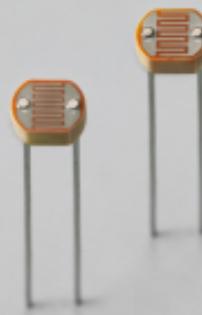


CdS photoconductive cell Resin coating type (5R type)

Standard type designed for general-purpose, wide application



CdS photoconductive cells utilize photoconductive effects in semiconductors that decrease their resistance when illuminated by light. These sensors are non-polar resistive elements with spectral response characteristics close to the human eye (luminous efficiency), thus making their operating circuits simple and small.

Features

- Small size, thin package
- Low price
- Wide range of sensor lineup

Applications

- Programmed electronic shutter and stroboscope light control for compact camera
- Auto dimmer for digital display, CRT and room illumination
- Sensor for automatic light on/off
- Sensor for electronic toy and teaching aid material

■ Absolute maximum ratings / Characteristics (Typ. Ta=25 °C, unless otherwise noted)

Type No.	Absolute maximum ratings			Peak sensitivity wavelength λ_p (nm)	Characteristics *1			$\gamma_{10}^{100} *4$	Response time 10 lx *5			
	Supply voltage (Vdc)	Power dissipation P (mW)	Ambient temperature Ta (°C)		Cell resistance *2		100 to 10 lx (ms)		Rise time tr (ms)	Fall time tf (ms)		
					10 lx, 2856 K	0 lx *3						
P687-02	30	-30 to +50	620	5	20	5.0	0.70	60	25			
P1201-04	100	50	-30 to +60	540	50	200	0.90	40	30			
P1201-06						100						
P1241-04	50	30	-30 to +60	560	3	9	0.2	0.70	50	40		
P1241-05					8	24	0.5					
P1241-06					5	20	0.5					
P1444	100	-30 to +50	620		10	50	5.0	0.85	40	10		
P1445					48	140	20					

*1: All characteristics are measured after exposure to light (100 to 500 lx) for one to two hours.

*2: The light source is a standard tungsten lamp operated at a color temperature of 2856 K.

*3: Measured 10 seconds after shutting off the 10 lx light.

*4: Typical gamma characteristics (within ± 0.10 variations) between 100 lx to 10 lx

$$\gamma_{10}^{100} = \frac{|\log(R_{100}) - \log(R_{10})|}{\log(E_{100}) - \log(E_{10})}$$

E100, E10: illuminance 100 lx, 10 lx

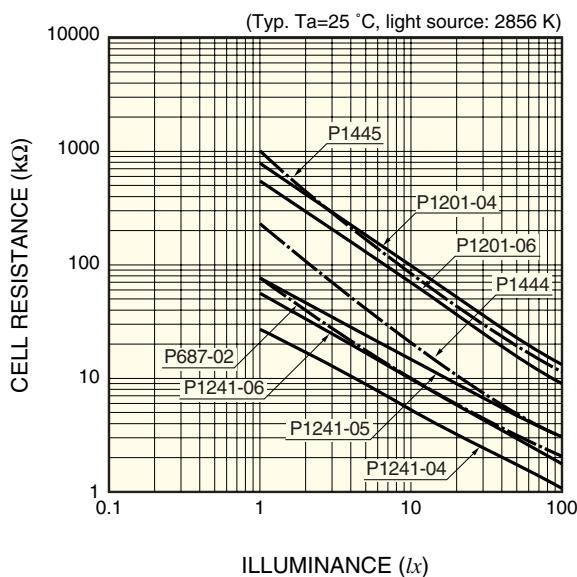
R100, R10: resistance at 100 lx and 10 lx respectively

*5: The rise time is the time required for the sensor resistance to reach 63 % of the saturated conductance level (when fully illuminated). The fall time is the time required for the sensor resistance to decay from the saturated conductance level to 37 %.

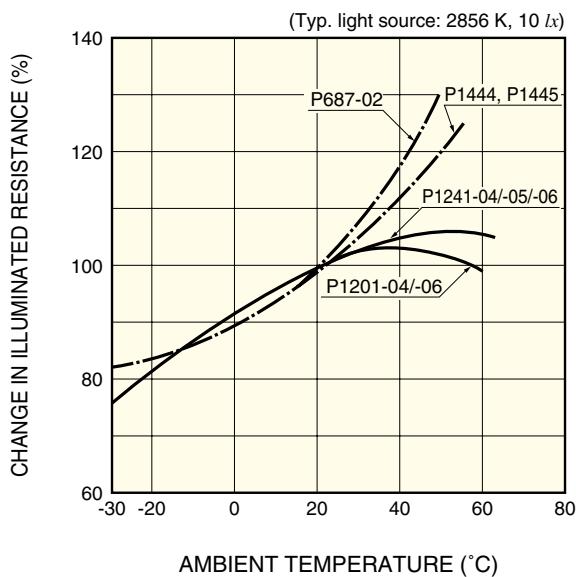
SOLID STATE DIVISION

CdS photoconductive cell Resin coating type (5R type)

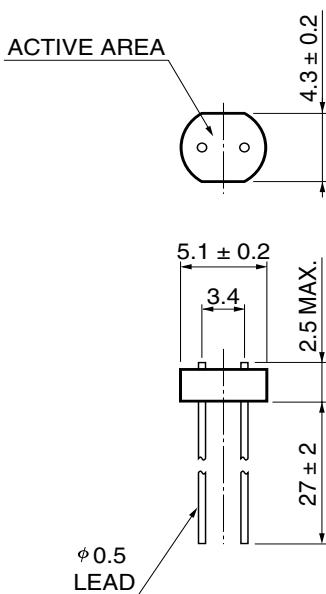
■ Cell resistance vs. illuminance



■ Resistance temperature characteristics



■ Dimensional outline (unit: mm)



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HAMAMATSU

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