

# 使用注意

# Handling Precautions

## ■浪涌吸收器系列使用注意

使用浪涌吸收器系列时，根据使用条件(电源条件，周边环境条件，贴装条件等)，有可能发生以下异常，如火灾事故，触电事故，产品故障等，因此请核查下列事项之后使用。

但是关于未声明的事项，请咨询本公司。

### 1.严守事项

#### (1) 确认额定性能

每个产品有各自的浪涌破坏容量、浪涌寿命，和使用温度范围等规定，请在额定性能的规定下使用。若超过额定性能的规定使用时，会引起性能退化或玻璃管破坏，并可能会导致冒烟，起火。

#### (2) 避免意外行为所造成事故

该产品的毁坏时，玻璃有可能飞散，因此请把产品装入容器中。

### 2.注意事项

#### (1) 电流值/通电时间

在连续放电下使用时，功能可能会降低，因此测量直流放电开始电压时请多加注意。

#### (2) 关于续流的发生

AC或DC电源电路中使用本产品时，因电源的电压供应可能会发生续流。使用本产品时请与压敏电阻串联连接，以防止此类续流现象。

#### (3) 交流电压试验

实施本产品的交流电压试验时，请勿施加超出保证值得电压。此外，使用针表显示交流电压测试设备时，请用数字显示式万用表核实电压。

使用交流电压测试设备时，微小的输入电压的变动，输出电压可能有很大的变动。

输入电压有变动时，请安装稳压电源，控制电压变动。

此外，请勿在高温和潮湿的环境中测量。绝缘电阻降低等，由此标准值可能无法得到满足。

放电管和电线的模式接近时，交流电压会下降。因此放电管和电线的模式之间请保持1毫米以上的间距。

#### (4) 落下/冲击

玻璃管型产品，因落下/震动及冲击等玻璃碎裂时，可能无法保持其功能，特请谨慎处理。

#### (5) 成形

成形时使用本产品的导线时，特请注意玻璃管的碎裂。

#### (6) 保管

①请保管在正常温度和湿度(温度：40°C以内，湿度：70%RH以内)的环境中。

②交付产品后，请在6个月内使用。

③请勿保管在直接照射阳光的场所。

④请勿保管有发生毒气体(腐蚀性气体等)和灰尘多的场所。

⑤有急速的温度变化，导线有可能因冷凝而腐蚀，请保管在温度变化少的场所。

#### (7) 导线

因本产品是导线式端子零件，故在运输过程中振动等会使导线有所弯曲，请给予谅解。

### 3.免责声明

#### (1) 本规范中所述的产品用途为一般消费者产品使用为前提而设备。

(2) 安装在医疗设备，航空设备，核电设备等，发生故障时有可能对人体造成影响，或对社会造成巨大损失的设备时，与一般消费者设备不同需要高可靠性。考虑以上用途时，请事先与本公司联系。

## ■Caution in Surge Absorber series usage

In case that a surge absorber series is used, if an abnormality takes place because of peripheral conditions of the surge absorber (power source conditions, environment, mounted conditions, etc.), fire, electric shock, product failure may be occur, so confirm the next matter sufficiently, and please use. For more questions, contact us.

### 1. Precautions to be strictly observed

#### (1) Confirmation of performance ratings

Use the surge absorber within its rated range of performance such as surge current capacity, surge life and operating temperature range. If used outside the range, surge absorber can be degrade and have glass fracture, which may result in smoking and ignition.

#### (2) Avoiding accidents due to unexpected phenomena

In the event of fracture of surge absorber, its pieces may scatter; hence, put the case or cover of the set product in place.

### 2. Application notes

#### (1) Current value • Test current time

There is a case where an electric characteristic deteriorates in continuous-discharge, in case of measuring DC spark-over voltage.

#### (2) Concerning Hold-Over

Hold-over may occur by power supply, in case this product is used in AC or DC power supply circuit. We recommend using a varistor, electrically connected in series.

#### (3) AC withstand voltage test

Do not apply the voltage over a guaranteed value, in case of the AC withstand voltage test. Please be sure the voltage with voltmeters, such as digital multi-meter, in case to perform a voltage setup of AC withstand voltage tester with analog display. By change of slight input voltage, output voltage may change a lot. So if there were changes of input voltage, installation of stabilization power supply is recommended to suppress voltage change.

For AC electric strength to fall, when the wiring pattern approaches with Absorber, please leave more than 1 mm of space of Absorber and the wiring pattern and use.

#### (4) Fall and a shock

Glass may be cracked by fall, vibration, a shock, etc. Since it may become impossible to maintain the characteristics when glass has crack, please be careful of handling enough.

#### (5) Forming

Please be careful enough not to cause a crack of glass and a chip, in case of lead forming.

#### (6) Storage

①Please store at a temperature up to 40°C and at humidity below 70%RH.

②This products should be used within 6 months after delivery.

③Avoid direct sunlight.

④Avoid the place where poisonous gas and dusty condition.

⑤Avoid rapid temperature change in the storage area, otherwise dew condensation may occur and a lead wire may corrode.

#### (7) Lead wire

This product has lead wire. A lead may slightly bend by vibration in transport condition.

### 3. Notice

#### (1) Parts shown in the specification are meant for general commercial products.

(2) Electronic components used in equipment that can have a series effect on human life or society, such as medical equipment, equipment for use in space, nuclear related equipment, etc. requires higher reliability parts than those found in general commercial electronics. For these types of applications not mentioned in the specification, please contact our charge sections.