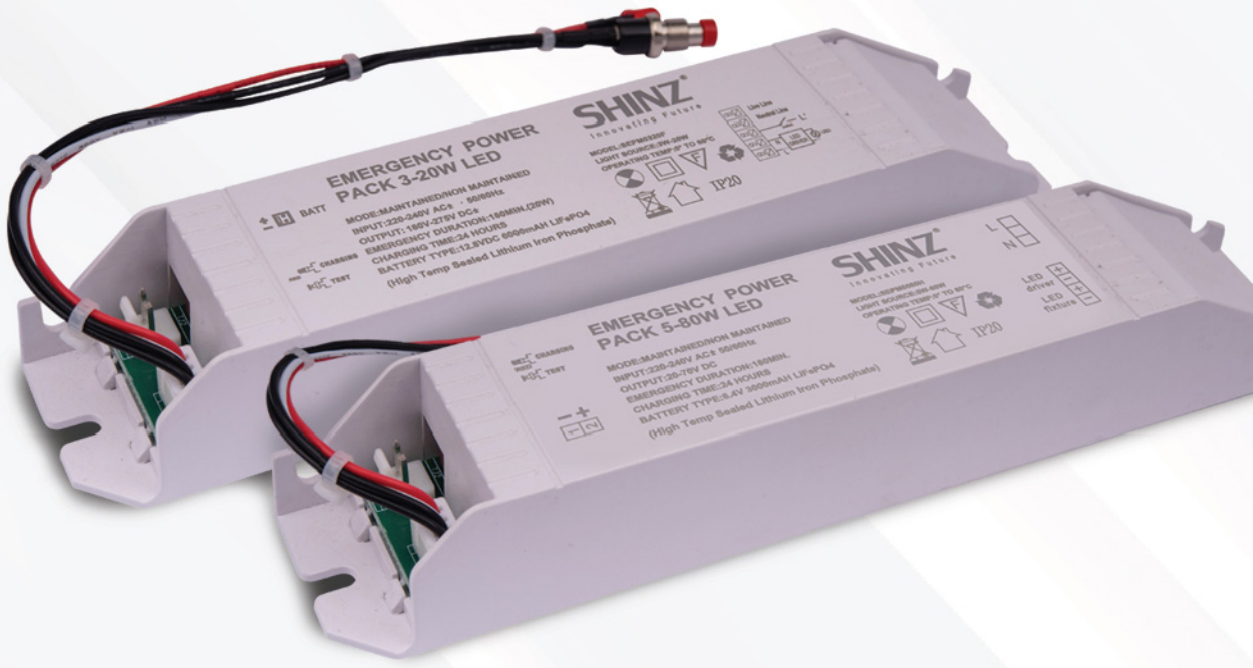
SHINZ®

Innovating Future

EMERGENCY POWERPACK MODULES

SEPM SERIES 0320F & 0580H



Reference Standard / Method of Test
IEC 61347-2-7:2011 / IEC 61347-1:2010

SEPM SERIES

EMERGENCY POWERPACK MODULE

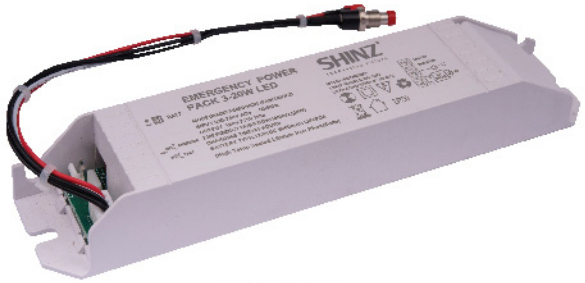
LED emergency converter kit or LED emergency power pack (LED emergency driver) is **an inverter along with a** rechargeable **battery** that is used to convert normal LED lighting fixtures to emergency safety lighting which mostly applying on high-risk areas.

The SHINZ " SEPM SERIES " Emergency Powerpack Modules (LED emergency driver) are designed to convert a wide range of LED types which compatible to internal Led driver (non-insulated) or external Led driver. It is dedicated designed to operate either full or reduced light output in an emergency of power outage.

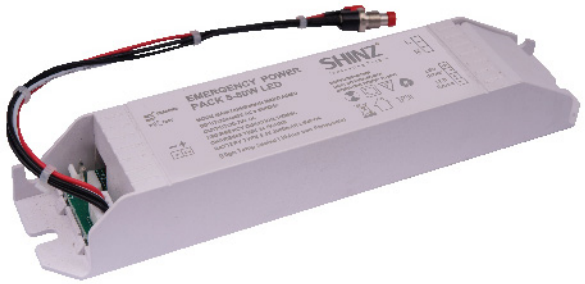
F *(Full)* Suitable for LEDs luminaires which are compatible to Internal LED Driver (non-insulated) / Integrated driver type.

H *(Hyper)* Suitable for LEDs which are equipped with Separate / External driver type.

Note : Please refer to Technical Characteristic



SEPM 0320F



SEPM 0580H

Main Luminaire Conversion

An emergency powerpack modules are available to convert main luminaires for emergency use. The conversion kits comprises of an emergency module and for **self contained** conversions a rechargeable batteries. In instances where the main luminaires contain more than one lamp, it is usual to convert just one of the lamp for emergency use.

Sustained or Combined Emergency Luminaire

Luminaire containing two or more lamps, at least one of which is energized from the emergency lighting supply and the others from the normal lighting supply. A combined emergency luminaire is either maintained or non-maintained.

Mode of Operation	Mains Mode	Emergency Mode
Non-maintained (NM)	Lamp is off	Lamp is on
Maintained (M)	Lamp is on	Lamp is on
Sustained / Combined (C) or (S)	Mains lamp is on	Emergency lamp is on

SPECIFICATIONS

- An emergency powerpack modules comes with rechargeble batteries that comply to **IEC 61347-2-7:2011** compatible to convert main luminaires for emergency use.

IEC 61347-2-7:2011, Lamp controlgear - Part 2-7: Particular requirements for battery supplied electronic controlgear for emergency lighting (self-contained)
IEC 61347-2-7:2011/AMD1 : 2017
IEC 61347-2-7:2011/AMD : 2021

- The High temperature sealed lithium Iron Phosphate batteries (LiFePo4) shall comply to IEC 62133-2:2017 (safety standard) & IEC 62620:2014 (Performance standard)

IEC 62133-2:2017, Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary lithium cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems

IEC 62620:2014, Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary lithium cells and batteries for use in industrial applications

High-risk task-area lighting

The part of emergency lighting provided to ensure the safety of people involved in a potentially dangerous process or situation to enable proper shut-down procedures for the safety of the operator and occupants of the premises.

High-Risk Task Area usually are hazardous area or workplaces involving risk assessment will identify any hazardous work processes and locations needing special consideration. Proper shut-down procedures are needed for the safety of operations and all the other occupants of the premises. For example in places such as plant or production lines where machines are running , in laboratories handling hazardous , control rooms that manage dangerous processes.

For EN1838:2013 details that the maintained illuminance on the reference plane shall not be less than 10% of the required maintained illuminance for that task and never less than 15 lux. This may require emergency luminaire to be operated in **maintained mode.**

How safely tasks can be stopped by those within a building impacted by a reduction in illuminance is a key influence in emergency lighting system design. We've broken this down into three risk categories:

LOW RISK

Tasks can be safely stopped under reduction of illuminance to very low levels (typically 0.5Lux from 300-500 depending on the task). Illumination type typically needed: escape, anti-panic

- Offices
- Circulation
- Commercial spaces
- Retail
- Services sector

HIGH RISK

Tasks can be safely stopped at practically any time by interacting with a control panel. Illumination is typically required on both the control panel and task to safely stop and evacuate.
Illumination type typically needed: high risk

- Treatment Room
- Refuges
- Plant Rooms
- Reception
- Cafe/Kitchens (Turns gas/electrical appliances off, put down hot food)
- Swimming Pool
- Light industrial work (Safely finish with a power tool and store safely)
- First aid / eyewash stations
- Theme park

HIGH RISK(+)

Tasks cannot be immediately stopped or take a long time to do so. Full illumination over a whole area may be necessary.
Illumination type typically needed: standby (which allows a process to continue at full efficiency).

- Foundry
- Operating theatres / spaces
- Airport control towers

Battery - Lithium Iron Phosphate (LFP, LiFO , LiFePO4) & PCM

The Lithium Iron Phosphate (LiFePO4) battery, also called LFP battery (with "LFP" standing for "Lithium FerroPhosphate"), is a type of rechargeable battery, specifically a lithium-ion battery.

The LFP battery require much less space than Ni-Cd and NiMh cells of equal capacity that allows for compact design. LFP also don't suffer from the so-called memory effect associated with Ni-Cd and NiMh cells. Lastly LFP battery has more environment friendly than Ni-Cd and NiMh battery.

Since its development advances, LFP is found in many applications which includes electric vehicles, Uninterruptable Power Supply (UPS), Solar based energy storage solutions and various portable electronics.

A Pulse Code Modulation (PCM) to protect the supply voltage against reverse polarity.

Remark:
Because the lighting has itself power consumption, please store the battery individually and do not connect the battery with the lighting before using.

Advantage of using Lithium Iron Phosphate batteries

Battery Type	NiCd	NiMH	LiFePO4
Voltage	1.2V	1.2V	3.2V
Volume Energy Density	150Wh/L	260Wh/L	**290WH/L**
Weight Energy Density	60Wh/kg	80Wh/kg	**130Wh/kg**
Safety	Good	Good	Good
Pollution or Green	Pollution	**Green**	**Green**
High Temp. Performance	Good	Acceptable	Good
Life Time (55°C)	4 Years	-	**> 6 Years**

** All informations are subject to change without prior notice*

TECHNICAL CHARACTERISTIC

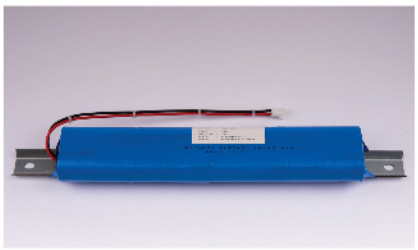
Model		SEPM 0320F	SEPM 0580H
Compatible To Led Driver type	:	Internal LED Driver (Non Insulated)	External LED Driver
Mode of Operation	:	Maintained / Non-maintained	Maintained / Non-maintained
Input Supply Voltage	:	220 - 240VA , 50Hz	220 - 240VA , 50Hz
Output Supply Voltage	:	DC 180V - 275V	DC 20V - 70V
Frequency	:	50/60 Hz	50/60 Hz
Power Rating tested	:	3W & 20W LED LAMPS	5W & 2 X 40W LED LAMPS
Power Rating	:	3W - 20W - Max. 40W	5W - Max. 80W
Module Contructions	:	Flame Retardant Polycarbonate	Flame Retardant Polycarbonate
Module Size (L x W x H) mm	:	195 mm x 40 mm x 28 mm	195 mm x 40 mm x 28 mm
Ingress Preotection	:	IP20	IP20
Charge Indications	:	Red LED	Red LED
Test Facility	:	Push - To - Test Switch	Push - To - Test Switch
Ambient Temperature	:	25°C ± 5%	25°C ± 5%
Operating Temperature	:	0° TO 65°C	0° TO 65°C
Teminals - Push Wire	:	0.2 mm^2 - 0.75 mm^2	0.2 mm^2 - 0.75 mm^2
Battery Type	:	12.8VDC 6000mAH *(LiFePO4)*	6.4VDC 3000mAH *(LiFePO4)*
Battery Protection	:	PCM	PCM
Charging Time	:	24 hours	24 hours
Backup Time	:	20W - minimum 180 minutes	5W - minimum 180 minutes
Battery Temperature	:	55°C	55°C
Battery Dimensions (L x Ø)	:	292 mm x 35 mm	135 mm x 26 mm
Module Weight	:	0.153 Kg	0.125 Kg
Battery Weight	:	0.652 Kg / 0.790 Kg	0.197 Kg
Mounting Type	:	Surfaced	Surfaced
Warranty	:	1 Year	1 Year
Installation Wiring Guide	:	Refer to Fig. A	Refer to Fig. A1
Operation Manual	:	Refer to QR code (Fig. B)	Refer to QR code (Fig. B)
Reference Standard	:	IEC 61347-2-7:2011	IEC 61347-2-7:2011

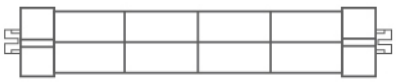
Batteries Size, Weight & Dimensions

Figure C

- **6.4V 3000mAh**
- Using 3000mAh/cell
- Total 2 Cells

Weight 0.197 Kg
Length 135 mm x 26 mm





- **12.8V 6000mAH**
- Using 3000mAh/cell
- Total 8 Cells

Weight 0.790 Kg
Length 265 mm x (26x2) mm

- **12.8V 6000mAh**
- Using 6000mAh/cell
- Total 4 Cells

Weight 0.652 Kg
Length 292 mm x 35 mm

Installation Wiring Guide

Figure A

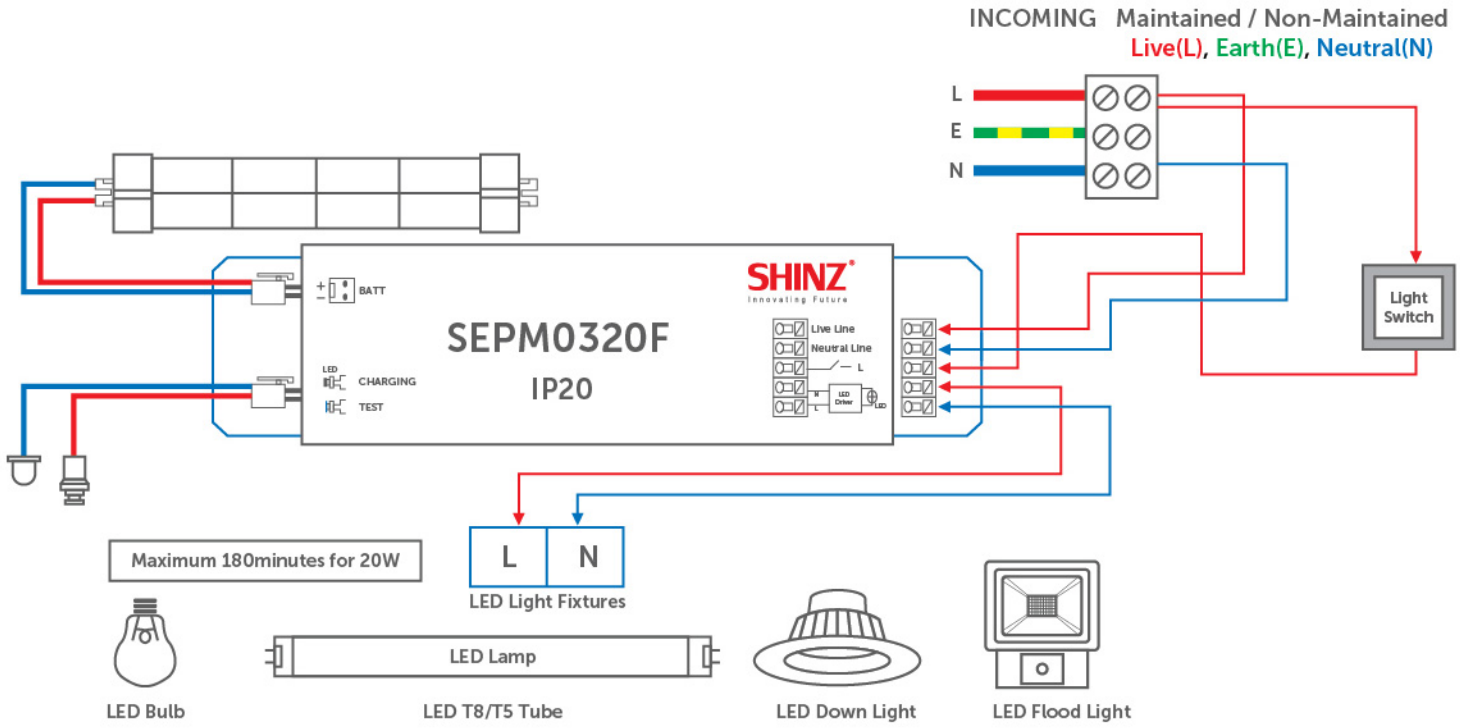
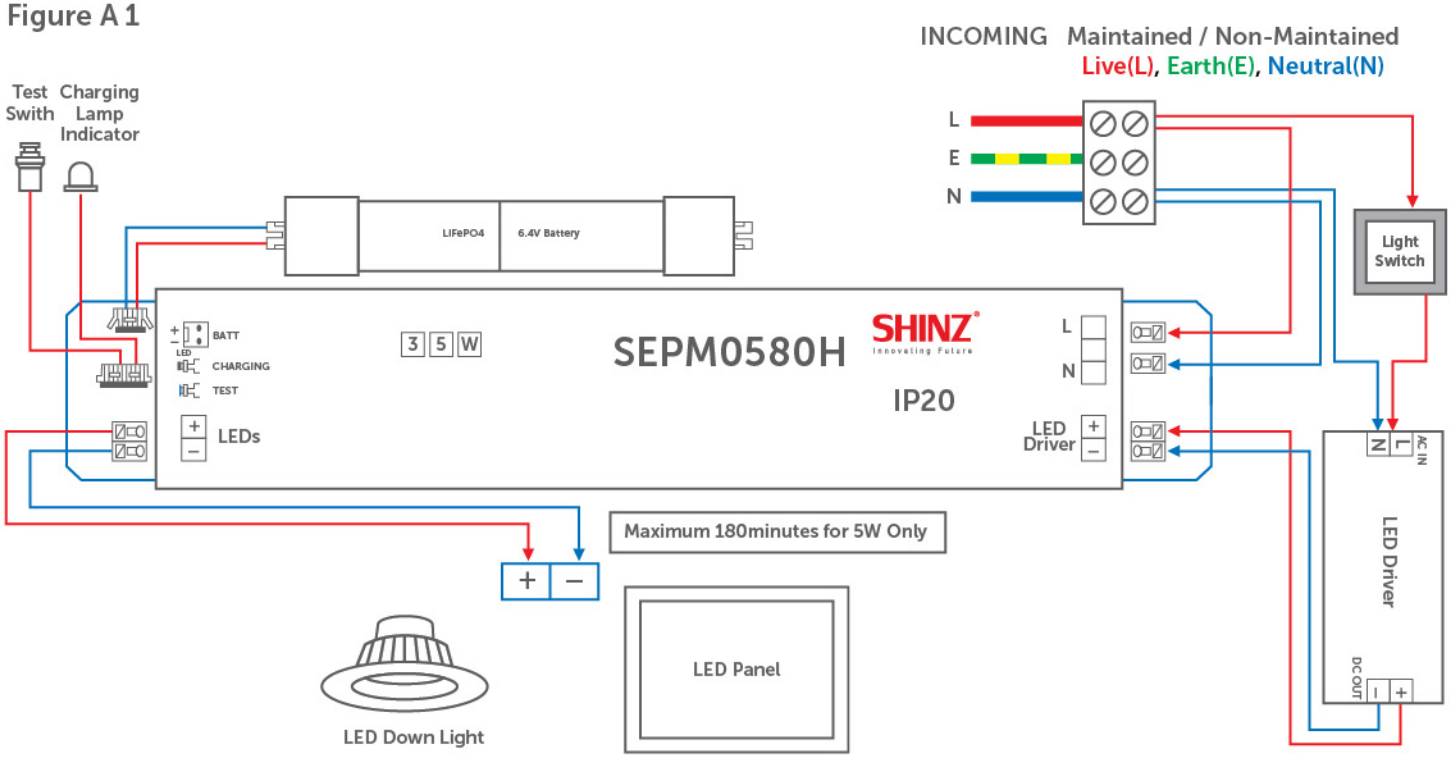


Figure A 1



Important

- It is recommended that the module is installed by a competent person ensuring the installation complies with the necessary standards. Shinz accept no responsibility for injury, damage or loss, which may arise as a result of incorrect installation, operation or maintenance.
- The conversion requires an unswitched supply for charging the battery and a switched supply if the unit is being used for maintained operation.

SHINZ®

Innovating Future

Shinz Global Sdn Bhd (1085402-M)

No. 5, Jalan BPU 8, Bandar Puchong Utama,
47100 Puchong, Selangor Darul Ehsan, Malaysia.

Tel : +6 03 5879 0388
Fax : +6 03 5879 0688
Email : shinzglobalchannel@gmail.com
ewest.acc@gmail.com

www.shinzglobal.com Shinz Global S/B