# CdS Photoresistor
# Resin coating type (4R type)
## PART NO. LXD4537

### ■ Product Description

Photoresistor is a resistor which made of semi-conductor material,and the conductance changes with luminance variation . The photoresistor can be manufactured with different figures and illuminated area based on this characteristic.Photoresistor is widely used in many industries, such as toys,lamps,camera,etc.

### ■ Features

·Epoxy encapsulated
·Quick Response
·Small Size
·High Sensitivity
·Reliable Performance
·Good Characteristic of Spectrum

### ■ Applications

- Auto Flash For Cameras
- photoelectric Control
- Auto dimmer for digital display, CTR and room illumination
- Industrial control
- Electronic Toys

### ■ Absolute maximum ratings (Typ.Ta=25℃ Unless otherwise noted)

| Symbol | Parameter | Min | Max | Unit |
|---|---|---|---|---|
| Vpk | DC Voltage Applied | / | 150 | V |
| Pd | Power Dissipation at 25℃ | / | 50 | mW |
| To | Operating and storage temperature | -30 | +70 | ℃ |
| Ts | Soldering Temperature* | / | 260 | ℃ |

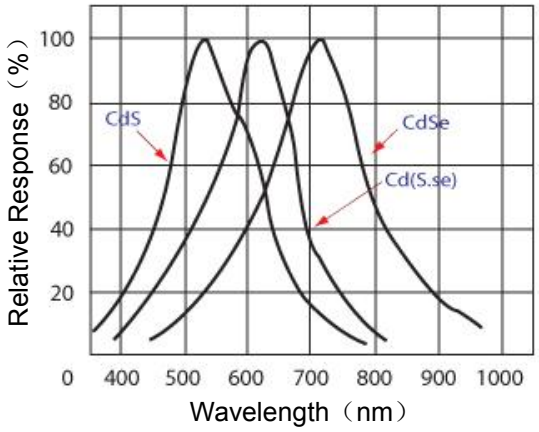
*0.118 inch from base for 3seconds with heat sink

### ■ Electro-Optical Characteristics(Typ.Ta=25℃，unless otherwise noted )

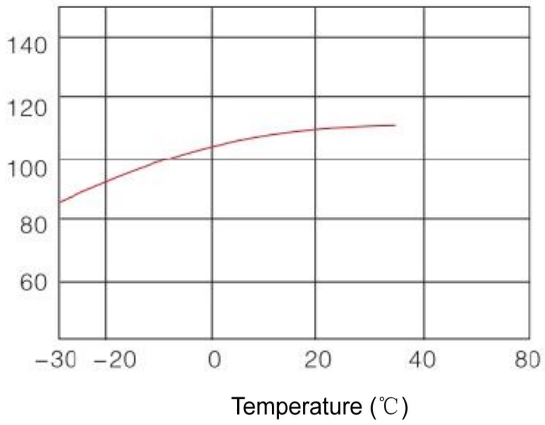
| Symbol | Characteristics | Text Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| RD | Dark Resistance | After 10 sec. Ev=0Lux @2856°K | *2* | / | / | MΩ |
| RL | Light Resistance | Ev=10Lux @2856°K | *18* | / | *50* | *KΩ* |
| S | Sensitivity | $\frac{LOG(R100)-LOG(R10)^{**}}{LOG(E100)-LOG(E10)^{***}}$ | / | *0.7* | / | *Ω/Lux* |
| λ Range | Spectral Application Range | Flooded | *400* | / | *700* | *nm* |
| λ Peak | Spectral Application Range | Flooded | / | *540* | / | *nm* |
| Tr | Rise Time | Ev=10Lux @2856°K | / | *30* | / | *mS* |
| Tf | Fall Time | After 10Lux @2856°K | / | *30* | / | *mS* |

** R100 , R10: photocell resistances at 100Lux and 10Lux at 2856°k respectively.
** E100 , E10: Iuminances at 100Lux and 10Lux at 2856°k respectively.

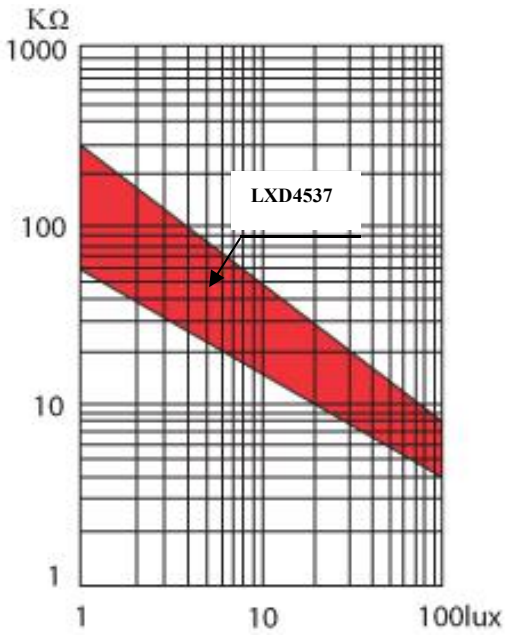
## ■ Spectral Response



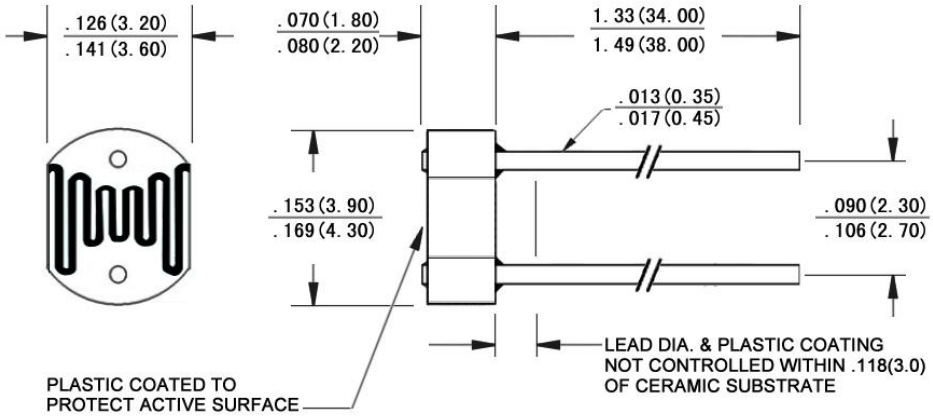

## ■ Temperature-Property




## ■Illuminance-Resistance Characteristics Curve



## ■ Package Dimensions inch [mm]




LXDCDS4537L

## ■ Precaution for use

1) Usage precautions

●Even within the absolute 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 photosensitive surface, when only part of the photosensitive surface is used , the allowable power consumption should be reduced in proportion to the surface that is being used.)

●Use at high temperature and high humidity shortens the cell life ,and should be avoided.

●Avoid usage that exposes the CdS Photoresistor to strong ultraviolet light.

●For low-light detection (1lux or less for general CdS Photoresistors),Characteristics are less stable.

●If the CdS Photoresistor is subject to strong vibration or shock , reinforce the cell itself and its leads.

2) Handling precautions

●Since the window is made of glass and plastic coating , avoid touching it , pressing it , and causing friction with it with hard objects and hot objects. In particular,this can cause deterioration of the optical and ele-tri cal characteristics of plastic-coated CdS Photoresistors. However , there is no problem with normal handling by hand.

●Since 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.

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● 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 befor changing the position or direction of the leads.

● When soldering , be careful about the soldering temperature and duration. In general,CdS Photoresistors should be soldered at least 5mm down the lead from the cell package itself,with a solder iron no hotter than 260℃， 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 form reaching the CdS Photoresistor (by using heatsink) or increase the distance of the soldering from the CdS Photoresistor 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 only after confirming that it will not harm the CdS Photoresistor.

● When washing or cleaning with solvents,use an 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 Photoresistor.



## Main Products

CdS Photoresistor

Ambient light sensor

Visible light sensor IC (Photo IC)

Si photodiode

## Sales Offices

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