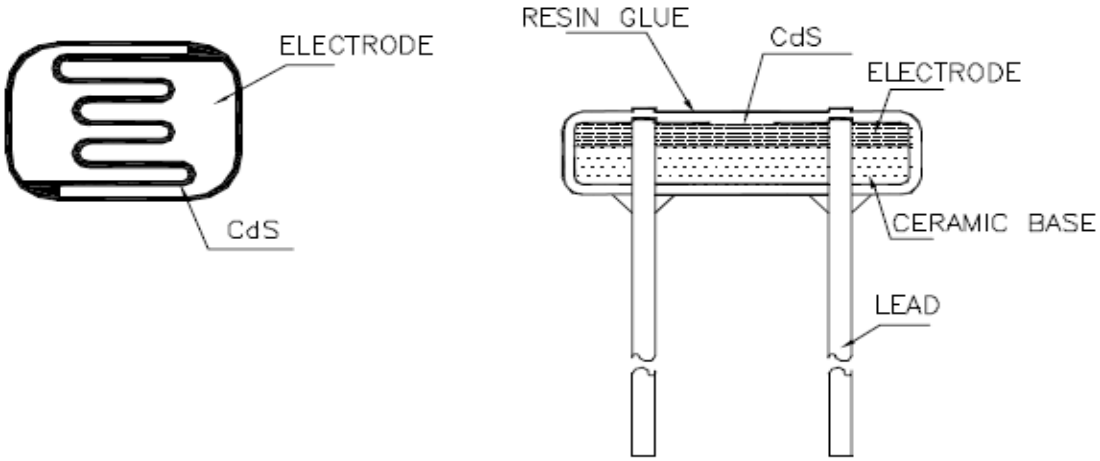
CdS PHOTORESISTOR **GL55 SERIES**

PHOTORESISTOR

Schematic Drawing



Photoresistor is a resistor which is 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.

Performances and Features

1). Coated with Epoxy
2). Small Volume
3). Fast Response
4). Good Reliability
5). High Sensitivity
6). Good Spectrum Characteristic

Typical Applications

1). Camera Automatic
2). Indoor Ray Control
3). Industrial Control
4). Light Control Lamp
5). Photoelectric Control
6). Annunciator
7). Light Control Switch
8). Electronic Toy

Types and Specifications

Specification	Type	Max. Voltage	Max. Power	Environmental Temp	Spectrum Peak Value
Φ 5 Series	GL5516	150	90	-30 ~ +70	540
	GL5528	150	100	-30 ~ +70	540
	GL5537-1	150	100	-30 ~ +70	540
	GL5537-2	150	100	-30 ~ +70	540
	GL5539	150	100	-30 ~ +70	540
	GL5549	150	100	-30 ~ +70	540

Specification	Light Resistance (10 Lux) (KΩ)	Dark Resistance (MΩ)	γ_{10}^{100}	Response Time (ms)		Illuminance Resistance Fig. No.
				Increase	Decrease	
Φ 5 Series	5-10	0.5	0.5	30	30	2
	10-20	1	0.6	20	30	3
	20-30	2	0.6	20	30	4
	30-50	3	0.7	20	30	4
	50-100	5	0.8	20	30	5
	100-200	10	0.9	20	30	6

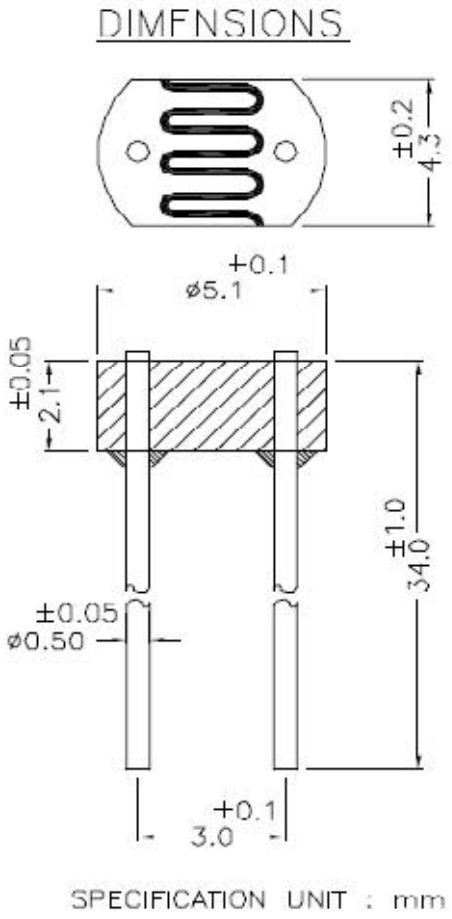
Test Conditions

Max. External Voltage : Maximum Voltage to be continuously given to component in the dark.
Dark Resistance : Refer to the Resistance 10 sec after the 10Lux light is shut up.
Max. Power Consumption : Maximum Power at the environmental temperature 25°C.
Light Resistance : Irradiated by 400-600Lux light for 2 hours, then test with 10Lux under standard light source A (as colour temperature 2856K).
γ value : Logarithm of the ratio of the standard resistance value under 10Lux and that under 100Lux.

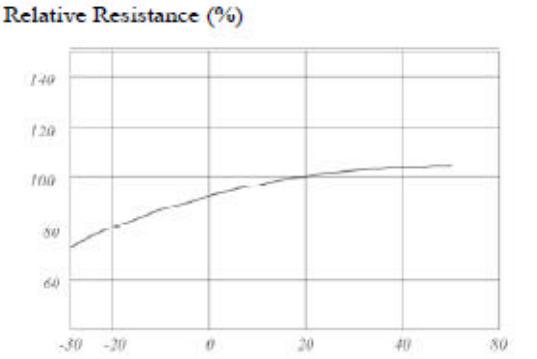
$$\gamma = Lg(R10/R100) / Lg(100/10) = Lg(R10/R100)$$

R10, R100 are the resistances under 10Lux and 100Lux respectively.

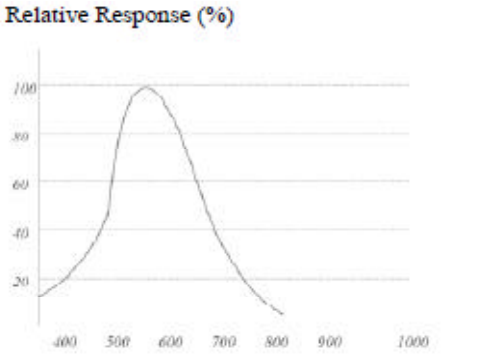
Dimensions



Main Characteristics Curves



Temperature-Property



Spectrum Response Characteristic

Illuminance Resistance Characteristics Curves

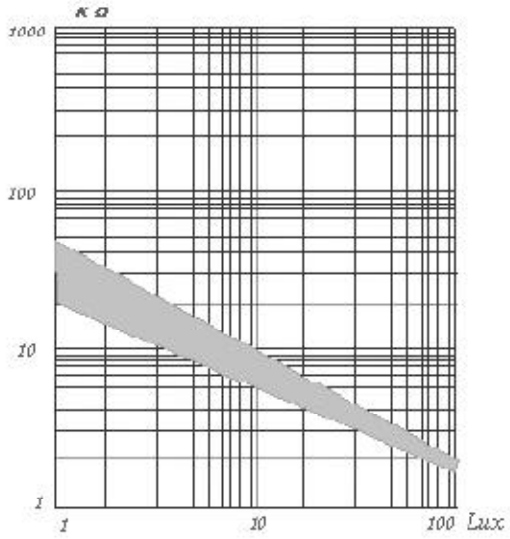


Fig. 1

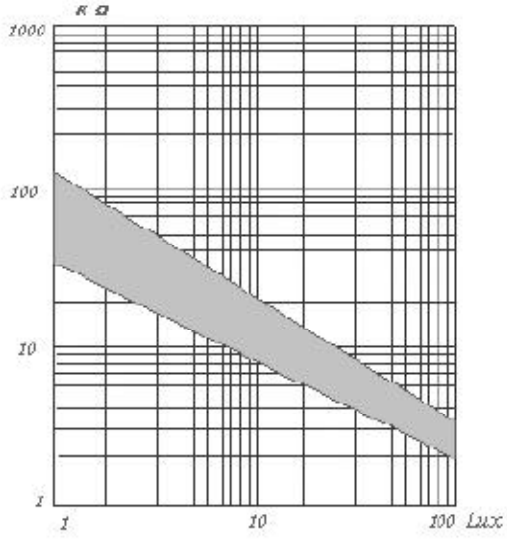


Fig.2

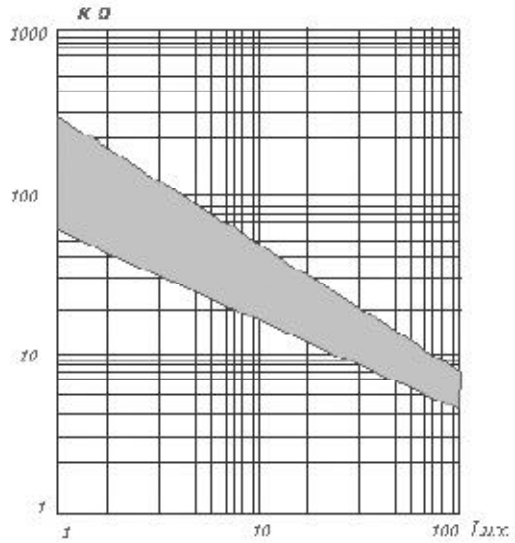


Fig. 3

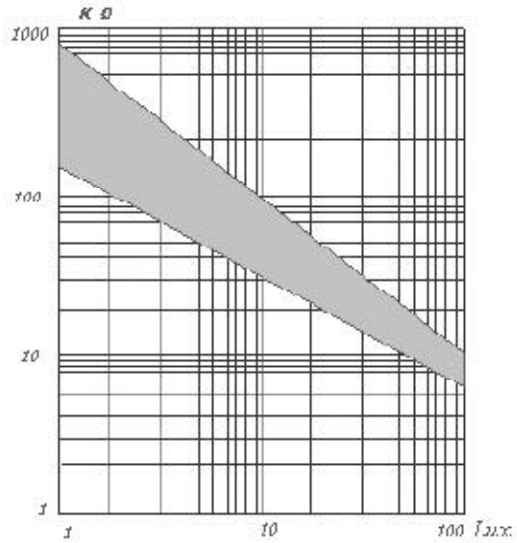


Fig. 4

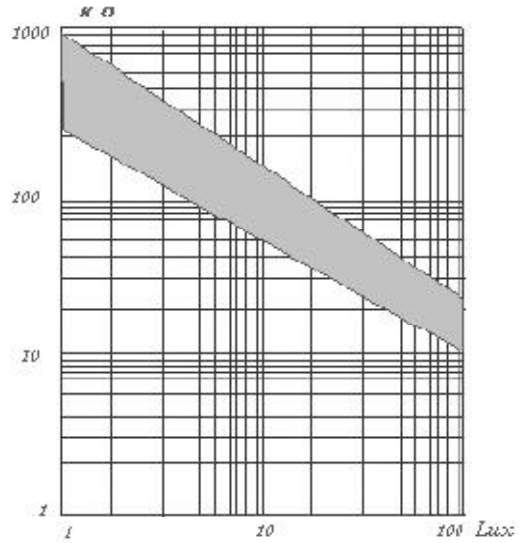


Fig.5

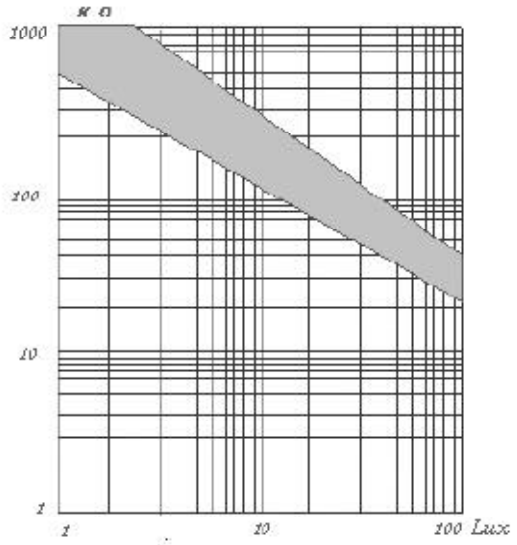


Fig. 6

Packing and Precaution

1). This product is packed with the environmental protection material, 100pcs per small package, 1000pcs per big package.
2). Avoid high temperature and humidity for storing.
3). Soldering should be completed in the shortest possible time.
4). It is recommended that soldering should keep 4mm away from ceramic substrate.

Customer Notes

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.

2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.

CDIL is a registered Trademark of
Continental Device India Limited
C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119
email@cdil.com www.cdil.com
CIN No. - U32109DL1964PLC004291