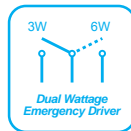


# Emergency LED Driver

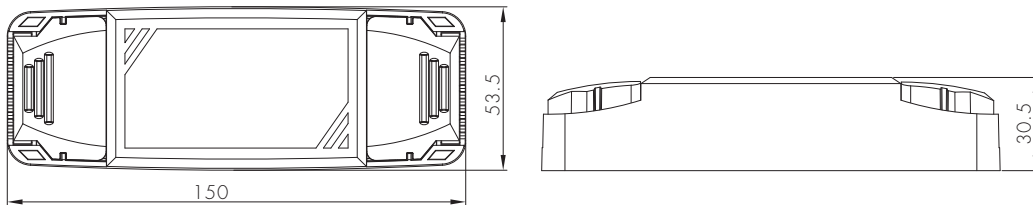
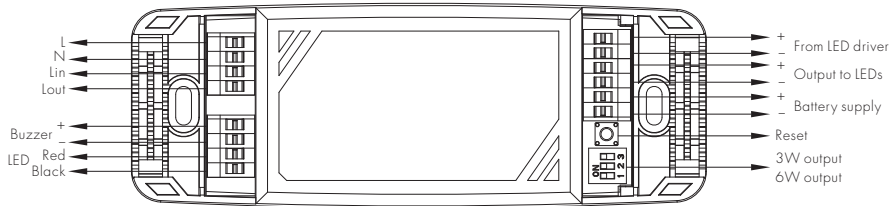
## Advanced Version

Model: HEM06-T HEM07-T

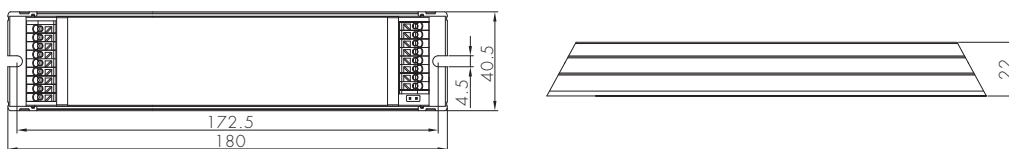


### Mechanical Structure

Model: HEM06-T



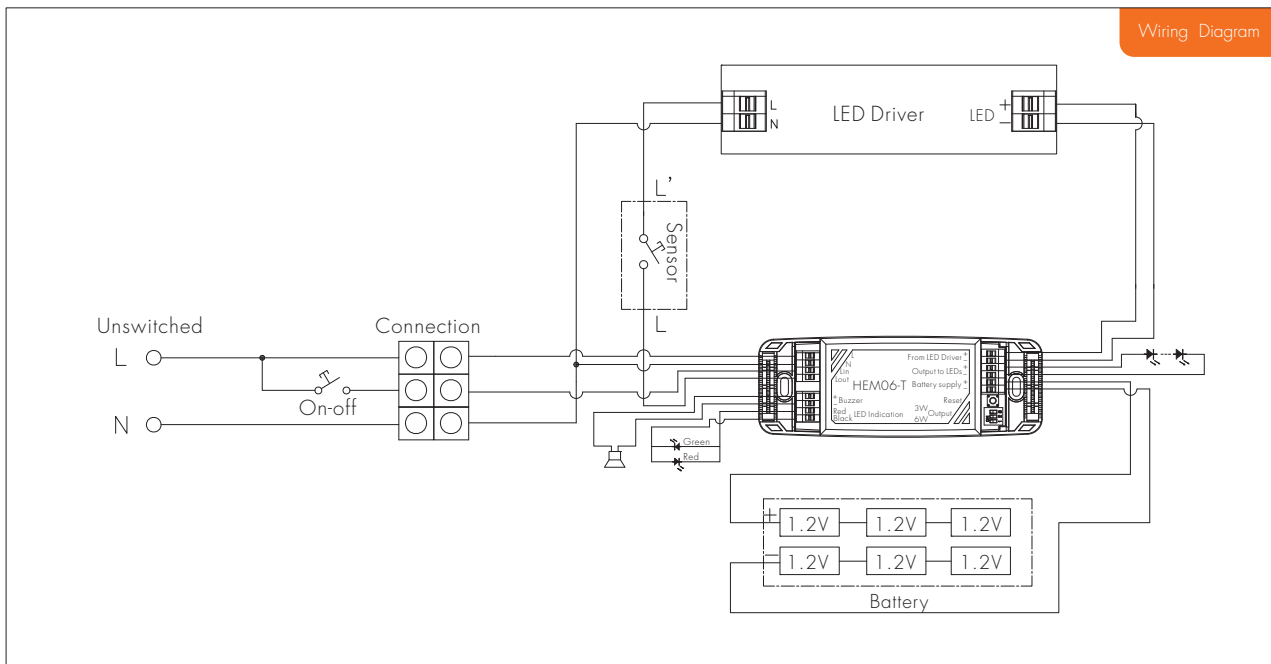
Model: HEM07-T



This emergency lighting module is designed to convert a wide range of LED types, and is an ideal choice for converting most standard LED luminaires and arrays containing from 4 to 22 ( HEM06-T ) or 4 to 20 ( HEM07-T ) LEDs in series.

This unit is designed to utilize the existing LED driver and panel layout (no need to break into the LED circuit) to be dimmed to 3W/6W in case of emergency.

The driver can automatically adjust the output LED current to provide the optimum match between the battery and the load, which enables maximum illumination whilst ensuring full battery duration. The driver is compatible with a wide range of LEDs such as Philips Fortimo DIM, SIM and LLM ranges, Bridgelux LS/ES/RS ranges, Citizen 4~41W ranges, GE Infusion, Xicato and many others.



## Highlights

- Dual wattage and duration selection:  
HEM06-T: 3W @ 3 hrs; 6W @ 1h / HEM07-T: 3W @ 3hrs; 3W @ 1h
- Built-in MCU programed self-testing, maintenance free
- Automatic output current adjustment
- Wide range of LEDs in series (HEM06-T: 12~70V / HEM07-T: 12~55V)
- With both LED indication and Buzzer warning
- Good compatibility with various brands of LED in the market
- Deep discharge protection
- Constant current charger
- High temperature NiMH/Nicd cells
- 5-Year product warranty

## Self-testing Feature

Carrying out routine test on emergency lighting and holding records of the test result is required by the law. (IEC62034, BS5266, EN50172). Hytronik advanced LED emergency control model HEM06-T has a internal clock, programmed to interrupt the permanent mains supply at pre-determined intervals to perform the requested routine testing: 3min. functional test every month, and 1h (3W) & 20min (6W) function test every 6 months, and 3h (3W) & 1h (6W) function test every 12 months.

- Self-test starts after the luminaire are connected to mains for continued 48 hours.
- Auto-commissioning, save manpower and maintenance.
- Permanently monitors battery and charge condition
- Dual failure indication: failures are clearly identified on the luminaire by red LED and buzzer.
- MCU programmed test schedule:  
HEM06-T: 3min @ every month; 1h (3W) & 20min (6W) @ 6 months; 3h (3W) & 1h (6W) @ 12months.  
HEM07-T: Emergency time 3h: 3min @ every month; 1h (3W) @ 6 months; 3h (3W) @ 12months. (ex-work default value)  
Emergency time 1h: 3min @ every month; 20min (3W) @ 6 months; 1h (3W) @ 12months.
- Automatic delayed test in case of power failure at programed testing period.

Status	Buzzer beep & LED flash mode	Visual indication	Buzzer
Battery failure	Red LED slowly flashes once in 3 seconds; buzzer beeps 10 seconds every hour.		
LED lamp failure	Red LED rapidly flashes twice in 3 seconds buzzer beeps 10 seconds every hour.		
Emergency LED driver failure	Red LED rapidly flashes 3 times in 3 seconds buzzer beeps 10 seconds every hour.		
Healthy condition	Green LED is constantly on		
Battery charge	Green LED slowly flashes once every second		
Battery discharge	/	/	
Monthly test	Green LED slowly flashes once in 3 seconds		
6 month test	Green LED flashes twice in 3 seconds		
12 month test	Green LED quickly flashes 3 times in 3 seconds		

## Reset Function

There is a RESET button on HEM06-T / HEM07-T which are designed to randomly initiate the self-testing program after commissioning. It can also remove "failure indication" after replacing the failed component. Three ways to achieve:







- \* Short push (<2s): goes to monthly test mode and can clear all failure indications, except the one caused by low battery.
- \* Long push (<5s): buzzer beeps twice and battery starts charging for 48h, then goes to 12-month test mode. All indications are cleared after test.
- \* Long push (>10s): buzzer beeps three times, then goes to 12-month test mode. All indications are cleared after test.

## HEM07-T Battery options

Package code	Picture	Spec.	Size(mm)	Duration	Accessories
BPC10		3 cells, D type, D4000, high temperature Nicd battery, 3.6V, 4.0AH	215x37x37.5	3hrs@3W	battery bracket, LED indicator, Buzzer
BPC11		3 cells, D type, D4000, high temperature Nicd battery, 3.6V, 4.0AH	100x65x36	3hrs@3W	battery bracket, LED indicator, Buzzer
BPC15		3 cells, 18720 type, 18720-4000, high temperature NiMH battery, 3.6V, 4.0AH	240x23x22.5	3hrs@3W	battery bracket, LED indicator, Buzzer
BPC16		3 cells, 18720 type, 18720-4000, high temperature NiMH battery, 3.6V, 4.0AH	58x74x21	3hrs@3W	battery bracket, LED indicator, Buzzer

- Note: \* high temp. battery pack. 75 degree for NiCd, and 55 degree for NiMH.  
 \* Charge new battery 24h before use.  
 \* In compliance with IEC61951-1 (Nicc type), IEC61951-2 ( NiMH type).

## HEM06-T Battery options

Package code	Picture	Spec.	Size(mm)	Duration	Accessories
BPC05		6 cells, SC type, high temperature NiMH battery, 7.2V, 2.5AH	168x50x28	3hrs@3W	battery bracket, LED indicator, Buzzer
BPC08		6 cells, C type, high temperature NiMH battery, 7.2V, 4.0AH	100x77x28	3hrs@6W	battery bracket, LED indicator, Buzzer
BPC14		6 cells, SC type, SC1800, high temperature Nicd battery, 7.2V, 1.8AH	165x46x27	3hrs@3W	battery bracket, LED indicator, Buzzer
BPC19		6 cells, AA type, TH-AA1800T, high temperature NiMH battery, 7.2V, 1.8AH	190x33x19	3hrs@3W	battery bracket, LED indicator, Buzzer
BPC20		6 cells, D type, D4000, high temperature Nicd battery, 7.2V, 4.0Ah	230x72.5x39.5	3hrs@6W	battery bracket, LED indicator, Buzzer
BPC21		6 cells, 18720 type, 18720-4000, high temperature NiMH battery, 7.2V, 4.0Ah	240x42x23	3hrs@6W	battery bracket, LED indicator, Buzzer

Note: \* Charge new battery 24h before use.

\* High temp. battery pack. 75 degree for Nicd, and 55 degree for NiMH.

\* In compliance with IEC61951-1 (Nicd type), IEC61951-2 ( NiMH type).

### Ballast Lumen Factor %:

HEM06-T @3W	Luminaire Power	5W	7W	10W	12W	15W	20W	25W	30W	35W	40W	45W	50W
			60%	43%	30%	25%	20%	15%	12%	10%	9%	8%	7%

@6W	Luminaire Power	7W	10W	12W	15W	20W	25W	30W	35W	40W	45W	50W	60W
			85%	60%	50%	40%	30%	24%	20%	18%	16%	14%	12%

HEM07-T @3W	Luminaire Power	5W	7W	10W	12W	15W	20W	25W	30W	35W	40W	45W	50W
			60%	43%	30%	25%	20%	15%	12%	10%	9%	8%	7%

The driver is supplied as standard in conversion kit form, with the following parts:

- 500mm Green & Red charge healthy LED indicator and mounting collar.
- AMP Irreversible battery connector.
- External 5V Buzzer indicator for failure report.

## Specification



Model No.	HEM06-T	HEM07-T
Mains voltage	220~240VAC 50/60Hz	220~240VAC 50/60Hz
Mains current	13mA - 16mA	27mA - 17mA
Mains power	3.5W	4.5W
Output voltage(U-out Max.)	75VDC	65VDC
Power factor	0.75	0.75
Operation temperature	0~+50°C	0~+50°C
Battery charge voltage	6V~8.5V	3V~5.3V
Battery charge current	200mA (Max.)	200mA (Max.)
Battery pack	BPC05, BPC08, BPC14, BPC19, BPC20, BPC21	BPC10, BPC11, BPC15, BPC16
Mains Switch-over voltage range	150VAC~180VAC	150VAC~180VAC
Output LED current	3W- 260mA~40mA (12~70VDC); 6W- 350mA~80mA (12~70VDC)	40mA (55VDC)~230mA (12VDC)
Battery duration	1 hour @ 6W/3 hours @3W	3 hours @3W / 1 hour @3W
Charge period	24 hours	
Max. case temp.	75°C	
Over-heat protection	Over-heat protection with auto-reset.	
EMC standard	EN55015 , EN61547	
Safety standard	EN50172, EN61347-2-7, EN61347-2-13 , IEC62034 , BS5266	
Certification	Semko,CB, CE , EMC	
Dielectric strength	Input→output: 3750VAC	
IP grade	IP20	

## Cautions In Emergency Battery Usage:

### Storage Conditions

- Temperature range for storage (Humidity: Max. 85%)  
0 ~ +35°C, one year storage  
(Storage time will be shortened if out of this temp. range)
- Storage duration before use: Less than 6 months from batteries received to start with charging.

Note 1: For Ni-Cd battery, we recommend batteries are charged and discharged at least once every 6 months.

Note 2: For Ni-MH battery, we recommend batteries are charged and discharged at least once every 3 months.

Note 3: Never over discharge the battery.

### Warning

- Avoid direct soldering onto cells.
- Use only within the specified working temperature range.
- Do not subject batteries to mechanical shock.

### Danger

- Avoid throwing cells into a fire or attempting to disassemble them. As the electrolyte inside is strong alkaline and can damage skin and clothes.
- Avoid short circuiting. It may be leakage.