

Usage and Handling Precautions

The operating conditions and environment affect stability and reliability, please observe the following points concerning the use of CdS cells.

USAGE PRECAUTIONS

- Even within the maximum ratings, try to stay in the low region for power dissipation, applied voltage, and ambient temperature. Since this allowable power dissipation applies to total illumination of the sensitive surface, when only part of the sensitive surface is used, the allowable power consumption should be reduced in proportion to the surface that is being used.
- Use at high temperature and humidity shortens the cell life and should be avoided.
- Avoid usage that exposes the CdS cell to strong ultraviolet light.
- For low-light detection (1 lux or less for general CdS cells), characteristics are less stable.
- If the CdS cell is subject to strong vibration or shock, reinforce the cell itself and its leads.

HANDLING PRECAUTIONS

- Since the window is made of glass and plastic coating, avoid touching it, pressing it, and causing friction with hard or hot objects. This can cause deterioration of the optical and electrical characteristics of the plastic-coated CdS cells. There is no problem with normal handling by hand.
- Extreme bending or twisting of the lead at the root places stress on the lead root. Avoid this when forming the lead near the root, provide support for the lead root before bending the lead.
- Do not solder the leads with stress applied. Do not pull, twist, or compress the leads right after they have been soldered. Allow them to cool before changing the position or direction of the leads.
- When soldering, be careful about the soldering temperature and duration. CdS cells should be soldered at least 5mm down the lead from the cell package itself, with a solder iron no hotter than 260°C (for no longer than 5 seconds). Check the temperature of the tip of the soldering iron and use a soldering iron temperature controller if necessary.
- If these conditions cannot be observed, prevent the temperature rise from reaching the CdS cell (by using heatsink) or increase the distance of the soldering from the CdS cell itself.
- Avoid any chemicals that can corrode metal or cause deterioration of plastic. If there is a possibility of metal corrosion or deterioration of plastic, experiment ahead of time and carry out the operation in question only after confirming that it will not harm the CdS cell.
- When washing or cleaning with solvents, use a Freon solvent (Freon TF, Difron solvent S3-E, or a similar agent) or alcohol solvent (isopropyl alcohol, ethyl alcohol, or a similar agent). Ultrasound wave cleaning with these solvents depends greatly on the usage conditions, but the cleaning time should be no longer than 30 minutes. Avoid chloro-hydrocarbon and ketone solvents. They can cloud and dissolve the plastic parts of the CdS cell.