

注意事项 ⚠

Things To Note

一、使用

1. 锂离子电容器的使用温度不宜超过额定温度上限或下限。
2. 锂离子电容器应在标称电压下使用。同时，为延长产品使用寿命，推荐单体在额定电压（2.5V-4.0V）范围内使用。
3. 锂离子电容器在使用之前请确认极性，禁止反接（注意：锂离子电容器带电）。
4. 外界环境温度对锂离子电容器的寿命具有重要影响，请远离热源。
5. 锂离子电容器请勿直接接触水、油、酸或碱。
6. 请勿挤压、钉刺或拆解锂离子电容器。
7. 请勿随意丢弃锂离子电容，废弃时请根据国家环保标准进行处理。

二、存储

1. 锂离子电容器不可处理相对湿度为85%以上或含有有毒气体的场所，该种环境下引线及壳体易受潮及壳腐蚀，导致锂离子电容器短路。
2. 锂离子电容器若需长期储存，请在温度-10~55℃，相对湿度60%以下，通风良好的场所存放，严禁暴晒。

A. Use

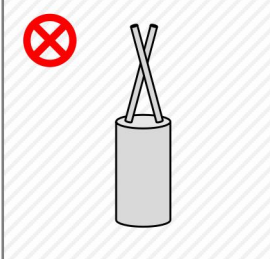
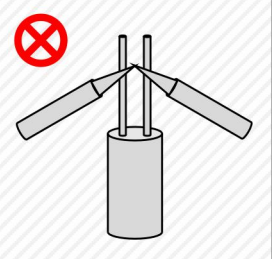
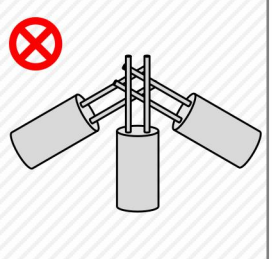
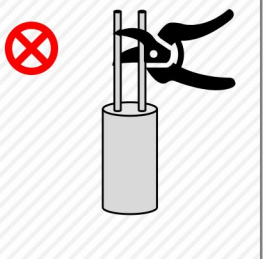
1. The operating temperature of lithium ion capacitors should not exceed the upper or lower limit of the rated temperature
2. Lithium ion capacitors should be used under nominal voltage. At the same time, in order to prolong the service life of the product, it is recommended that the monomer be used within the rated voltage (2.5V-4.0V).
3. Please confirm the polarity of lithium ion capacitors before use, and reverse connection is prohibited (Note: Lithium-ion capacitor is charged).
4. The external environment temperature has an important influence on the life of lithium ion capacitors, please keep away from heat sources.
5. Do not directly contact the lithium ion capacitors with water, oil, acid or soil.
6. Do not squeeze, nail or disassemble lithium ion capacitors.
7. Do not discard lithium-ion capacitors randomly. When discarding, please dispose of them in accordance with national environmental protection standards.

B. Storage

1. Lithium-ion capacitors cannot be handled in places where the relative humidity is above 85% or containing toxic gases. In this environment, the leads and shells are susceptible to moisture and shell corrosion, resulting in short-circuiting of the lithium-ion capacitors.
2. If the lithium ion capacitor needs to be stored for a long time, please store it at a temperature of -10~55℃, relative humidity below 60%, and a well-ventilated production facility. Exposure to the sun is strictly prohibited.

⊘ 请勿进行以下错误操作

Please do not perform the following wrong operations

短接 Short circuit	测量时短路 Short circuit during MEAS.	堆叠短路 Stacked short circuits	加工短路 Processing short circuit
			

为了确保安全，在使用LIB系列产品上的禁止事项****警告*●请不要在大电流、高电压的条件下进行充电。**

在大电流、高电压的条件下进行充电会使电容器内部的电解液沸腾，产生气体而引起内部压力的上升，有可能导致电容器的起火、发热、漏液以及破裂的危险。

●请不要放置在火中进行加热或进行分解。

由于发热而使绝缘物体等损伤，有可能导致电容器起火、发热、漏液以及破裂的危险。

●请不要直接焊接电容器主体。

因为受热会使绝缘物体等损伤，有可能导致电容器的起火、发热、漏液以及破裂的危险。

●请不要用金属线连接电容器的正极(+)和负极(-)，或者与项链或别针等金属产品一起进行搬运、保管。

会使电容器变为短路状态，促使放电电流过大，有可能导致电容器的起火、发热、漏液以及破裂的危险。

●请正确使用电容器的正极(+)和负极(-)。

会引起反向充电等异常反应，有可能导致电容器的起火、发热、漏液以及破裂的危险。

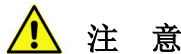
●请不要进行强制放电。

由于外部电源或其他的电容器而引起电容器的强制放电时，电压变为 0V 以下(电极转换)，在电容器内部产生气体而膨胀，并成为起火、破裂与燃烧的原因。

●电容器发生漏液或有异臭时，泄漏的电解液有可能导致起火，请马上避开有烟火的地方。

●在废弃以及保管电容器的情况下，请使用胶带等进行绝缘。

电容器混乱保管或与其他金属相混合，有可能使电容器发生短路而造成起火、发热和破裂，甚至导致受伤、引起火灾的危险。

**注意**

●电容器的液体进入眼睛时，有可能危及眼睛安全，请不要揉擦眼睛，马上用干净的水进行冲洗，并立即接受医生的治疗。

●请不要把新的电容器与已经使用过的旧的电容器或不同种类的电容器相互混合使用。

因为特性的不同，有可能导致电容器的发热、漏液以及破裂的危险。

●在2个或2个以上的电容器串联或者并联连接使用的情况下，请事先与本公司联系。

因为负载平衡有可能导致破裂的危险。

●请不要在日光直射很强的场所或炎热天气下的车内等高温的场所使用或放置电容器。

有可能导致电容器的发热、漏液以及破裂的危险。

●请不要强烈地冲击电容器，或投掷电容器。

有可能导致电容器的发热、漏液以及破裂的危险。

●请不要接触水等易湿物体。

有可能导致电容器发热的危险。

●请避免在日光直射、高温、高湿的地方放置保管。

有可能导致电容器发热的危险。

为了防止功能的降低**●注意防静电用垫子**

附有管脚的电容器或实际安装后的电路板若放置在防静电用垫子上，电容器会发生短路，有导致电压降低的危险。

●注意焊接

利用焊接剂进行焊接时，请注意焊接剂不能接触到电容器本体。另外，在电容器实际安装后焊接其他零部件时，也请注意焊接剂不能接触到电容器。

●注意安装工具

在实际安装到电路板时，所使用的电容器的安装工具请使用树脂等绝缘物体。使用导电性工具的情况下，由于工具而发生短路，会导致电容器电压的降低。短路后的电容器电压的完全恢复，需要一段时间。

●注意冲洗电路板时的清洗液以及干燥温度

因清洗液的种类、干燥温度的不同，有可能影响到电容器的功能。在使用清洗液之时，请向本公司咨询。

有关锂离子电容器、国际运输与废弃**●航空运输、海上运输、陆地运输**

关于锂电电容器的运输，遵照联合国的规范，按照国际航空运输协会(IATA)、国际民间航空组织(ICAO)、国际海事组织(IMO)和运输部(DOT)等相关联的机构所制定的，关于航空、船舶和陆地运输的规定。

本公司生产的锂电电容器(单节电容器)可满足下述的条件要求(因运输的方式、方法和所出口国的不同而异)，因此可按上述规定认定为不属于危险物品。

有关详情，请向本公司咨询。

注意标签：在捆包箱的外侧贴着使用锂电电容器注意事项的标签(LATA 危险物品规则书的图7.4.D)。

非危险物品申报表：必须提交已注明装载着锂电电容器，当包装物品受到损伤时的使用注意事项以及紧急联络电话号码的附属资料。

捆包的重量限制：2.5kg以下(使用航空运输时)。

包装、捆包：为了防止外部短路，将各个电容器分离并进行牢固的包装。

捆包落下测试：使用1.2m落下测试，并且必须达到测试标准。

●废弃

在全世界，人们对地球环境保护的关心日益提高，从欧美各国开始中国也对废弃、再循环利用制定了法令。从现状而言，因各国、各州、各地方自治区有所不同，有关废弃，有必要向所管辖的各管理当局进行咨询。有关废弃，有必要向所管辖的各管理当局进行咨询。

To ensure safety, prohibited matters when using LIB series products.****Warning*• Do not charge under high current or high voltage conditions.**

Charging under high current or high voltage conditions may cause the electrolyte inside the capacitor to boil, generating gas and increasing internal pressure, which could lead to risks such as fire, overheating, leakage, or rupture of the capacitor.

• Do not expose to fire for heating or disassembly.

Heat may damage insulating materials, potentially causing risks such as fire, overheating, leakage, or rupture of the capacitor.

• Do not solder directly onto the capacitor body.

Heat exposure may damage insulating materials, potentially leading to risks such as fire, overheating, leakage, or rupture of the capacitor.

• Do not connect the positive (+) and negative (-) terminals of the capacitor with metal wires, or transport or store it with metal items such as necklaces or pins.

This may short-circuit the capacitor, resulting in excessive discharge current and posing risks such as fire, overheating, leakage, or rupture of the capacitor.

• Please correctly use the positive (+) and negative (-) terminals of the capacitor.

Reverse charging or other abnormal reactions may occur, which could lead to risks such as fire, overheating, electrolyte leakage, or rupture of the capacitor.

• Do not force discharge the capacitor.

When forced discharge occurs due to an external power source or other capacitors, the voltage may drop below 0V (polarity reversal), generating gas inside the capacitor and causing expansion. This can result in fire, rupture, or combustion.

• If the capacitor leaks or emits an unusual odor, immediately move away from any open flames or sparks, as the leaked electrolyte may cause a fire.**• When disposing of or storing capacitors, ensure insulation using tape or other methods.**

Improper storage or mixing capacitors with other metals may cause a short circuit, leading to fire, overheating, rupture, or even personal injury and fire hazards.

**Note****• If liquid from the capacitor enters the eyes, it may endanger eye safety. Do not rub the eyes; immediately rinse with clean water and seek medical treatment without delay.****• Do not mix new capacitors with used or different types of capacitors.**

Due to differences in characteristics, this may lead to risks such as capacitor overheating, leakage, or rupture.

• When connecting two or more capacitors in series or parallel, please contact our company in advance.

Imbalanced load distribution may pose a risk of rupture.

• Do not use or place capacitors in high-temperature environments such as areas with strong direct sunlight or inside vehicles during hot weather.

This may lead to risks of capacitor overheating, leakage, or rupture.

• Do not subject capacitors to strong impacts or throw them.

This may lead to risks of capacitor overheating, leakage, or rupture.

• Do not expose capacitors to moisture-prone substances such as water.

This may lead to risks of capacitor overheating.

• Avoid storing capacitors in areas exposed to direct sunlight, high temperatures, or high humidity.

This may lead to risks of capacitor overheating.

To prevent degradation of functionality**• Caution regarding anti-static mats**

If capacitors with attached leads or circuit boards after actual installation are placed on anti-static mats, the capacitors may short-circuit, posing a risk of voltage drop.

• Caution regarding soldering

When soldering using solder, ensure that the solder does not come into contact with the capacitor body. Additionally, when soldering other components after the capacitor has been installed, take care to prevent solder from contacting the capacitor.

• Precautions for Installation Tools

When installing capacitors onto circuit boards, ensure that the installation tools used are made of insulating materials such as resin. If conductive tools are employed, short circuits caused by the tools may lead to a drop in capacitor voltage. Full recovery of the capacitor voltage after a short circuit requires a certain period of time.

• Precautions Regarding Cleaning Solutions and Drying Temperatures for Circuit Board Rinsing

The type of cleaning solution and drying temperature may affect capacitor functionality. Before using any cleaning solution, please consult our company for guidance.

Regarding lithium-ion capacitors, international transportation, and waste disposal**• Air Transport, Maritime Transport, Land Transport**

Regarding the transportation of lithium capacitors, in accordance with United Nations regulations, the relevant provisions for air, sea, and land transport established by the International Air Transport Association (IATA), the International Civil Aviation Organization (ICAO), the International Maritime Organization (IMO), and the Department of Transportation (DOT) must be followed.

The lithium capacitors (single-cell capacitors) produced by our company meet the following conditions (which may vary depending on the mode of transportation, method, and destination country) and can therefore be classified as non-hazardous goods under the aforementioned regulations. For further details, please consult our company.

Caution Label: A label outlining precautions for the use of lithium capacitors (Figure 7.4.D of the IATA Dangerous Goods Regulations) is affixed to the exterior of the packaging box.

Non-Hazardous Goods Declaration: A supplementary document must be submitted, indicating the presence of lithium capacitors, precautions for use in case of packaging damage, and an emergency contact phone number.

Weight limit for bundled packages: under 2.5kg (when using air transport).

Packaging and bundling: To prevent external short circuits, separate each capacitor and package them securely.

Bundled package drop test: Conduct a 1.2m drop test, and it must meet the test standards.

• Disposal

Globally, concerns about environmental protection are increasing, and starting from Europe and America, China has also enacted laws and regulations regarding disposal and recycling. Currently, as regulations vary by country, state, and local municipality, it is necessary to consult the relevant regulatory authorities regarding disposal. For disposal matters, it is necessary to consult the relevant regulatory authorities.