

### Driver LC 10W 350/500/700mA fixC C SNC

ESSENCE 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

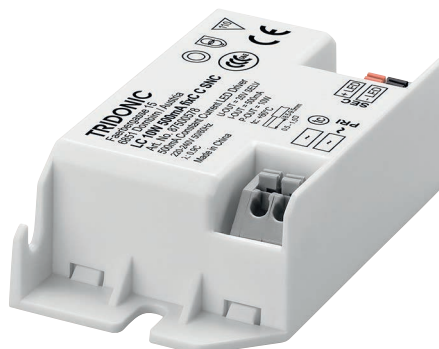
#### Functions

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



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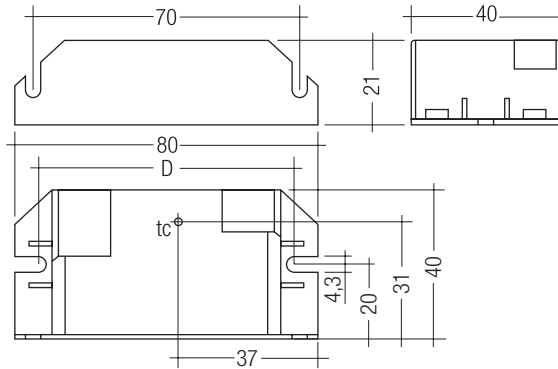
IP20 SELV  RoHS

### Driver LC 10W 350/500/700mA fixC C SNC

ESSENCE series

#### Technical data

Rated supply voltage	220 – 240 V
AC voltage range	198 – 264 V
Mains frequency	50 / 60 Hz
Overvoltage protection	320 V AC, 1 h
THD (at 230 V, 50 Hz, full load)	< 20 %
Output current tolerance <sup>®</sup>	± 7.5 %
Typ. current ripple (at 230 V, 50 Hz, full load)	± 40 %
Turn on time (at 230 V, 50 Hz, full load)	≤ 0.5 s
Turn off time (at 230 V, 50 Hz, full load)	≤ 0.5 s
Hold on time at power failure (output)	0 s
Ambient temperature $t_a$	-20 ... +50 °C
Ambient temperature $t_a$ (at life-time 50,000 h)	40 °C
Storage temperature $t_s$	-40 ... +80 °C
Dimensions L x W x H	80 x 40 x 21 mm



#### Ordering data

Type <sup>®</sup>	Article number	Packaging, carton	Packaging, low volume	Packaging, high volume	Weight per pc.
<b>LC 10W 350mA fixC C SNC</b>	<b>87500577</b>	25 pc(s).	1,100 pc(s).	7,700 pc(s).	0.043 kg
<b>LC 10W 500mA fixC C SNC</b>	<b>87500578</b>	25 pc(s).	1,100 pc(s).	7,700 pc(s).	0.043 kg
<b>LC 10W 700mA fixC C SNC</b>	<b>87500579</b>	25 pc(s).	1,100 pc(s).	7,700 pc(s).	0.043 kg

#### Specific technical data

Type	Output current <sup>®</sup>	Input current (at 230 V, 50 Hz, full load)	Max. input power	Typ. power consumption (at 230 V, 50 Hz, full load)	Output power range	Power factor at full load <sup>®</sup>	Efficiency at full load <sup>®</sup>	Power factor at min. load <sup>®</sup>	Efficiency at min. load <sup>®</sup>	Min. forward voltage	Max. forward voltage	Max. output voltage	Max. output peak current at full load <sup>®</sup>	Max. output peak current at min. load <sup>®</sup>	Max. casing temperature $t_c$
<b>LC 10W 350mA fixC C SNC</b>	350 mA	0.060 A	12.5 W	12 W	7 – 10 W	0.9C	83 %	0.85C	81 %	20 V	28.6 V	42 V	550 mA	600 mA	80 °C
<b>LC 10W 500mA fixC C SNC</b>	500 mA	0.060 A	12.5 W	12 W	7 – 10 W	0.9C	83 %	0.85C	80 %	14 V	20.0 V	35 V	780 mA	820 mA	80 °C
<b>LC 10W 700mA fixC C SNC</b>	700 mA	0.065 A	12.5 W	12 W	7 – 10 W	0.9C	81 %	0.85C	78 %	10 V	14.2 V	25 V	1,100 mA	1,150 mA	80 °C

<sup>®</sup> Test result at 230 V, 50 Hz.

<sup>®</sup> The trend between min. and full load is linear.

<sup>®</sup> Output current is mean value.

### 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 will protect itself and LED may flicker. After elimination of the overload, the nominal operation is restored automatically.

### Short-circuit behaviour

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

### No-load operation

The LED Driver works in burst working mode to provide a constant output voltage regulation which allows the application to be able to work safely when LED string opens due to a failure.

### Installation instructions

The LED module and all contact points within the wiring must be sufficiently insulated against 3 kV surge voltage.  
Air and creepage distance must be maintained.

### Replace LED module

1. Mains off
2. Remove LED module
3. Wait for 10 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
<b>LC 10W 350mA fixC C SNC</b>	tc	70 °C	80 °C	x
	Life-time	50,000 h	30,000 h	x
<b>LC 10W 500mA fixC C SNC</b>	tc	70 °C	80 °C	x
	Life-time	50,000 h	30,000 h	x
<b>LC 10W 700mA fixC C SNC</b>	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 %.

### Maximum loading of automatic circuit breakers

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20	Inrush current	
Installation Ø	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	I <sub>max</sub>	Time
<b>LC 10W 350mA fixC C SNC</b>	120	160	200	240	100	130	160	200	8 A	80 µs
<b>LC 10W 500mA fixC C SNC</b>	120	160	200	240	100	130	160	200	8 A	80 µs
<b>LC 10W 700mA fixC C SNC</b>	120	160	200	240	100	130	160	200	8 A	80 µs

### Glow-wire test

according to EN 61347-1 with increased temperature of 850 °C passed.

### Mounting of device

Max. torque for fixing: 0.5 Nm/M4

### Storage conditions

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

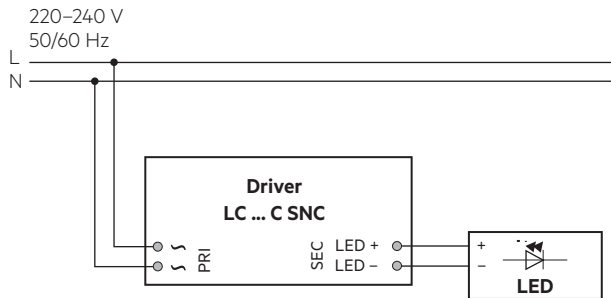
Storage temperature: -40 °C up to max. +80 °C

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

**Harmonic distortion in the mains supply (at 230 V / 50 Hz and full load) in %**

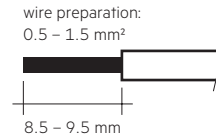
	THD	3.	5.	7.	9.	11.
<b>LC 10W 350mA fixC C SNC</b>	< 20	< 15	< 8	< 8	< 8	< 5
<b>LC 10W 500mA fixC C SNC</b>	< 20	< 10	< 8	< 6	< 6	< 6
<b>LC 10W 700mA fixC C SNC</b>	< 20	< 15	< 10	< 8	< 5	< 5

**Wiring diagram**



**Wiring type and cross section**

The wiring can be done with a cross section of 0.5 – 1.5 mm<sup>2</sup>. Strip 8.5 – 9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals.



**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. length of output wires is 2 m.
- Secondary switching is not permitted.
- Incorrect wiring can damage LED modules.
- The wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.).

**Isolation and electric strength testing of luminaires**

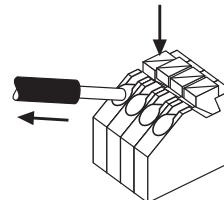
Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

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<sub>DC</sub> 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<sub>AC</sub> (or 1.414 x 1500 V<sub>DC</sub>). To avoid damage to the electronic devices this test must not be conducted.

**Release of the wiring**

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



**Additional information**

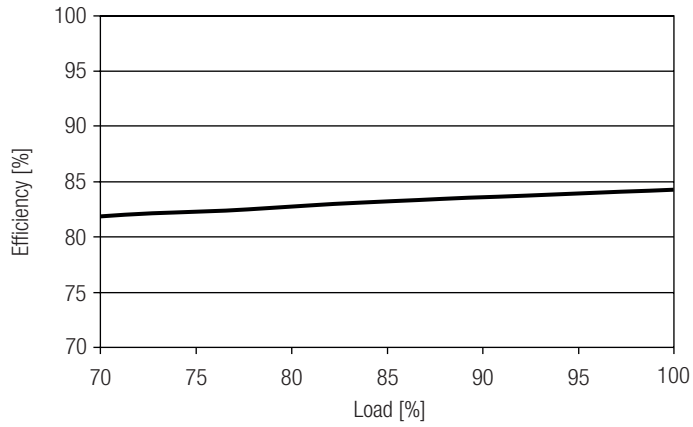
Additional technical information at [www.tridonic.com](http://www.tridonic.com) → Technical Data

Guarantee conditions at [www.tridonic.com](http://www.tridonic.com) → Services

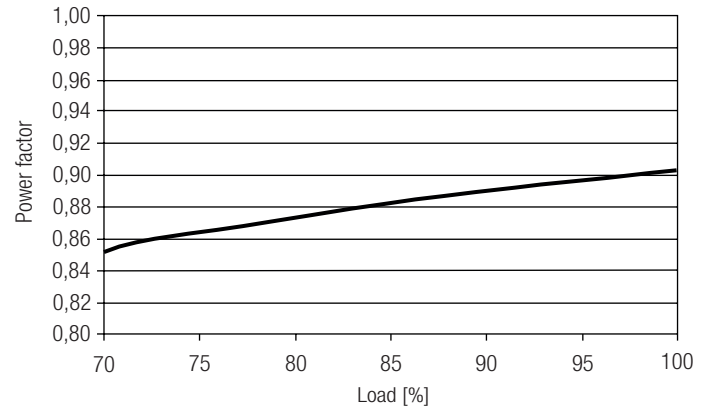
Life-time declarations are informative and represent no warranty claim. No warranty if device was opened.

**Diagrams LC 10W 350mA fixC C SNC**

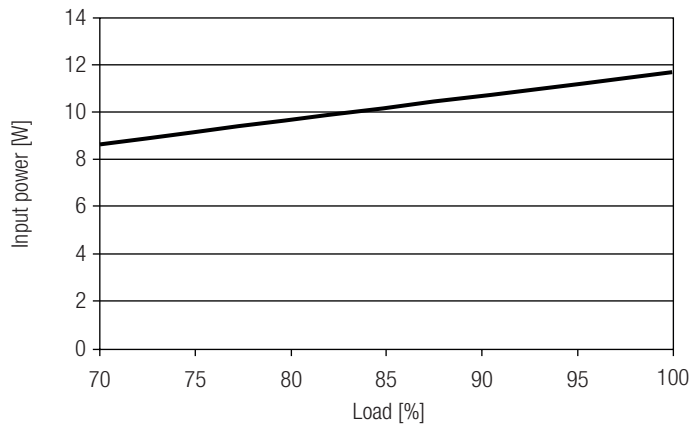
Efficiency vs load



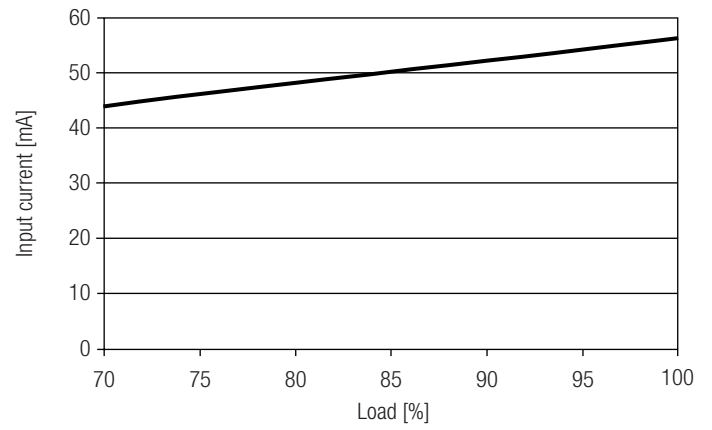
Power factor vs load



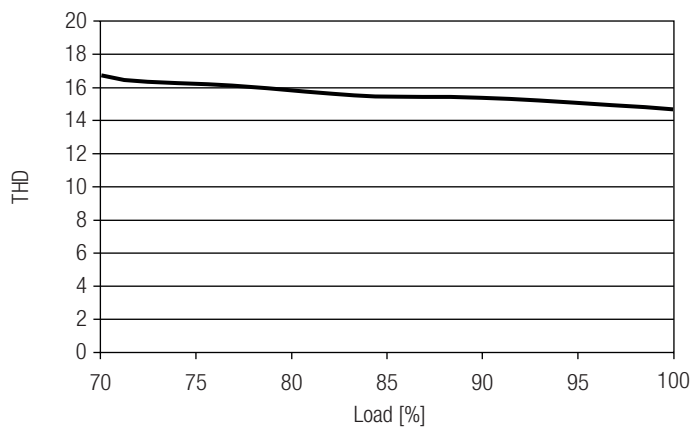
Input power vs load



Input current vs load

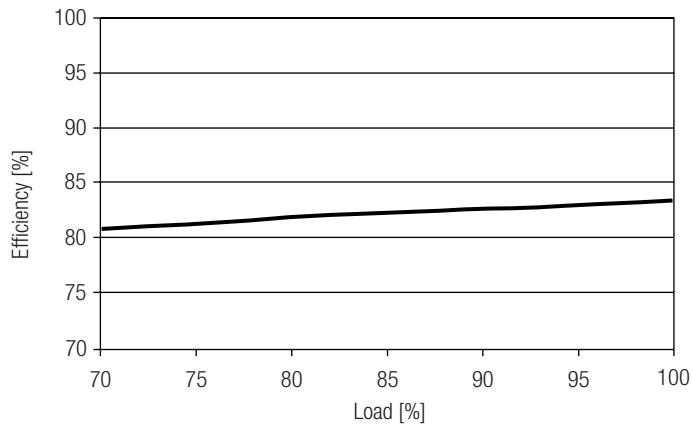


THD vs load

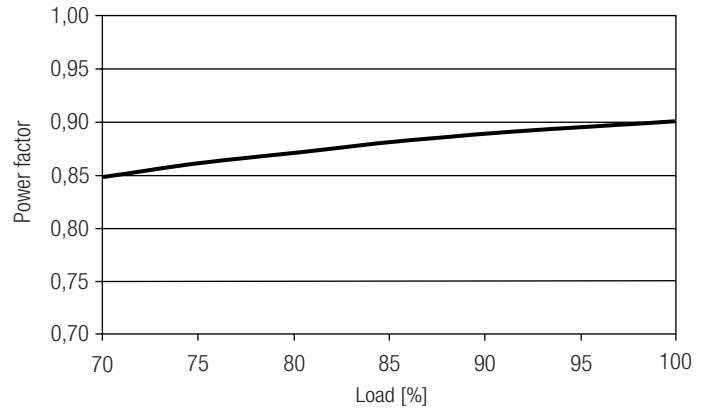


**Diagrams LC 10W 500mA fix C SNC**

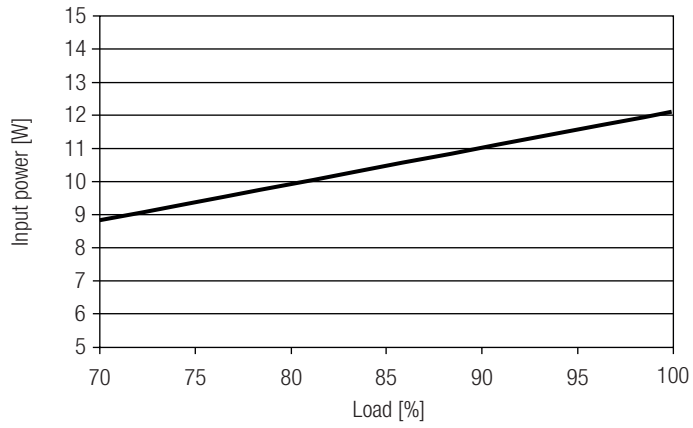
Efficiency vs load



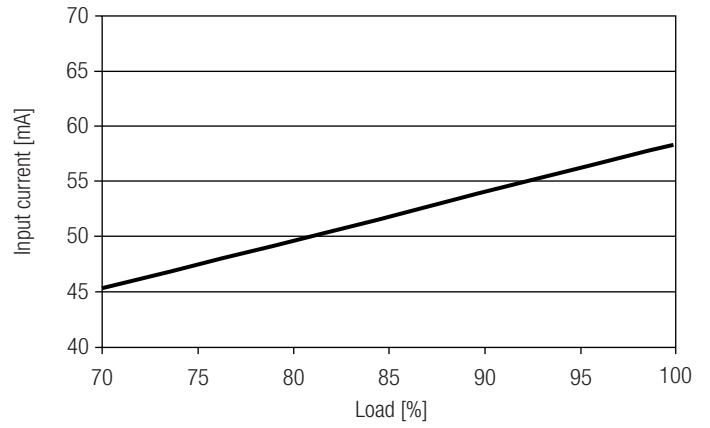
Power factor vs load



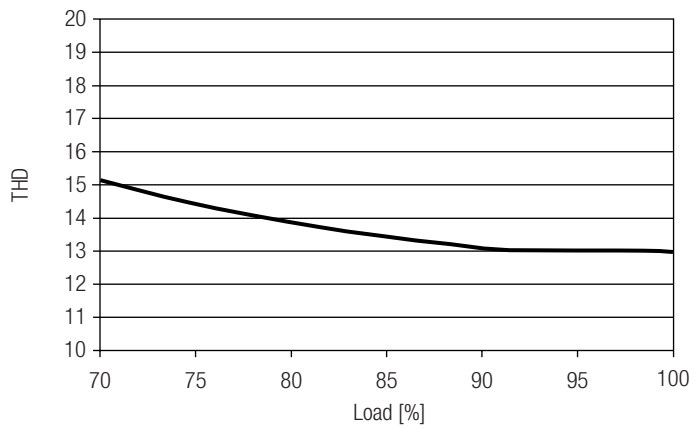
Input power vs load



Input current vs load

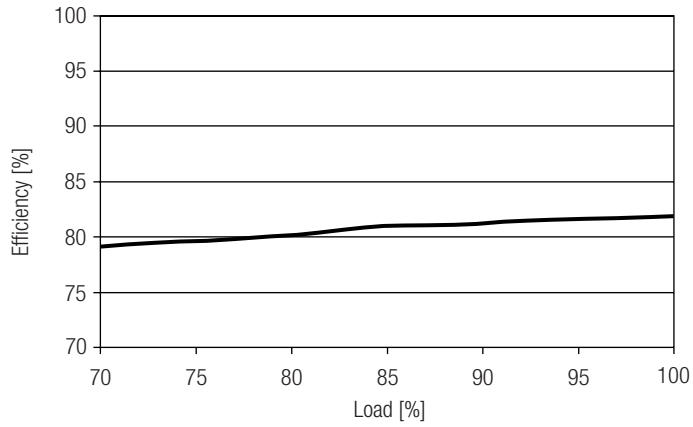


THD vs load

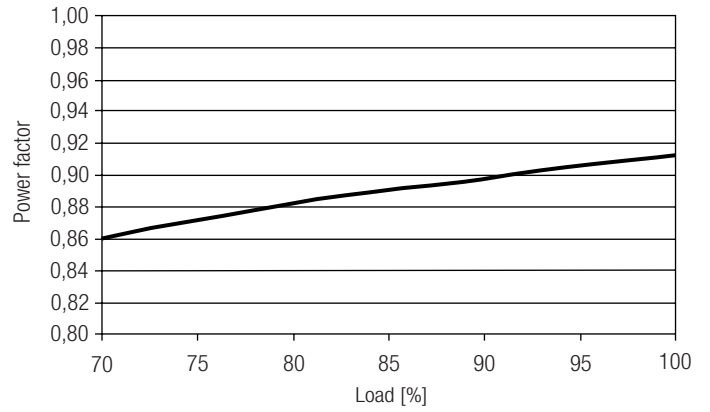


**Diagrams LC 10W 700mA fixC C SNC**

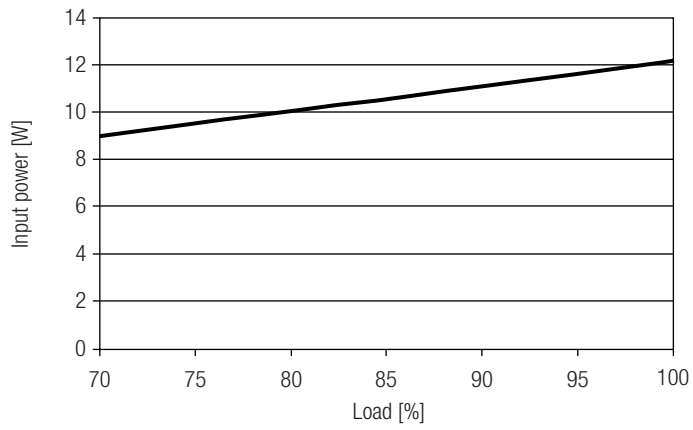
Efficiency vs load



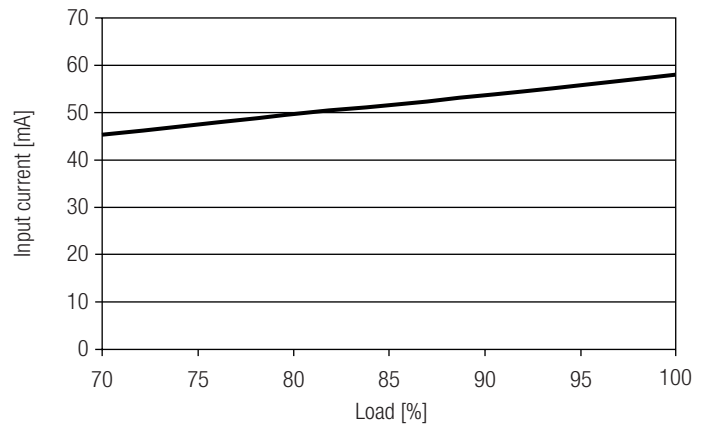
Power factor vs load



Input power vs load



Input current vs load



THD vs load

