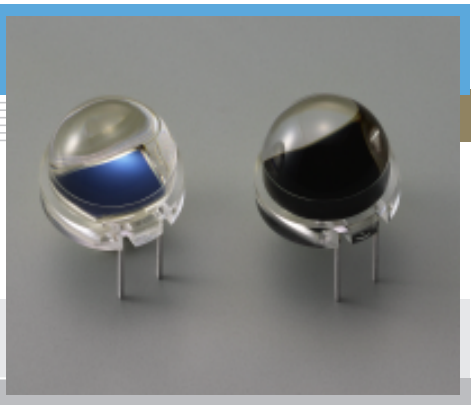
Si PIN photodiode
S6801/S6968 series

ϕ14 mm lens plastic package



S6801/S6968 series is a Si PIN photodiode molded into a plastic package with a ϕ14 mm lens. Four types are provided, S6801, S6968 with a clear plastic package and S6801-01, S6968-01 with a visible-cut package.

Features

- Plastic packages with ϕ14 mm lens
- High-speed response (S6968 series): 50 MHz Typ. (V_R=10 V, λ=850 nm)
- High sensitivity (S6801, S6968): 0.63 A/W (λ=850 nm)
- Directivity: 35 ° (half angle)
- Visible-cut type: S6801-01, S6968-01
- Active area size: ϕ14 mm (lens diameter)
- Effective active area: 150 mm^2

Applications

- Spatial light transmission
- Optical communication
- Optical data link
- High-speed optical measurement
- Optical switch
- Laser radar

■ General ratings / Absolute maximum ratings

Type No.	Package	Active area size (mm)	Effective active area (mm^2)	Absolute maximum ratings		
				Reverse voltage V_R Max. (V)	Operating temperature Topr (°C)	Storage temperature Tstg (°C)
S6801	Plastic	ϕ14	150	35	-25 to +85	-40 to +100
S6801-01						
S6968						
S6968-01						

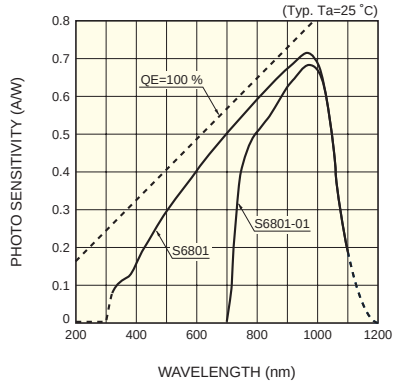
■ Electrical and optical characteristics

Type No.	Spectral response range λ (nm)	Peak sensitivity wavelength λp (nm)	Photo sensitivity S λ=850 nm		Short circuit current Isc 100 *lx* 2856 K		Dark current I_D V_R=10 V		Temp. coefficient of I_D T_{CID} (times/° C)	Cut-off frequency fc V_R=10 V R_L=50 Ω λ=850 nm, -3 dB		Terminal capacitance Ct V_R=10 V f=1 MHz		Half * angle (degree)
			Min. (A/W)	Typ. (A/W)	Min. (μA)	Typ. (μA)	Typ. (nA)	Max. (nA)		Min. (MHz)	Typ. (MHz)	Typ. (pF)	Max. (pF)	
S6801	320 to 1100	960	0.57	0.63	95	120	0.5	10	1.15	7	15	40	80	±35
S6801-01	700 to 1100		0.5	0.55	64	80								
S6968	320 to 1060	920	0.57	0.63	83	104	0.5	5		30	50	50	100	
S6968-01	700 to 1060		0.5	0.55	57	72								

* Photocurrent generated in a photodiode varies depending on the incident light angle. The half angle is the incident light angle at which the photocurrent is 50 % of that generated when the incident light is perpendicular to the photodiode.

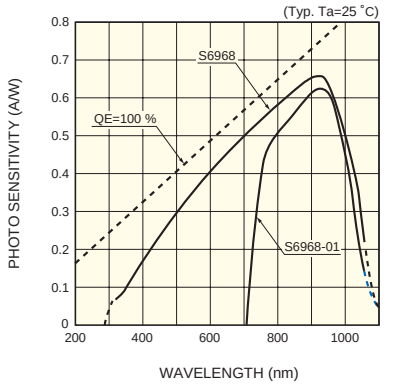
■ Spectral response

S6801 series



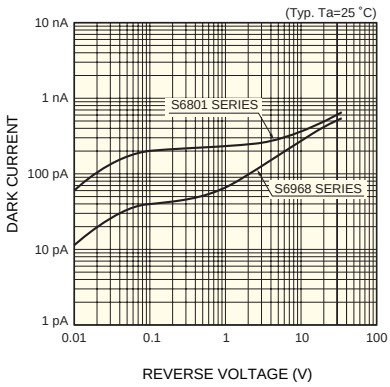
KPINB0345EA

S6968 series



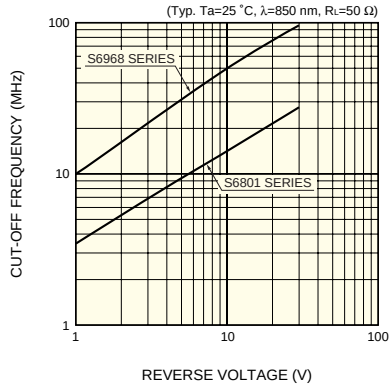
KPINB0214EA

■ Dark current vs. reverse voltage



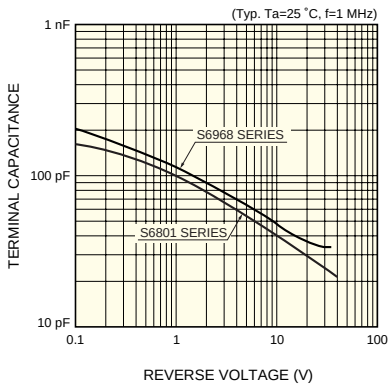
KPINB0205EC

■ Cut-off frequency vs. reverse voltage



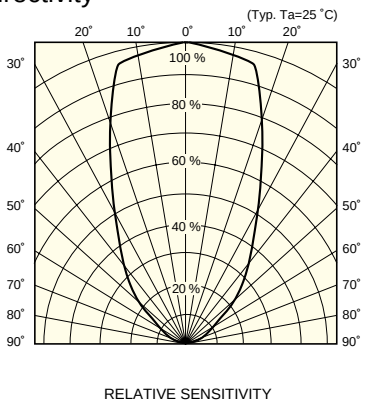
KPINB0241EB

■ Terminal capacitance vs. reverse voltage



KPINB0207EB

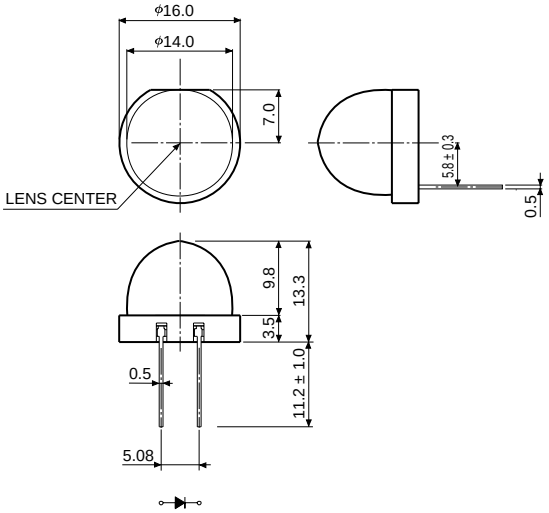
■ Directivity



KPINB0211EA

■ Dimensional outline

(unit: mm, tolerance unless otherwise noted: ±0.1)



KPINA0044EA

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