1]	Max. output voltage	Max. peak output current[1]	Typ. current ripple (at 230 V, 50 Hz, full load)
LCI 10W 350mA TEC C	350 mA	0.75C	82 %	0.70C	78 %	13.0 V	29.0 V	33 V	460 mA	± 20 %
LCI 10W 500mA TEC C	500 mA	0.75C	82 %	0.70C	77 %	9.0 V	20.0 V	27 V	700 mA	± 30 %
LCI 10W 700mA TEC C	700 mA	0.75C	80 %	0.70C	75 %	6.5 V	14.5 V	21 V	980 mA	± 30 %

[1] Test result at 230 V, 50 Hz.

Standards
EN 55015
EN 61000-3-2
EN 61000-3-3
EN 61347-1
EN 61347-2-13
EN 61547
EN 62384

Overload protection
If the output voltage range is exceeded the LED Driver reduces the LED output current. After elimination of the overload the nominal operation is restored automatically.

Overtemperature protection
The LED Driver is protected against temporary thermal overheating. If the temperature limit is exceeded the output current is reduced to limit tc at a certain level. It restarts automatically.
The temperature protection is activated typically at 10 °C above tc max.

Short-circuit behaviour
In case of a short circuit on the secondary side (LED) the LED Driver switches into hic-cup mode. After the removal of the short-circuit fault the LED Driver will recover automatically.

No-load operation
The LED Driver works in constant voltage mode. In no-load operation the output voltage will not exceed the specified max. output voltage (see page 1).

Installation instructions
The LED module and all contact points within the wiring must be sufficiently insulated against 2.5 kV surge voltage.
Air and creepage distance must be maintained.

Replace LED module
1. Mains off
2. Remove LED module
3. Wait for 30 seconds
4. Connect LED module again

Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

Expected life-time

Type	ta	40 °C	50 °C	60 °C
LCI 10W xxxmA TEC C	tc	70 °C	80 °C	x
	Life-time	50,000 h	30,000 h	x

The LED Drivers are designed for a life-time stated above under reference conditions and with a failure probability of less than 10 %.

Glow-wire test
according to EN 61347-1 with increased temperature of 960 °C passed.

Mounting of device
Max. torque for fixing: 0.5 Nm/M4

Temperature range

The LED Driver life duration is related to the ambient temperature ta.
The relation of tc to ta temperature depends also on the luminaire design. If the measured tc temperature is approx. 5 K below tc max. or higher, ta temperature should be checked and eventually critical components (e.g. ELCAP) measured. Detailed information on request.

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

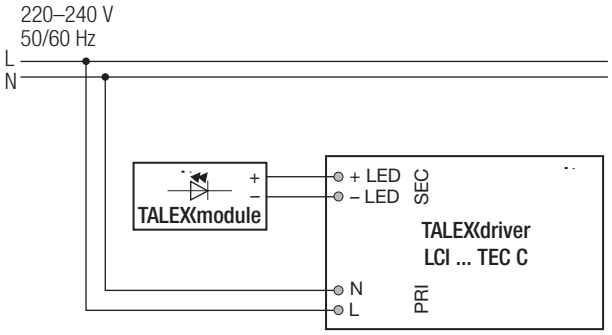
Storage temperature: -40 °C up to max. +80 °C

The devices have to be within the specified temperature range (ta) before they can be operated.

Maximum loading of automatic circuit breakers

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20	Inrush current	
Installation Ø	1.5 mm²	1.5 mm²	1.5 mm²	2.5 mm²	1.5 mm²	1.5 mm²	1.5 mm²	2.5 mm²	I_{max}	Time
LCI 10W 350mA TEC C	120	160	200	240	60	80	100	120	10 A	100 µs
LCI 10W 500mA TEC C	120	160	200	240	60	80	100	120	10 A	100 µs
LCI 10W 700mA TEC C	120	160	200	240	60	80	100	120	10 A	100 µs

Wiring diagram



Isolation and electric strength testing of luminaires

Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an isolation test with 500 V_{DC} for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal.
The isolation resistance must be at least 2 MΩ.

As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500 V_{AC} (or 1.414 x 1500 V_{DC}). To avoid damage to the electronic devices this test must not be conducted.

Additional information

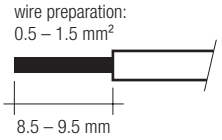
Additional technical information at www.tridonic.com → Technical Data

Guarantee conditions at www.tridonic.com → Services

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

Wiring type and cross section

The wiring can be stranded wires with ferrules or rigid wires with a cross section of 0.5 – 1.5 mm^2.
Strip 8.5 – 9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals (WAGO 250).

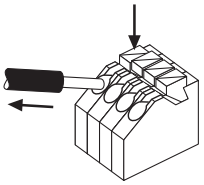


Wiring guidelines

- All connections must be kept as short as possible to ensure good EMI behaviour.
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
- Max. lenght of output wires is 2 m.
- Secondary switching is not permitted.
- Incorrect wiring can demage LED modules.
- Through wiring of mains is connecting additional LED Driver only. Max. permanent current of 6 A may not be exceeded.
- The wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.).

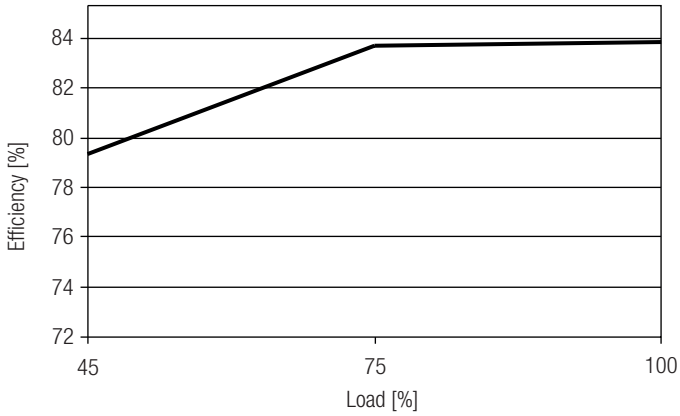
Release of the wiring

Press down the “push button” and remove the cable from front.

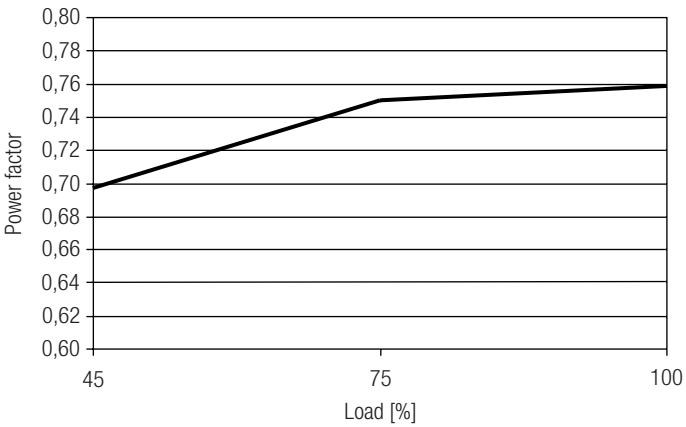


Diagrams LCI 10W 350mA TEC C

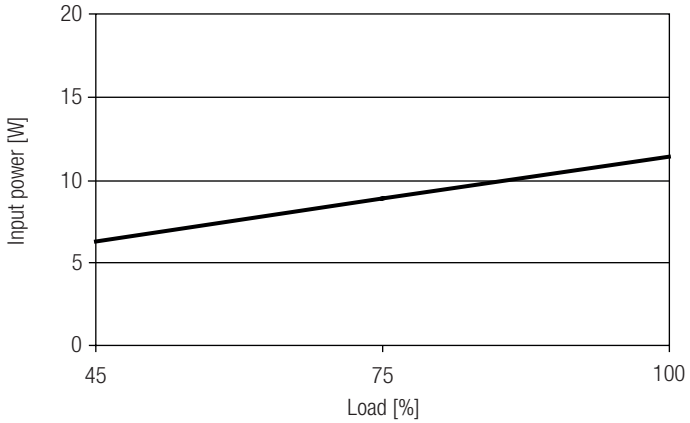
Efficiency vs load



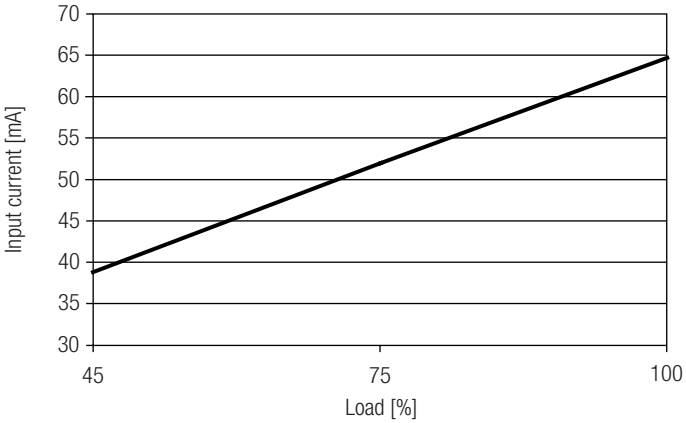
Power factor vs load



Input power vs load

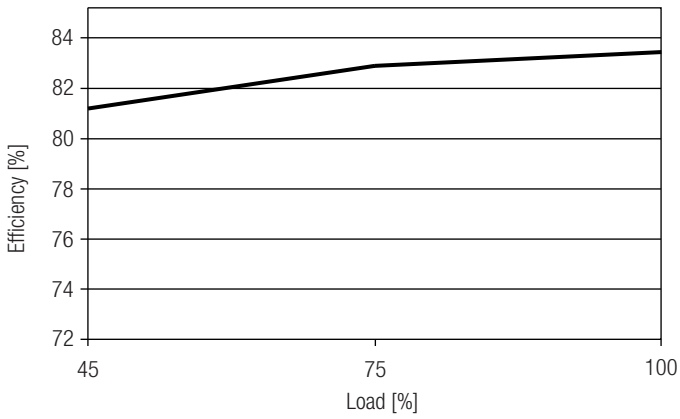


Input current vs load

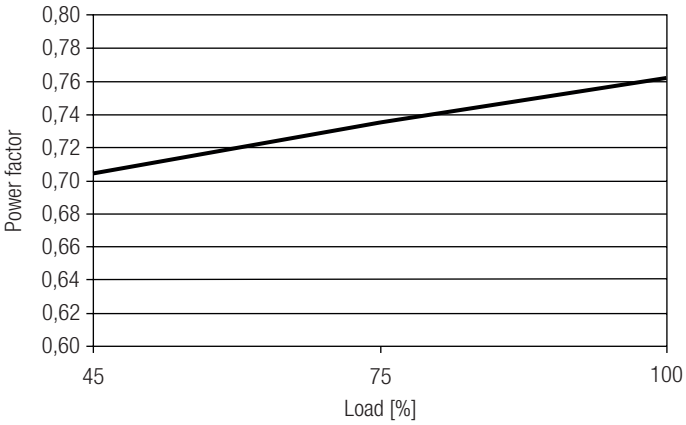


Diagrams LCI 10W 500mA TEC C

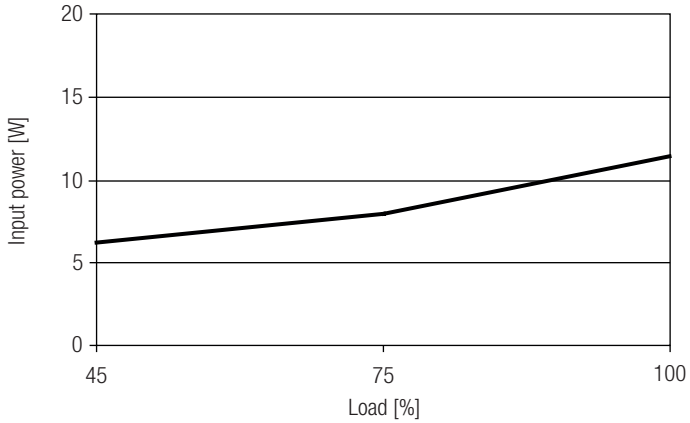
Efficiency vs load



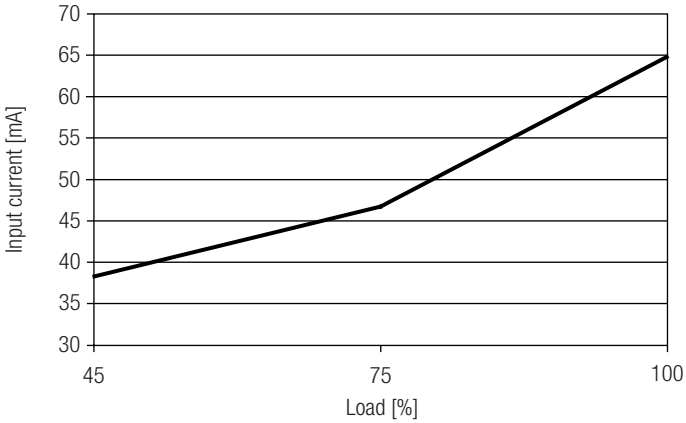
Power factor vs load



Input power vs load

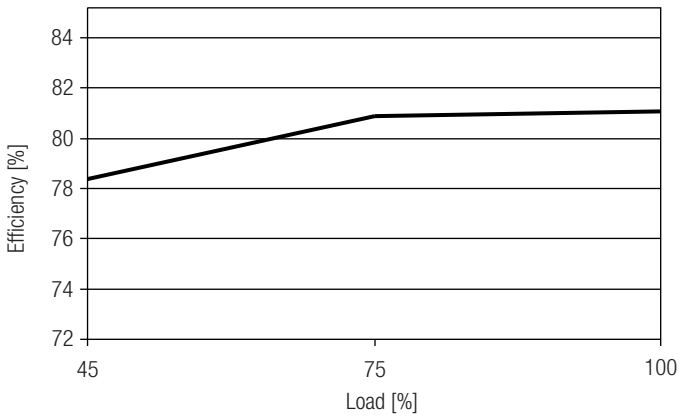


Input current vs load

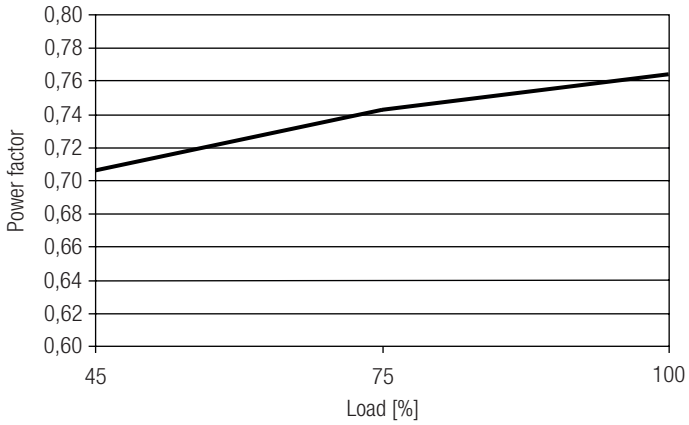


Diagrams LCI 10W 700mA TEC C

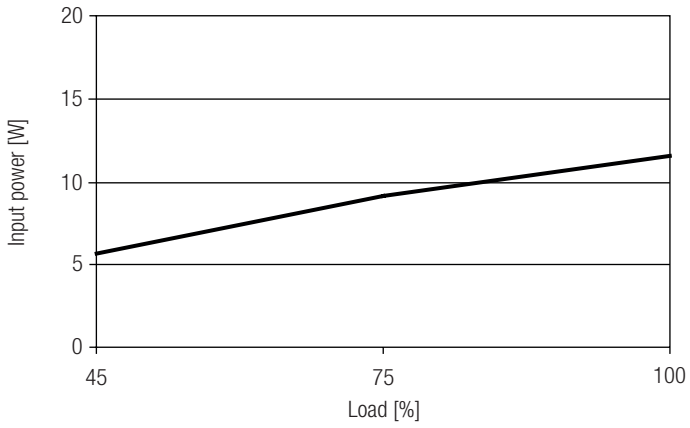
Efficiency vs load



Power factor vs load



Input power vs load



Input current vs load