

The battery consists of lithium, organic, solvent, and other combustible materials. Proper handling of the battery is of utmost importance; otherwise, the battery could lead to distortion, leakage (accidental seepage of liquid), overheating, explosion, or fire and cause bodily injury or damage to equipment. Please strictly comply with the following instructions to avoid the occurrence of accident.

WARNING for Handling

- **Do Not Ingest**

The battery should be properly stored and kept away from children in order to avoid them to put it into their mouths and ingest it. However, if it happens, you should immediately take them to the hospital.

- **Do Not Recharge**

The battery is not a rechargeable battery. You should never charge it as it could generate gas and internal short-circuiting, leading to distortion, leakage, overheating, explosion, or fire.

- **Do Not Make Hot**

If the battery is being heated to more than 100 degree centigrade, it would increase the internal pressure resulting distortion, leakage, overheating, explosion, or fire.

- **Do Not Burn**

If the battery is burnt or put to flame, the lithium metal will melt and cause explosion or fire.

- **Do Not Dismantle**

The battery should not be dismantled as it will cause damage to separator or gasket resulting distortion, leakage, overheating, explosion, or fire

- **Do Not Make Improper Setting**

The improper setting of the battery could lead to short-circuiting, charging or forced-discharging and distortion, leakage, overheating, explosion, or fire could be occasioned as a result. When setting, the positive and negative terminals should not be reversed.

- **Do Not Short-circuit The Battery**

The short-circuit should be avoided for positive and negative terminals. Do you carry or keep battery with metal goods; otherwise, battery could occasion distortion, leakage, overheating, explosion, or fire.

- **Do Not Directly Weld The Terminal or Wire to The Body of The Battery**

The welding will cause heat and occasion lithium melted or insulating material damaged in the

battery. As a result, the distorting, leakage, overheating, explosion, or fire would be caused. The battery should not be soldered directly to equipment which it must be done only on tabs or leads. The temperature of soldering iron must not be over 50 degree C and the soldering time must not be more than 5 seconds; it is important to keep the temperature low and the time short. The soldering bath should not be used as the board with battery could stop on the bath or the battery could drop into the bath. It should avoid taking excessive solder because it could go to unintended portion on the board resulting short or charge of the battery.

- **Do Not Use Different Batteries Together**

It must be avoided for using different batteries collectively because batteries of different types or used and new or different manufacturers could occasion distortion, leakage, overheating, explosion, or fire. Please obtain advice from KOOMAX. if it is necessary for using two or more batteries connected in series or in parallel.

- **Do Not Touch The Liquid Leaked Out of Battery**

In case the liquid leaked and get into the mouth, you should immediately rinse your mouth. In case the liquid gets into your eyes, you should immediately flush eyes with water. In any event, you should go to the hospital and have proper treatment from a medical practitioner.

- **Do Not Bring Fire Close to Battery Liquid**

If the leakage or strange smell is found, immediately put the battery away from fire as the leaked liquid is combustible.

- **Do Not Keep in Touch with Battery**

Try to avoid keeping the battery in touch with the skin as it will get hurt.

- **Do Not Pile Up or Mix Battery**

The battery may be regulated by national or local regulation. please follow the instructions of proper regulation.as electric capacity is left in a discarded battery and it comes into contact with other metals, it could lead to distortion, leakage, overheating, or explosion, so make sure to cover the (+) and (-) terminals with friction tape or some other insulator before disposal.



WARNING for Disposal

There are different regulations in different countries or regions and please comply with those regulations. In general, the insulating tape or friction tape should be used to cover the (+) and (-) terminals before disposal. It is because the discarded battery still has electric capacity and when it is in touch with other metals or materials, it could occasion distortion, leakage, overheating, or explosion.

WARNING for Circuit Design for Back-up Use

The battery is not rechargeable. It is important that the diodes are applied for prevention of charging from the main power or other batteries when the battery is used for the device having memory or RTC back-up applications. In addition, the application of protective resistance is necessary as it can regulate the current as shown in the figure below. The following points have to be paid attention when choosing diodes and protective resistance.

- **Supplied voltage to load**

Due to the application of a diode and a resistance, the voltage generated will drop during operation, you are reminded to pay attention to these drops of voltage for supplied voltage to load.

- **Prevent charging by applying diodes**

It is recommended to use the least leak current diodes. The charged capacity owing to leak current should be maintained within 1% of nominal capacity.

- **Using and setting protective resistance**

In order to refrain from changing the battery by large surges of current when the diode is failed, the protective resistance should be applied. It is recommended to adjust the protective resistance to make the maximum current not over the figures as stated in the table.

CAUTION (Handling / Storage)

- **Do Not place the battery in ultrasonic**

The short-circuit may be caused if the battery is placed in ultrasonic as the materials inside may be powdered occasioning distortion, leakage, overheating, explosion, or fire.

- **Do Not roughly handle the battery**

Distortion, leakage, overheating, explosion, or fire might be caused if the battery is received heavy impact or strong shock.

- **Do Not short-circuit the battery while putting into equipment**

It is advised to put the battery to the equipment in a prudent way. It is because the short-circuit may occurs to the battery through metal parts of the equipment.

- **Do Not maintain contact pressure less than 2N**

Due to the poor contact condition, the intended value may be higher than the battery voltage. For appropriate contact resistance, the contact pressure must be maintained not less than 2N.

- **Do Not wrongly match the battery and equipment**

Please use the proper battery conforming to the handling manual of the equipment. It is because the specifications or types of equipments are different and the battery may not fit all kinds of equipments.

- **Do Not put the battery in hot place such as under the sun or in the car in the daytime**

If the battery is put in hot place, it may cause distortion, leakage, overheating, explosion, or fire of the battery.

- **Do Not allow the battery touch water**

If the battery touches water may occasion distortion, leakage, overheating, explosion, or fire. It may also generate rust.

- **Do Not stock the battery in the condition of high humidity and heat**

In the high humid and hot condition, the battery may deteriorate. It may cause the battery distorted, leaked, overheated, or exploded.