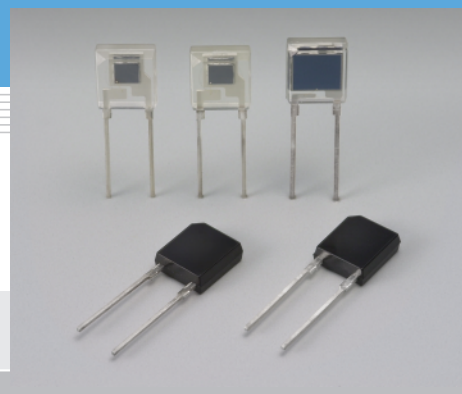


Si PIN photodiode S2506/S6967 series, S6786

Plastic SIP (Single In-line Package)



S2506/S6967 series and S6786 are Si PIN photodiodes with large active areas, molded into a clear or visible-cut plastic SIP (Single In-line Package) for detecting visible to infrared range or infrared range only. These Si PIN photodiodes feature high sensitivity, large active areas and high-speed response, allowing you to choose the optimum type that best matches your application.

Features

- S2506-02: Visible to infrared range
S2506-04: Visible-cut
S6786 : Visible to infrared range, high sensitivity, high-speed response
S6967 : Visible to infrared range, high sensitivity, high-speed response, large active area
S6967-01: Visible-cut, high sensitivity, high-speed response, large active area
- Plastic package: 7 × 7.8 mm
- Active area size
S2506 series, S6786: 2.77 × 2.77 mm
S6967 series : 5.5 × 4.8 mm

Applications

- Spatial light transmission
- Optical switches
- Laser radar, etc.

General ratings / Absolute maximum ratings

Type No.	Dimensional outline	Package	Active area size (mm)	Effective active area (mm ²)	Absolute maximum ratings			
					Reverse voltage V _R Max. (V)	Power dissipation P (mW)	Operating temperature T _{opr} (°C)	Storage temperature T _{stg} (°C)
S2506-02	①	 Plastic	2.77 × 2.77	7.7	35	150	-25 to +85	-40 to +100
S2506-04						50		
S6786								
S6967	②	 Plastic	5.5 × 4.8	26.4	35	50	-25 to +85	-40 to +100
S6967-01								

Electrical and optical characteristics (Typ. T_a=25 °C, unless otherwise noted)

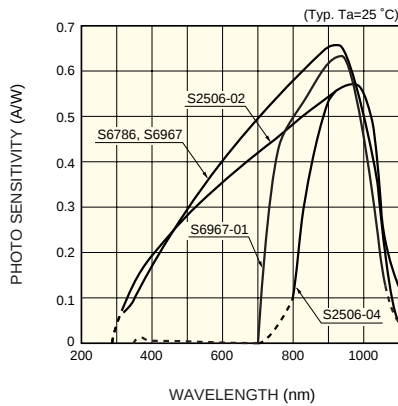
Type No.	Spectral response range λ (nm)	Peak sensitivity wavelength λ _p (nm)	Photo sensitivity S (A/W)				Short circuit current I _{sc} 100 lx (μA)	Dark current I _D		Temp. coefficient of I _D T _{CID} (times/°C)	Cut-off frequency f _c R _L =50 Ω -3 dB (MHz)	Terminal capacitance C _t f=1 MHz (pF)	NEP (W/Hz ^{1/2})
			λ _p	660 nm	780 nm	830 nm		Typ. (nA)	Max. (nA)				
S2506-02	320 to 1100	960	0.56	0.4	0.48	0.5	7.3	0.1 *1	10 *1	1.15	25 *1	15 *1	1.0 × 10 ⁻¹⁴ *1
S2506-04	760 to 1100			-	-	0.25	4.1	0.3 *2	5 *2		60 *2	15 *2	1.5 × 10 ⁻¹⁴ *2
S6786	320 to 1060	900	0.65	0.45	0.55	0.6	7.5	0.3 *2	5 *2		50 *2	50 *2	2.0 × 10 ⁻¹⁴ *2
S6967	700 to 1060			-	-	-	26	0.5 *2	5 *2		50 *2	50 *2	2.0 × 10 ⁻¹⁴ *2
S6967-01	700 to 1060	900	0.63	-	0.48	0.54	18	0.5 *2	5 *2		50 *2	50 *2	2.0 × 10 ⁻¹⁴ *2

*1: V_R=12 V

*2: V_R=10 V

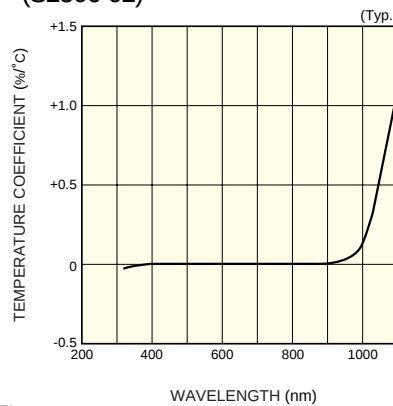
SOLID STATE DIVISION

Spectral response



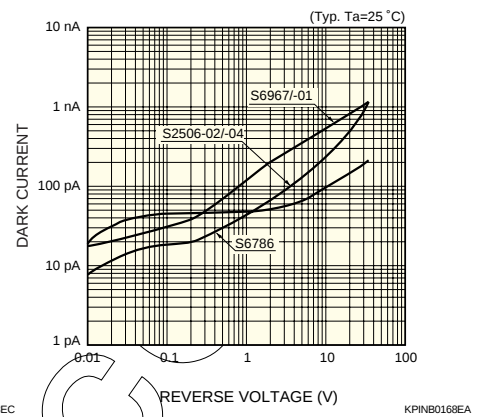
KPINB0167EA

Photo sensitivity temperature characteristic (S2506-02)



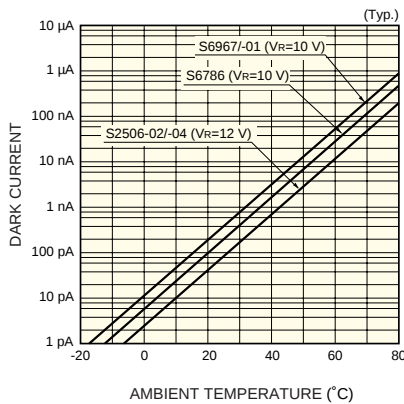
KPINB0063EC

Dark current vs. reverse voltage



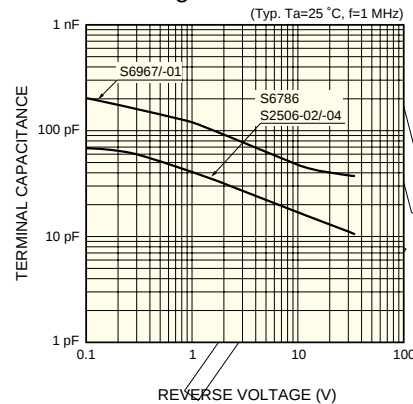
KPINB0168EA

Dark current vs. ambient temperature



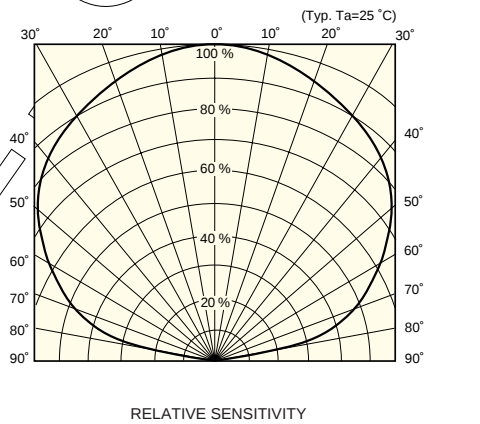
KPINB0169EA

Terminal capacitance vs. reverse voltage



KPINB0170EA

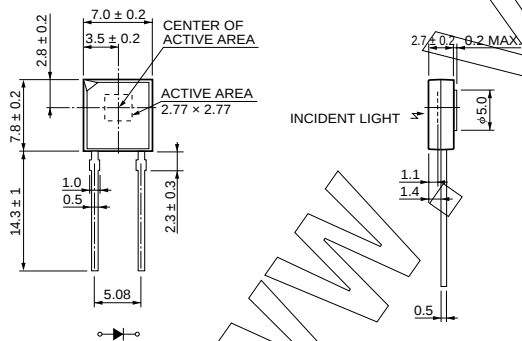
Directivity (S2506-02)



KPINB0065EB

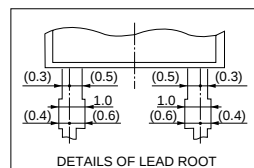
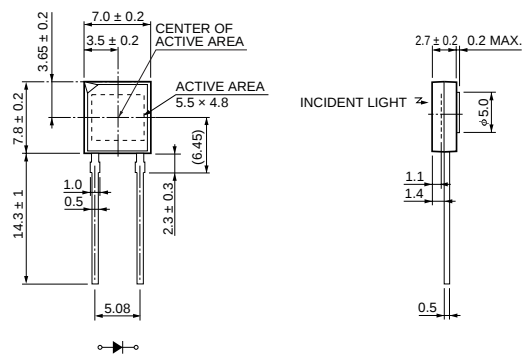
Dimensional outline (unit: mm, tolerance unless otherwise noted: ±0.1)

S2506 series, S6786



KPINA0076EA

S6967 series



KPINA0084EA

HAMAMATSU

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