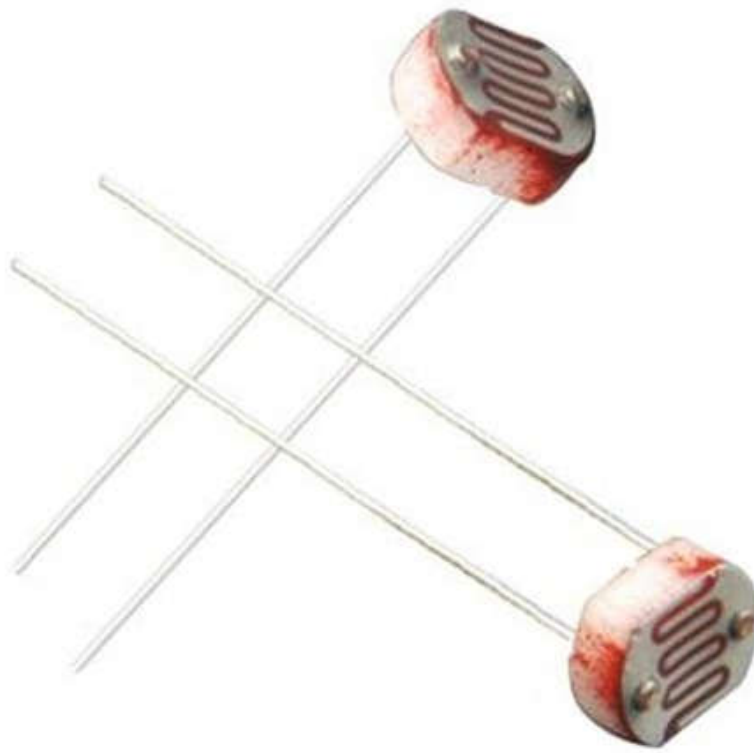


Specification
产品规格书



Name: LIGHT DEPENDENT RESISTOR

名称: 光敏电阻

类型: GM75系列

Type: GM75 Series

Specification of GM75 series LIGHT DEPENDENT RESISTOR

GM75 系列光敏电阻规格书

GM75 series LIGHT DEPENDENT RESISTOR

GM75系列光敏电阻

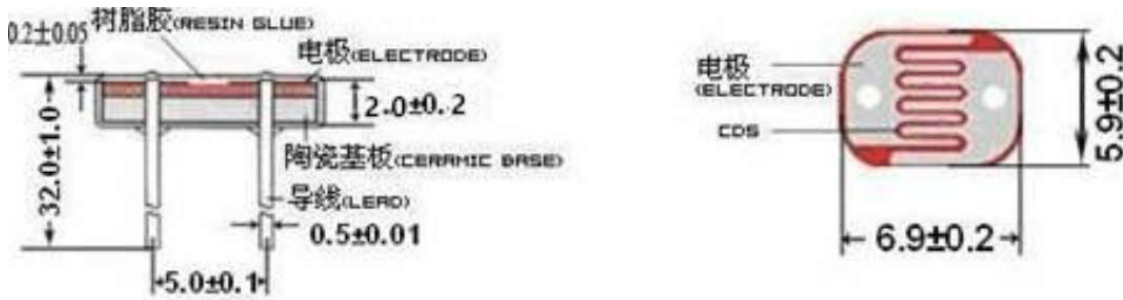
光敏电阻是一种半导体材料制成的电阻，其电导率随着光照度的变化而发生线性变化。光敏电阻广泛应用于玩具、灯具、照相机等行业。

LDR is a kind of resistance made of semiconductor material. Its conductivity changes linearly with the change of illumination Change. LDR are widely used in toys, lamps, cameras and other industries.

结构示意图

Structure drawing

单位: mm



性能及特点

Performance and characteristics

环氧树脂封装	Epoxy resin encapsulation	可靠性好	Good reliability
体积小	Small volume	灵敏度高	High sensitivity
反应速度快	Fast reaction speed	光谱特性好	Good spectral characteristics

应用范围

Scope of application

照相机自动测光	Camera automation photometry	光电控制	Photoelectric control
室内光线控制	Indoor light control	报警器	Burglar alarm
工业控制	Industrial control	光控开关	Optically controlled switch
光控灯	Light controlled lamp	电子玩具	Electronic toy

型号及规格

Model and specification

规格 Type	型号 Model	最大 电压 Voltage VDC	最大 功耗 power dissipation mw	环境 温度 temperature °C	光谱 峰值 Spectral peak nm	亮电阻 (10Lux) KΩ	Dark resistance		响应时间 Response time (ms)		照度 特性 characteristic symbol 图号
							暗电 阻≥ MΩ	γ_{10}^{100}	上升UP	下降Down	
φ7 系列 Series	GM7516	150	100	-30~+70	540	5-10	0.2	0.6	30	30	1
	GM7528	150	100	-30~+70	540	10-20	1	0.6	30	30	2
	GM7537-1	150	150	-30~+70	560	20-30	2	0.7	30	30	3
	GM7537-2	150	150	-30~+70	560	30-50	4	0.8	30	30	3
	GM7539	150	150	-30~+70	560	50-100	8	0.8	30	30	4

测量条件 Measurement conditions

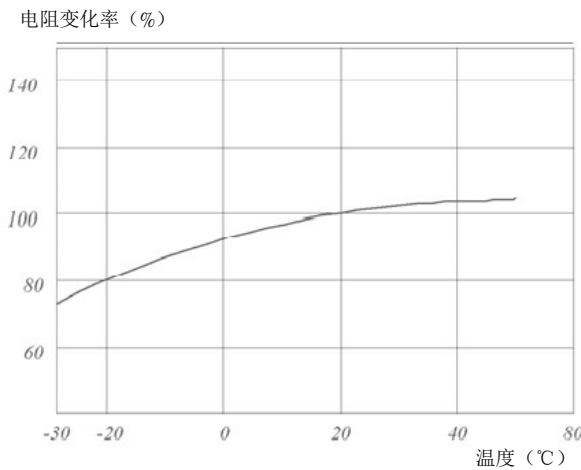
最大外加电压：在黑暗中可连续施加给元件的最大电压；
 暗电阻：关闭 10Lux 光照后第 10 秒的阻值；
 最大功耗：环境温度为 25℃时的最大功耗；
 亮电阻：用 400-600Lux 光照射 2 小时后，在标准光源（色温 2854K）10Lux 光下的测试值；
 γ 值：10Lux 照度和 100Lux 照度下的标准电阻值之比的对数。

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

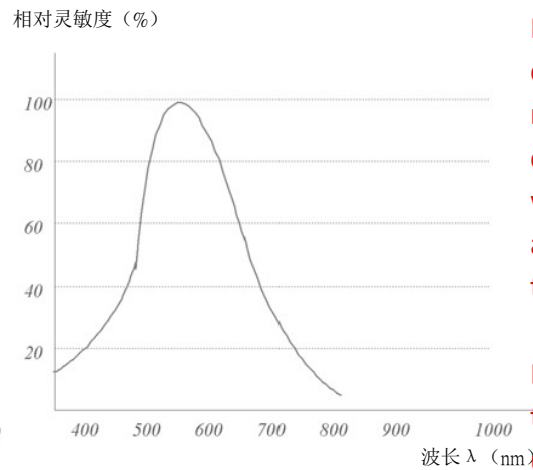
R10、R100 分别为 10Lux、100Lux 照度下的电阻值（γ 的公差为±0.1）

R10 and R100 are the resistance values under 10lux and 100lux illumination respectively (γ Tolerance of ± 0.1)

主要特性曲线 Main characteristic curve



温度特性曲线
Temperature characteristic curve



光谱响应特性曲线
Spectral response characteristic curve

光照度-电阻特性曲线 Illuminance resistance characteristic curve

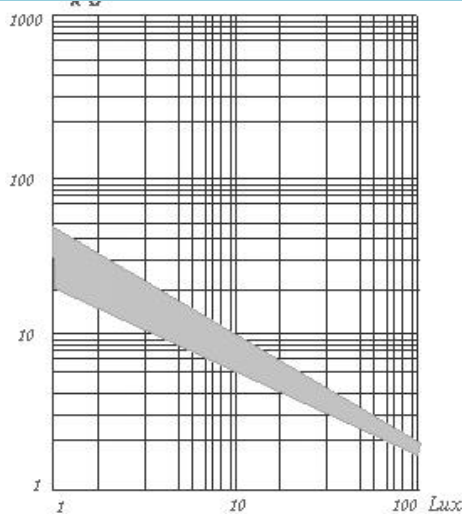


图 1 GM7516

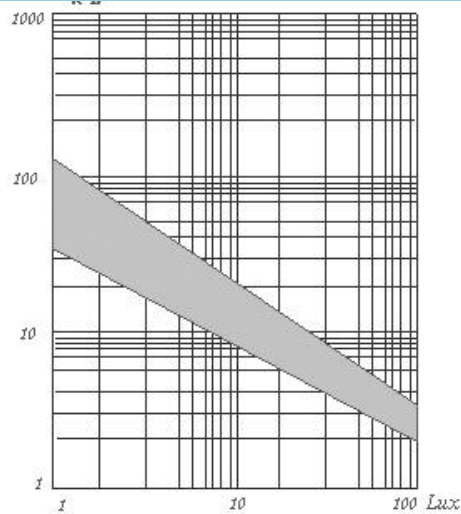


图 2 GM7528

Maximum applied voltage: the maximum voltage that can be continuously applied to the element in the dark;
 Dark resistance: the resistance value in the 10th second after turning off 10lux illumination;
 Maximum power consumption: the maximum power consumption when the ambient temperature is 25℃;
 Bright resistance: the test value under 10lux light of standard light source (color temperature 2854k) after exposure to 400-600lux light for 2 hours;
 γ Value: logarithm of the ratio of standard resistance value under 10lux illumination and 100lux illumination.

Specification of GM75 series LIGHT DEPENDENT RESISTOR
GM75 系列光敏电阻规格书

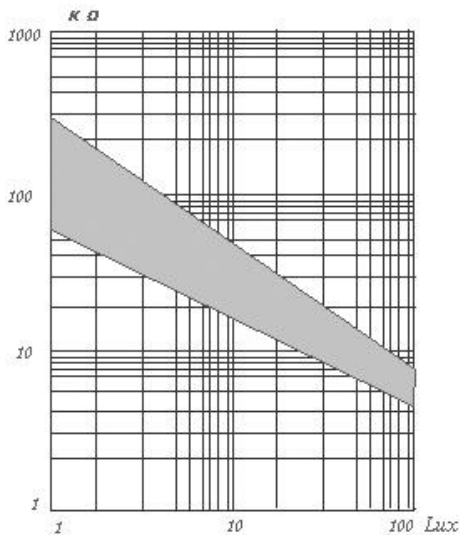


图 3 GM7537-1

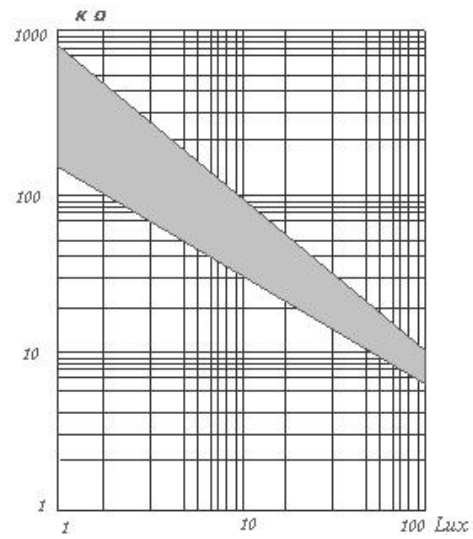


图 4 GM7537-2

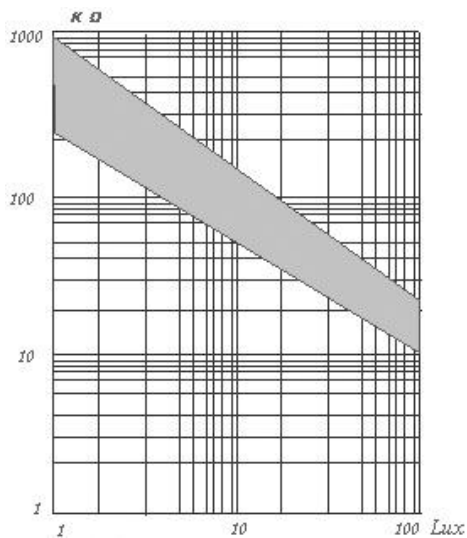


图 5 GM7539

注意事项 Matters needing attention

本产品采用环保材料包装,小包装 100 支,大包装 1000 支;
避免将本产品放在潮湿、高温环境下保存;
焊接时间尽可能短;
注意引线焊接位置应距陶瓷基座 4mm 以上。

This product is packed with environmental protection materials, with 100 small packages and 1000 large packages;
Avoid storing this product in humid and high temperature environment;

The welding time shall be as short as possible;

Note that the welding position of the lead should be more than 4mm away from the ceramic base.