



## LED Emergency converter

**Model:EC25 Basic self-test**

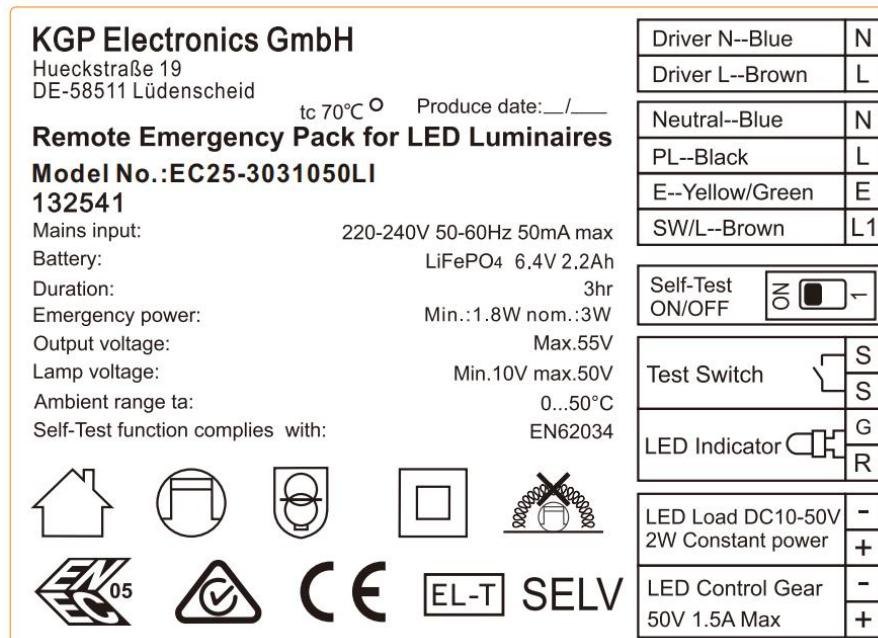

Model no	Item code	Mode* Constant power	Battery	Duration
EC25-3031050Li	132541	DC 10-50V 3W	LiFePO4 6.4V2.2AH	3 Hours

### 1. Parameters

category	Item	Technical Norm
Features	Output Type	Constant power output
	IP Grade	IP20 (relies on end-product enclosure for protection against accidental contact live parts.)
	Insulation Class	Class II
Input	Input Rated Voltage	220-240VAC
	Frequency	50/60Hz
	AC Input Current	50mA
	AC Input Power Rated	4.0W max.
	Power Factor	>0.5
	Charge time	≥24 hours
	Charge mode	Trickle re-charging on battery
	No-load Power Consumption	≤2W @230VAC
	Inrush Current	≤36A/420us (230VAC, Full-load)
Output	Output power	2-3W Constant power
	Output voltage	DC10-50V, DC55V Max(SELV)
	Battery capacity(LiFePO4)	2200mAh
	Battery Charging Current	0-250mA
	Rated duration	>3 hours
Protection	Short Circuit Protection	Auto Recovery
	Overload Protection	Auto Recovery
	No-load Protection	Auto Recovery
	Insulation voltage	I/P to O/P , 3KVac/1min
	Insulation resistance	>100M ohm @ 500VDC
	Leakage current	I/P to O/P < 250µA
Environment	Ta/Operation Temperature	0....+50°C
	Ts/Storage Temperature	-25....+85°C
	Tc/Enclosure Temperature	70 °C max.
	Humidity	10%....90%RH
	Atmosphere	86-108KPa

Construction	Connection Method	Push-in Terminal		
	Installation	Independent		
	PRI Wire preparation	0.5- 1.5mm <sup>2</sup>		
	SEC Wire preparation	0.5- 1.5mm <sup>2</sup>		
	Dimension	212X73X28mm (L*W*H)		
Standards	Certification	CE		
	Safety Standards	EN61347- 1:2015,EN61347-2- 13:2014/A1:2017, EN62493:2015,IEC 61347- 1,IEC 61347-2-7, AS/NZS 60598-2-22,AS/NZS2293.3		
	EMC Standards	EN55015 EN62034		
	Surge	L-N/1KV		
Others	RoHS	complied to 2011/65/EU		
	Life Time	50,000h @50°C (Ta) / @70°C (Tc)		
	Battery pack	Battery model	IFR18650-1500	IFR18500-1100
		Battery voltage per cell	3.2V	3.2V
		Battery capacity per cell	1500mAh	1100mAh
		Battery case temperature	0....60°	0....60°
		Max short term temperature	70°	70°
	Warranty	3 years ( Except for the following circumstance :1)Improper installation or operation 2)Misuse 3)Abuse 4)Unauthorized or improper repair alteration 5)Accident or negligence in use,storage,transportation 6)Any natural acts )		
<b>Remark</b> <ol style="list-style-type: none"> <li>1. To guarantee the rated discharge time,please charge the battery for more than 24 hours.Please ensure that the voltage is constant with a Maximum deviation of -20% and +10%.</li> <li>2. Charge and discharge cycle needs to be done at least once every three months, and the continuous charging time can not exceed 3 months.</li> </ol>				

## 2. Label (For example)



### 3. Initial Test

#### 3.1 Initial Test

Connect led load, emergency module, battery and led driver, then connect mains supply, this emergency conversion module will automatically start to do a initial test, to check led load, battery, led driver and emergency module itself working well or not. If not, led indicator would be red flash. If everything goes well, it then goes into charge mode.

#### 3.2 Functional Test

Functional tests are carried out for 10 seconds automatically every 7 calendar days.

#### 3.3 Duration test

Emergency conversion module will automatically make a full duration test after AC on &24 hours full charged, and repeated every 180 calendar days to check capacity of battery.

#### Note

If mains supply is off during self-test period, emergency conversion module would terminate self-test immediately and go into emergency mode.

Under EM mode, if DC load failure, indicator will permanent red, then off, EM kit go into rest mode for protection.

#### 3.4 Failure mode clear

The failure mode in self-test will be maintained, until the user figures out the failure issue.

After issue fixed, pressing test switch longer than 3 seconds at emergency mode can clear failure mode.

#### 3.5 Timer reset functionality

The timer for function and duration test can be set to a particular time of the day by cycling the unswitched line supply 3 times within 1 minute.

#### 3.6 Rest mode

Rest mode can be initiated during emergency mode by pressing test switch longer than 3 seconds.

### 4. LED indicator

	Color	LED indication	Status	Comment
	Green	Permanent green	Charging Mode or Fully Charged	AC mode
	Green	Fast flashing green (0.1 sec on, 0.1 sec off)	Function test underway	
	Green	Slow flashing green (1 sec on, 1 sec off)	Duration test underway	
	Red	Permanent red	Load failure	Open circuit / Short circuit / LED failure
	Red	Slow flashing red (1 sec on, 1 sec off)	Battery failure	Battery failed the duration test or function test / No battery
		Green and red off	DC mode	Battery operation (emergency mode)

## 5. Installation



Fig.1



Fig.2

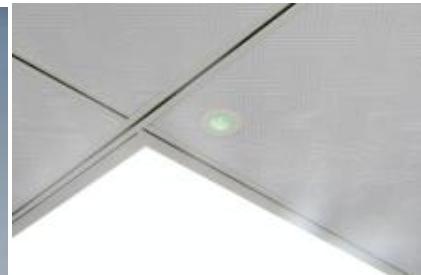


Fig.3



LED Holder

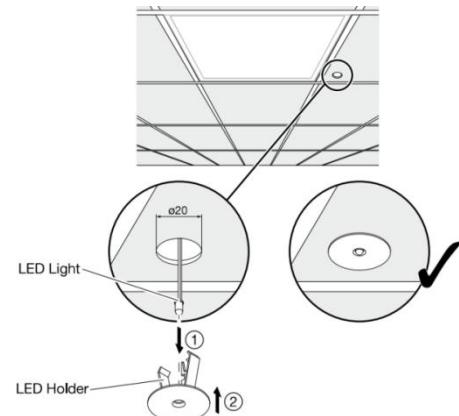


Fig.1 -The driver could be installed on the back of LED panels

Fig.2-There is a battery box in the driver, where users could replace the battery pack . But users have to use our battery pack modules.

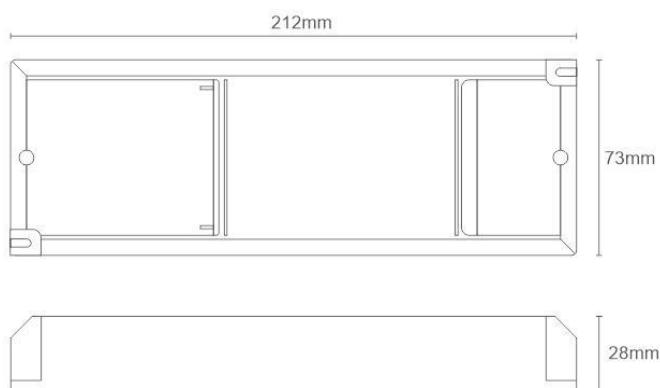
Fig.3-Please make a 20mm cutting hole on the ceiling,where you could install the LED holder .

Note:

- Only professional people (e.g. electrical Engineer) can wire it.
- Please confirm that the electrical parameters of this product match with the luminaire.
- Please power off mains supply before installation, and confirm the wiring is correct,then connect the battery, the last step is to turn on main supply.
- Please do not cover this control gear .



## 6. Dimension (Unit: mm)



## 7. Self-Test switch

The self-test of YH25 series covers function testing and duration test. Function test refers to charging, discharging and the working situation of load, and duration test mainly refers to the test of batteries' capacity.

Manual test is also working as default

If the main power is off when the self test happens, the emergency driver will be working with a priority immediately, until the batteries run out.

The self test will be operating again when the batteries are charged fully afterwards.

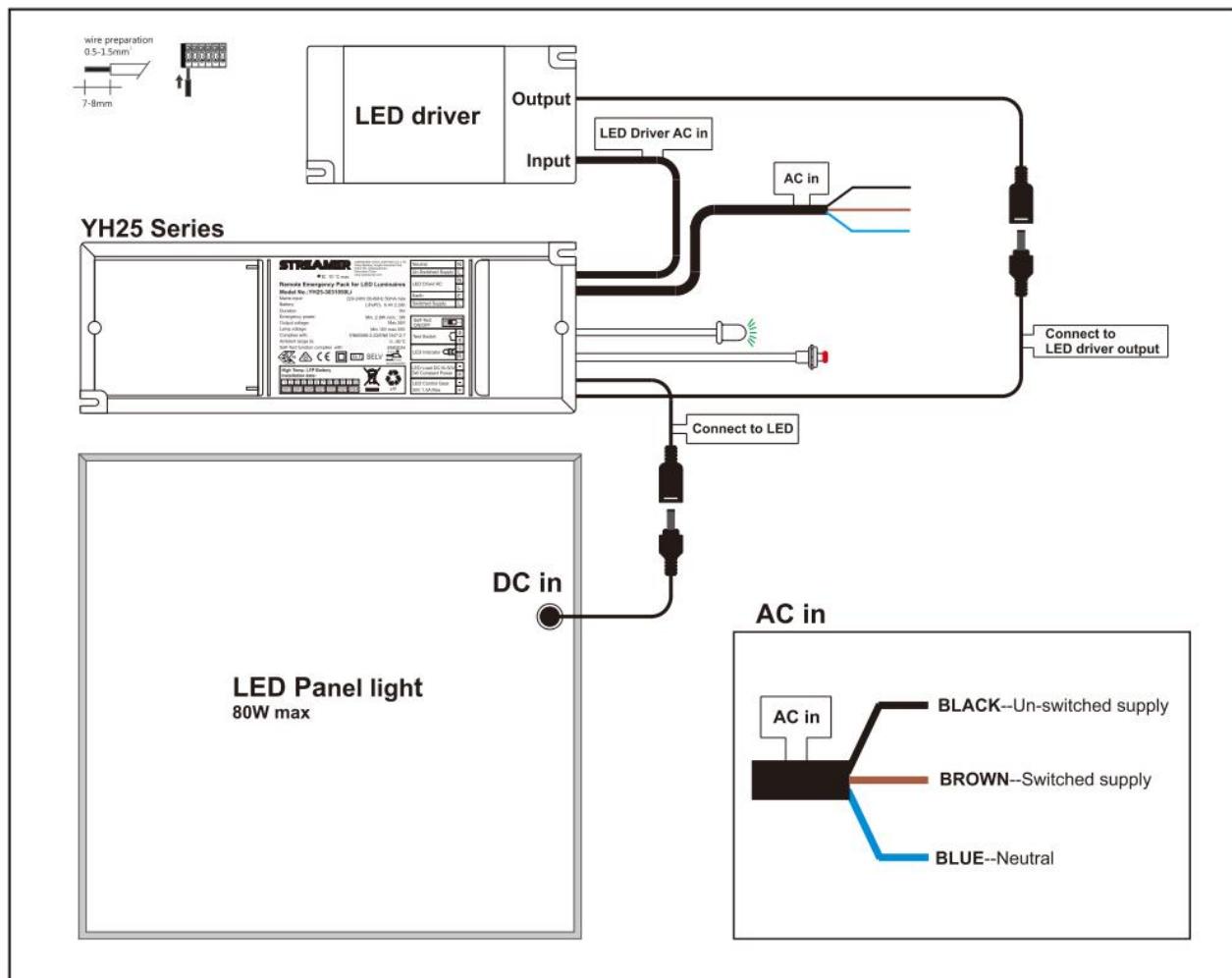
The failure mode in self-test will be maintained, until the user figures out the failure issue.

If the main power of the LED emergency driver is consistently switched on/off for 3 times, the self-test will be re-set.

Self-test is under the regulation of EN62034.

Please refer to the below chart of the working situation (working well or working failure) of the LED emergency driver. The different colors and the flashing modes of LED indicator will refer to different situations.

## 8. Wiring Diagram



**9. Warranty**

Warranty 5 years, Including batteries.

Except for the following circumstances:

Improper installation or operation.

Misuse.

Abuse.

Unauthorized or improper repair alteration.

Accident or negligence in use, storage, transportation.

Any natural acts.

\* If users would like to change the batteries pack, please use the nominated models of KGP , then it will be under the warranty .

**10. Packing information**

Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
340*310*305	20 PCS	0.455 kg	9.1kg	9.6kg

**11. Ordering data**

Model No	Item code
EC25-3031050Li	132541

**12. Revision history**

Date	Version	Remark
2023-08-25	V1.0	Initial release.
2023-11-28	V2.0	Add description of LED holder
2024-04-07	V3.0	Modified the description of LED indicator and test switch
2024.04.12	V4.0	Modified the cross section unit to mm <sup>2</sup>
2024.06.07	V5.0	Updated Indicator explanation