DEVETECH ELECTRONICS

Specification

Name: Photoresistor

Model: GM55 Series

GM55 Series Photoresistor

Photoresistor is made of a kind semiconductor material and the conductivity has the linear changes with the illuminance change. The photoresistor was widely used in the toys, lights and camera etc.

Structure Diagram

Units:mm

Performance and Characteristics

Coated with epoxy, good reliability, small volume, high sensitivity, quick response; good spectrum characteristic.

Application

Camera automatically metering photoelectric control Interior light control alarm industrial control light-controlled switch light-controlled light electronic toys.

Specification

Name	Model	Max. Voltage VDC	Max. Power mw	Environment Temperature (℃)	Spectrum Peak nm	Light Resistance (10Lux) KΩ	Dark Resistance ≥MΩ	γ^{100}_{10}	Response Time (ms)		Illuminance Resistance Characteristic
									Increase	Decrease	
φ5 Series	GM5506	150	90	-30~+70	540	2-5	0.1	0.5	30	30	
	GM5516	150	90	-30~+70	540	5-10	0.2	0.5	30	30	1
	GM5528	150	100	-30~+70	540	10-20	1	0.6	20	30	2
	GM5537-1	150	100	-30~+70	540	20-30	2	0.6	20	30	3
	GM5537-2	150	100	-30~+70	540	30-50	3	0.7	20	30	3
	GM5539	150	100	-30~+70	540	50-100	5	0.8	20	30	4
	GM5549	150	100	-30~+70	540	100-200	10	0.9	20	30	5

Test Condition

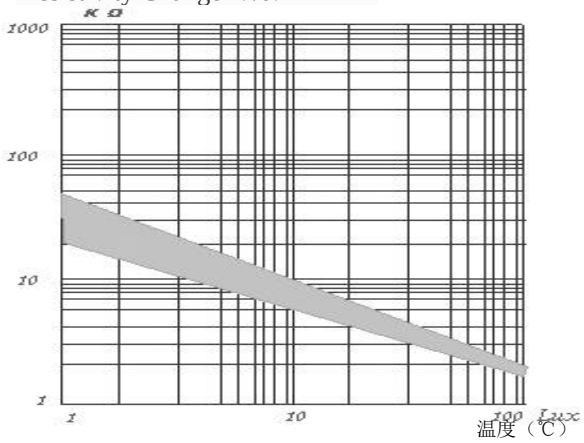
Max. External Voltage: The max. voltage can be consistently imposed in the components in darkness.
Dark Resistance：The resistance which is get from closed the 10 lux light for 10 seconds.
Max. Power：When the environment temperature is 25℃ using the biggest power
Light Resistance：The resistance which is get after 400-600lux light for 2 hours, test with the standard light (CCT：2854K) 10 lux get the value.
Γ Value: The ratio gets from the standard resistance in 10 lux illuminance and 100lux illuminance's rate.

$$\gamma = \frac{\text{Lg (R10/R100)}}{\text{Lg (100/10)}} = \text{Lg(R10/R100)}$$

R10、R100 the resistance value in 10lux and 100 lux respectively. （γ's tolerance is ±0.1）

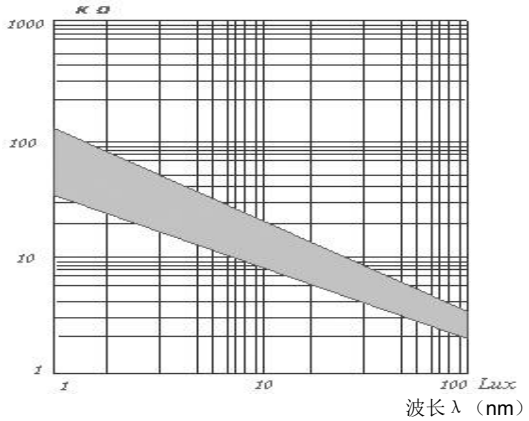
The Main Characteristic Curve

Resistivity Change（%）



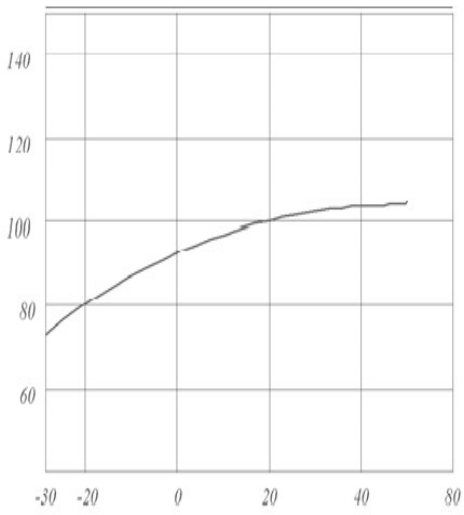
Temperature Characteristic,

Relative Sensitivity (%)

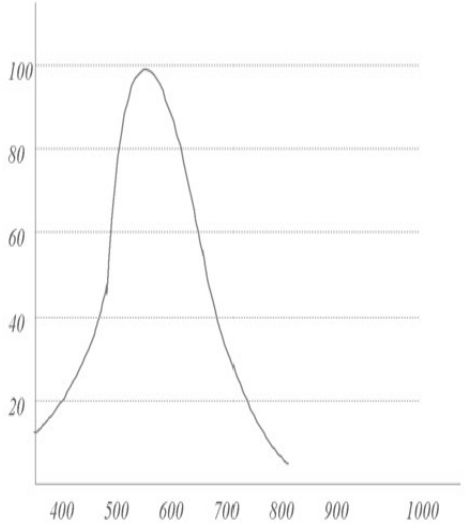


The Spectral Response

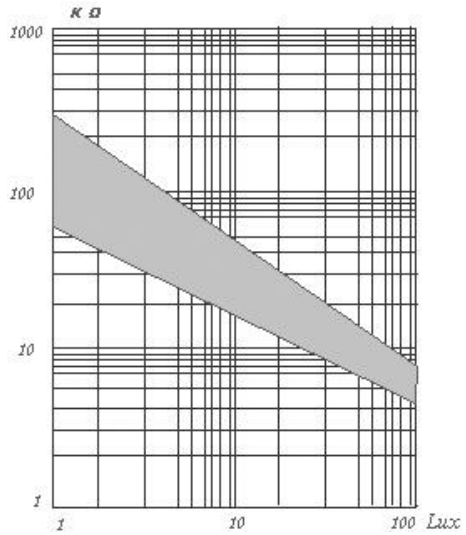
lluminance- the Resistance Characteristic Curve



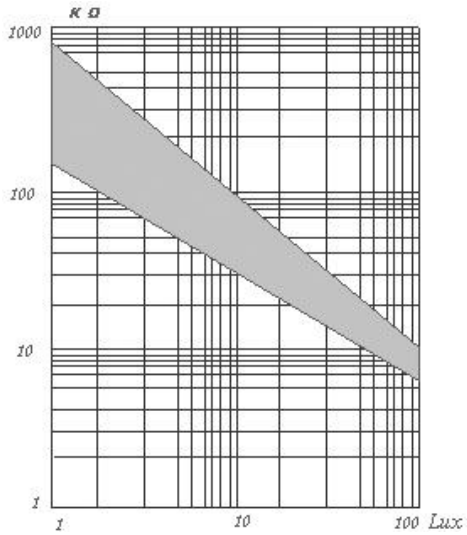
Picture 1 GM5516



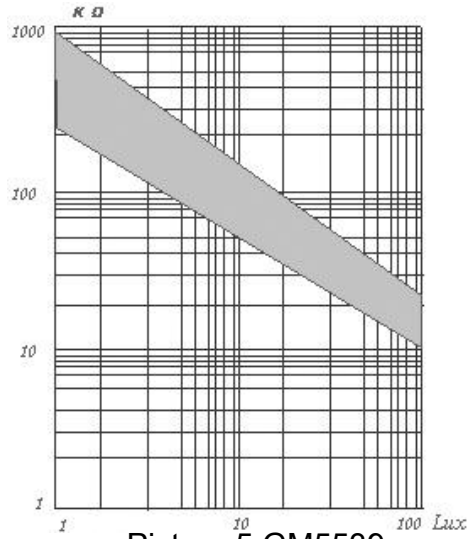
Picture 2 GM5528



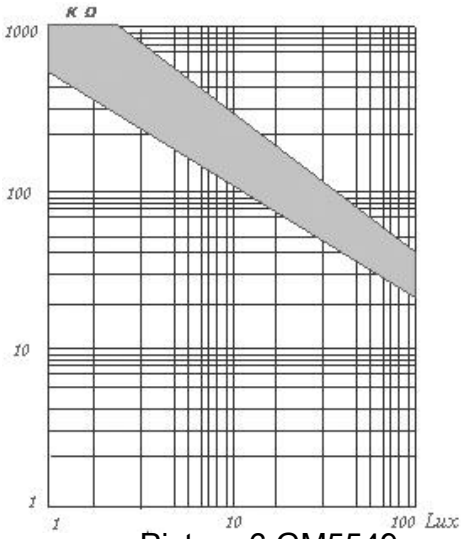
Picture 3 GM5537-1



Picture 4 GM5537-2



Picture 5 GM5539



Picture 6 GM5549

Note

1. This product is packaged in environmental protection material, with 200 pcs in a small box and 2,000 pcs in a large carton;
2. Avoid storing the product in humid and high temperature environment;
3. It should be stored in the non-corrosive gas, otherwise it will lead to the oxidation of tin coating, and the weldability will be reduced, so when open the package should be used as soon as possible;
4. Operating humidity is 95%;
5. The welding time is as short as possible;in the tin liquor at 230 ℃ (Sn63 Pb37) dip to 5 mm from CdS photoresistance ontology, maintain 3-5 second;
6. Note that lead welding position should be more than 4mm from the ceramic base.