

## Operation notes

Infrared photodiodes, phototransistors and photo IC's transmit light, and for this reason the plastic used for them differs from the black molding materials used for transistors and other IC's in that an almost pure epoxy resin is used. This resin is slightly weaker than the black molding materials in terms of heat tolerance, resistance to chemicals, and mechanical strength, and thus caution must be exercised when handling and mounting these devices.

### (1) Soldering

If the leads are under stress when soldering is performed on a printed circuit board, illumination failure may result immediately or later during use. For this reason, make sure that the intervals between the installation holes in the board are equal to the intervals between the leads (after forming if done) so that no stress remains. Ensure as well that the plastic body of the element is not subjected to stress during soldering as this may also cause illumination failure (this applies to emitters, detectors, interrupters, and reflectors).

Use a rosin-based flux. Highly acidic or alkaline fluxes may cause corrosion.

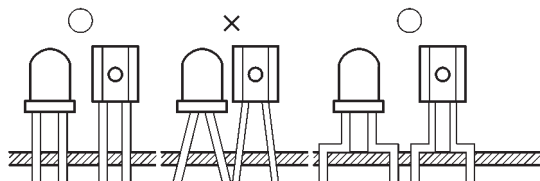


Fig.1 Mounting emitters and detectors on a printed circuit board

We recommend the following soldering conditions :

Item	Conditions	Soldering temperature	Work time
Soldering bath	Separated from resin body by 1.2 mm	260°C maximum	3 seconds maximum
Soldering iron	Separated from resin body by 1.2 mm Watts : 30 W maximum Soldering iron : $\phi$ 3 mm maximum	300°C maximum	3 seconds maximum

### (2) Lead forming

Form leads before soldering, and form them in such a way that stress is not applied to the inside of the plastic body. In addition, do not bend a lead repeatedly in the same place as it may break.

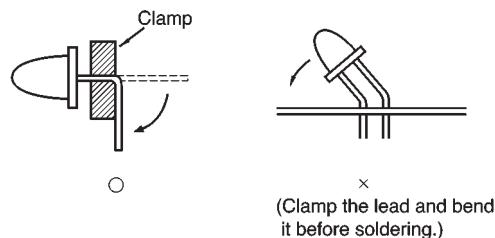


Fig.2 How to form leads

### (3) Cleaning

Depending on the solvent used the package may dissolve, and in general, cleaning is not to be performed. However, below is a list of solvents that can be used. Always be sure to confirm the solvent being used beforehand.

Solvents that can be used : Ethyl alcohol  
Methyl alcohol  
Isopropyl alcohol

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