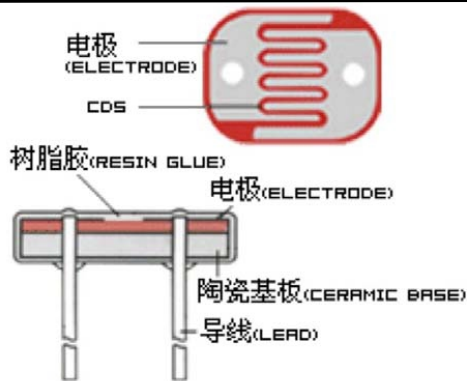


Description:

Photoconductive cells are sensors that allow you to detect light. They are small, inexpensive, low-power, easy to use and don't wear out. They are often referred to as CdS cells (they are made of Cadmium-Sulfide), light-dependent resistors (LDR), and photoresistors. whose resistance decreases with increasing incident light intensity. In other words when it is dark it has a high electrical resistance and when it is light it has a low electrical resistance.

Structure:



Component	RoHs
Resin Glue	Yes
Cds	No
Electrode	Yes
Ceramic Base	Yes
Lead	Yes

Features:

- | | |
|----------------------|---------------------------------|
| Epoxy encapsulated | Quick response |
| Small size | High sensitivity |
| Reliable performance | Good characteristic of spectrum |

Terms:

■ Light resistance:

Measured at 10Lux with standard light A (2854K color) color temperature) and 2H pre-illumination at 400–600lux prior to testing.

■ Dark resistance: Measured 10 seconds after pulsed 10lux

■ Gamma Characteristic:

Between 10Lux and 100Lux and given by $T = \frac{\log(R_{10} / R_{100})}{\log(100 / 10)} = \log(R_{10} / R_{100})$

R_{10} , R_{100} cell resistance at 10Lux and 100Lux. The error of T is +0.1

■ Pmax: Max. Power dissipation at ambient temperature of 25°C

■ Vmax: Max. Voltage in darkness that may be applied to the cell continuously.

Typical Applications:

Digital Applications:

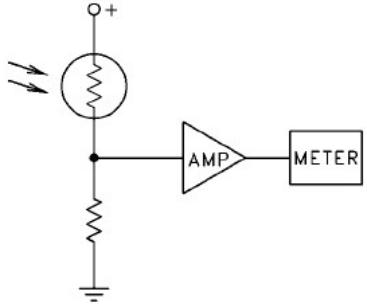
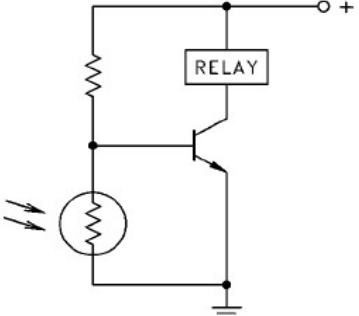
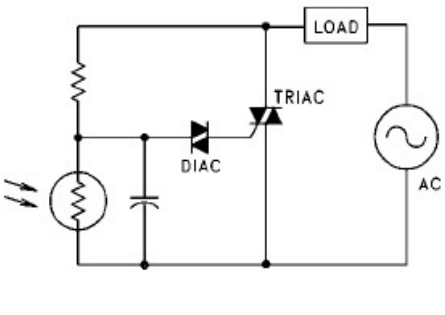
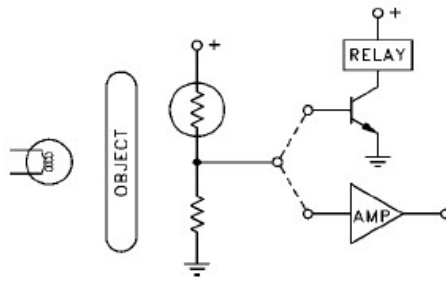
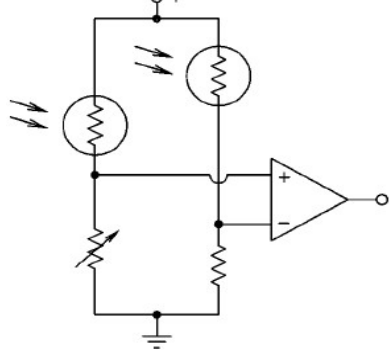
- ◆ Automatic headlight dimmer
- ◆ Night /street light control
- ◆ Photoelectric control
- ◆ Industrial control
- ◆ Security system

- ◆ Light-controlled torys/ switch

Analog Applications:

- ◆ Camera exposure control
- ◆ Automatic Gain Control

Typical Application Circuit:

	<p>Used in, eg,</p> <ul style="list-style-type: none"> <i>Ambient light detecting</i> <i>Camera auto exposure control</i>
	<p>Used in, eg,</p> <ul style="list-style-type: none"> <i>Backlight control</i> <i>Light adjusting application</i>
	<p>Used in, eg,</p> <ul style="list-style-type: none"> <i>Small Night Light</i> <i>Street Light</i> <i>Flame Detector</i>
	<p>Used in, eg,</p> <ul style="list-style-type: none"> <i>Security System</i> <i>Colorimetric devices</i> <i>Densitometer</i>
	<p>Used in, eg,</p> <ul style="list-style-type: none"> <i>Light intensity control</i> <i>Automatic Focusing</i> <i>Electronic Balance</i> <i>Light-control system</i>

■ Illuminance vs. Resistance:

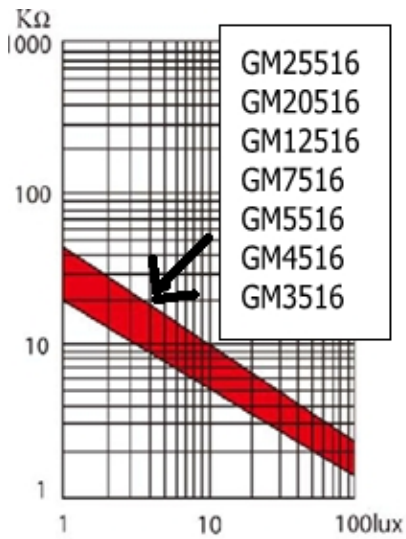


Fig. 1

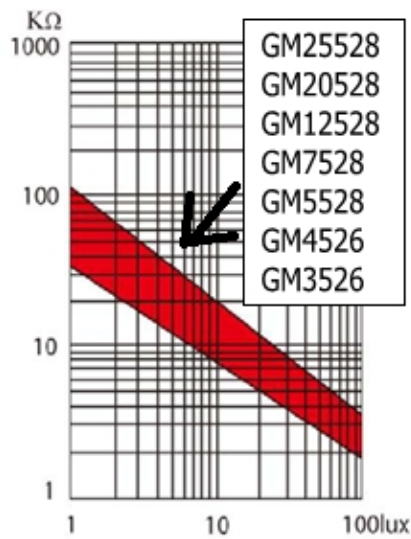


Fig. 2

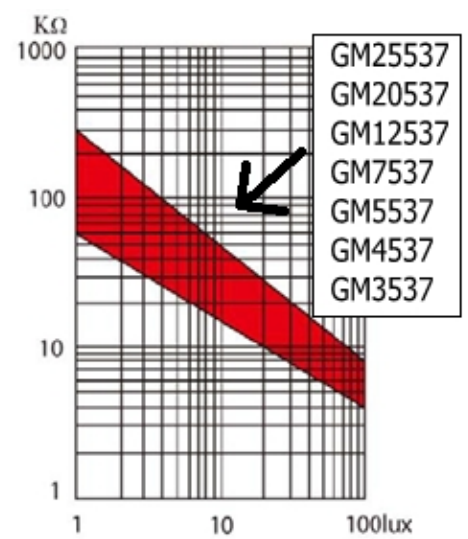


Fig. 3

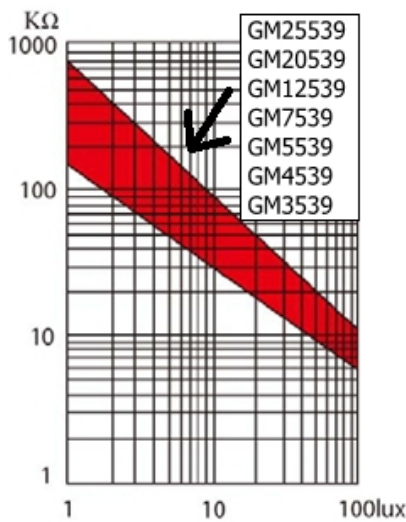


Fig. 4

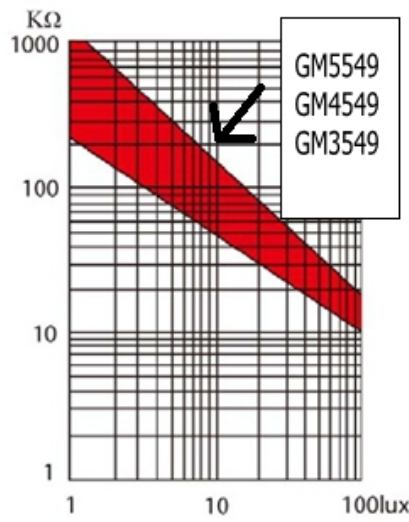
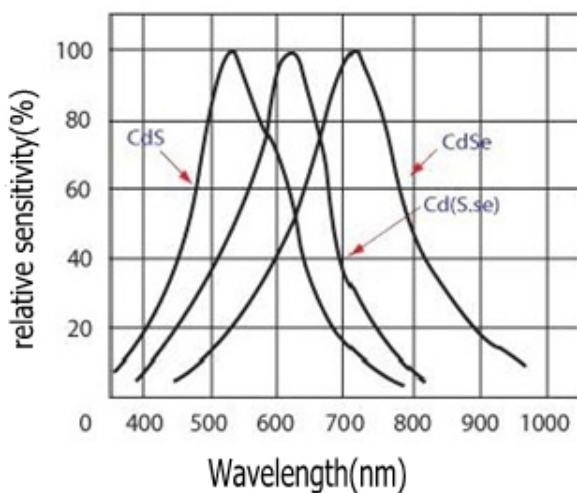
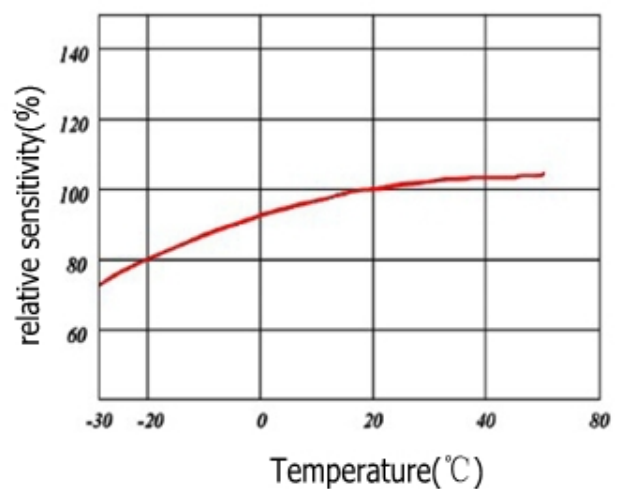


Fig. 5


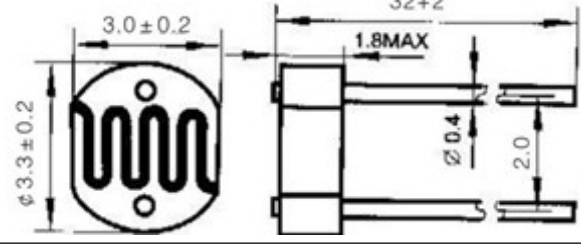

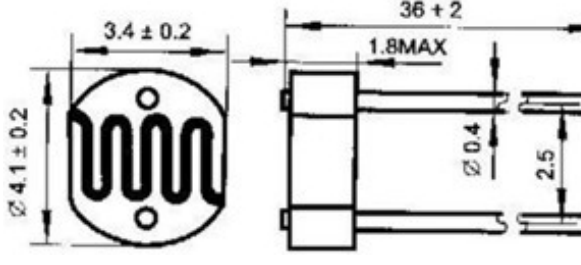

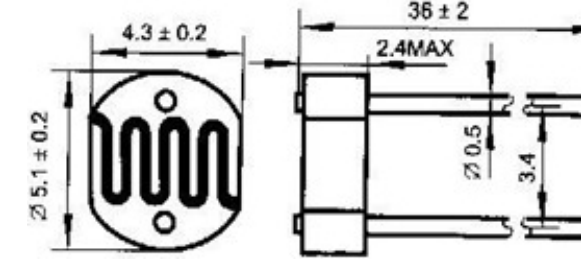

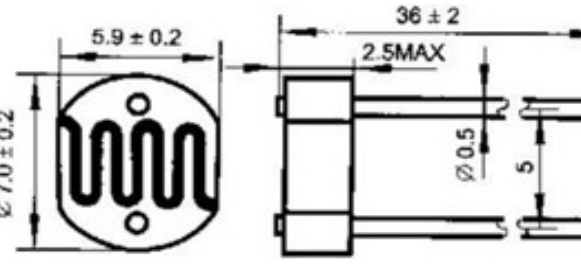

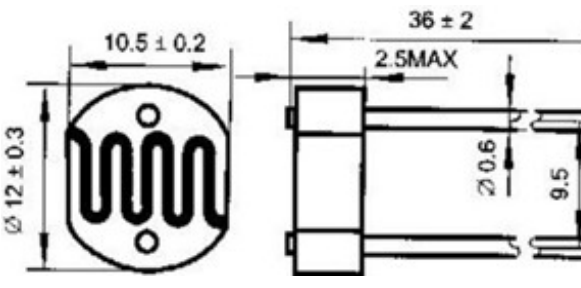

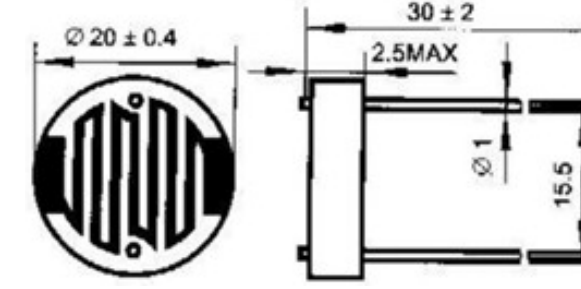

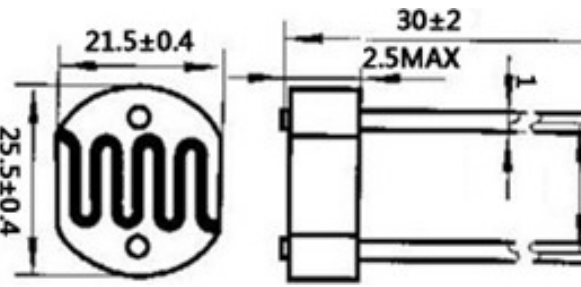
■ Spectral Response curve:



■ Temperature vs. Relative sensitivity



Pictures & Dimentions(Unit:mm)

<p>GM35 SERIES</p>		
<p>GM45 SERIES</p>		
<p>GM55 SERIES</p>		
<p>GM75 SERIES</p>		
<p>GM125 SERIES</p>		
<p>GM205 SERIES</p>		
<p>GM255 SERIES</p>		

Parameters of Cds photoresistor:

Items	Type	Max Voltage (VDC)	Power Dissipation (mw)	Ambient Temperature Range(°C)	Spectral Response peak(nm)	Light Resistance (10Lux)(KΩ)	Dark Resistance (MΩ)	$\gamma \frac{100}{10}$	Response time(ms)		Illuminance resistance Characterist
									Increase	Decrease	
GM35 Series	GM3516	100	50	-30~+70	540	5-10	0.6	0.5	30	30	1
	GM3526	100	50	-30~+70	540	10-20	1	0.6	30	30	2
	GM3537-1	100	50	-30~+70	540	20-30	2	0.6	30	30	3
	GM3537-2	100	50	-30~+70	540	30-50	3	0.7	30	30	3
	GM3547-1	100	50	-30~+70	540	50-100	5	0.8	30	30	4
	GM3547-2	100	50	-30~+70	540	100-200	10	0.9	30	30	5
GM45 Series	GM4516	100	50	-30~+70	540	5-10	0.6	0.5	30	30	1
	GM4526	100	50	-30~+70	540	10-20	1	0.6	30	30	2
	GM4537-1	100	50	-30~+70	540	20-30	2	0.6	30	30	3
	GM4537-2	100	50	-30~+70	540	30-50	3	0.7	30	30	3
	GM4539	100	50	-30~+70	540	50-100	5	0.8	30	30	4
	GM4549	100	50	-30~+70	540	100-200	10	0.9	30	30	5
GM55 Series	GM5516	150	90	-30~+70	540	5-10	0.5	0.5	30	30	1
	GM5528	150	100	-30~+70	540	10-20	1	0.6	30	30	2
	GM5537-1	150	100	-30~+70	540	20-30	2	0.6	30	30	3
	GM5537-2	150	100	-30~+70	540	30-50	3	0.7	30	30	3
	GM5539	150	100	-30~+70	540	50-100	5	0.8	30	30	4
	GM5549	150	100	-30~+70	540	100-200	10	0.9	30	30	5
GM75 Series	GM7516	150	90	-30~+70	540	5-10	0.5	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
GM125 Series	GM12516	250	200	-30~+70	560	5-10	1	0.6	30	30	1
	GM12528	250	200	-30~+70	560	10-20	2	0.6	30	30	2
	GM12537-1	250	200	-30~+70	560	20-30	3	0.7	30	30	3
	GM12537-2	250	200	-30~+70	560	30-50	5	0.7	30	30	3
	GM12539	250	200	-30~+70	560	50-100	8	0.8	30	30	4
GM205 Series	GM20516	500	500	-30~+70	560	5-10	1	0.6	30	30	1
	GM20528	500	500	-30~+70	560	10-20	2	0.6	30	30	2
	GM20537-1	500	500	-30~+70	560	20-30	3	0.7	30	30	3
	GM20537-2	500	500	-30~+70	560	30-50	5	0.7	30	30	3
	GM20539	500	500	-30~+70	560	50-100	8	0.8	30	30	4
GM255 Series	GM25516	500	500	-30~+70	560	5-10	1	0.6	30	30	1
	GM25528	500	500	-30~+70	560	10-20	2	0.6	30	30	2
	GM25537-1	500	500	-30~+70	560	20-30	3	0.7	30	30	3
	GM25537-2	500	500	-30~+70	560	30-50	5	0.7	30	30	3
	GM50539	500	500	-30~+70	560	50-100	8	0.8	30	30	4

Size of package(Unit: mm):

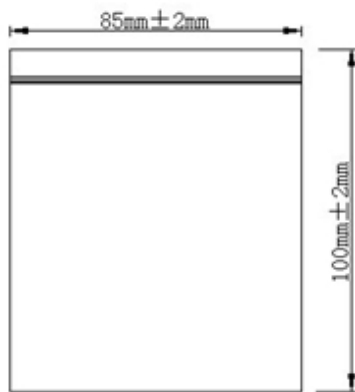


Fig.1:Bag

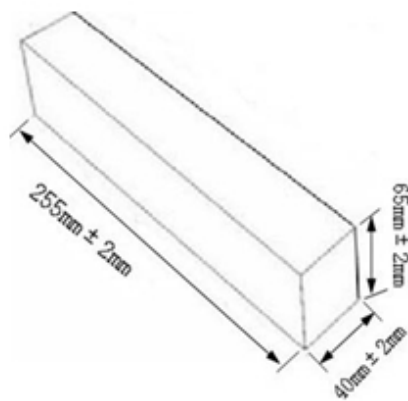


Fig.2:Box



Fig.3:Bin

Items	Package Detail		
	Pcs/Bag	Bag/Box	Box/Bin
GM35	200	10	25
GM45	200		
GM55	200		
GM75	100		
GM125	50		
GM205	20		
GM255	10		



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