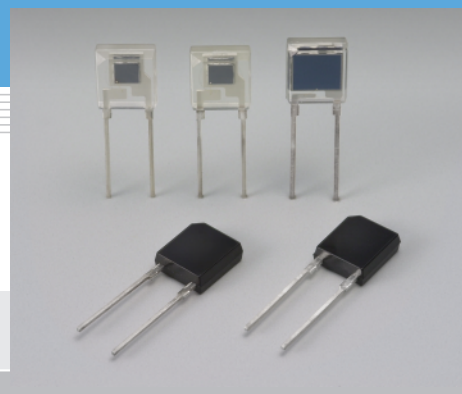


Si PIN photodiode S2506/S6967 series, S6786

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		5.5 × 4.8	26.4				
S6967-01								

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

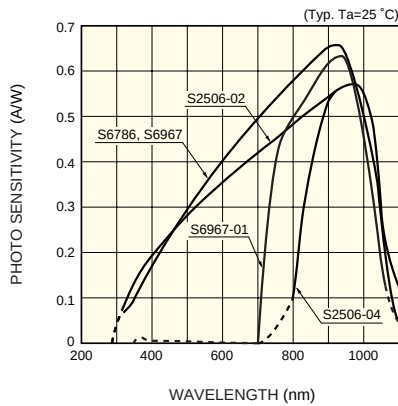
Type No.	Spectral response range λ (nm)	Peak sensitivity wavelength λp (nm)	Photo sensitivity S (A/W)				Short circuit current Isc 100 lx (μA)	Dark current Id		Temp. coefficient of Id TcId (times/°C)	Cut-off frequency fc RL=50 Ω -3 dB (MHz)	Terminal capacitance Ct f=1 MHz (pF)	NEP (W/Hz ^{1/2})			
			λp	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				50 *2	50 *2	2.0 × 10 ⁻¹⁴ *2			
S6967				700 to 1060			-							0.48	0.54	26
S6967-01								18								0.5 *2

*1: V_R=12 V

*2: V_R=10 V

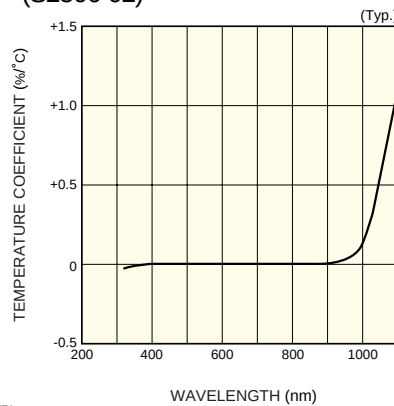
SOLID STATE DIVISION

Spectral response



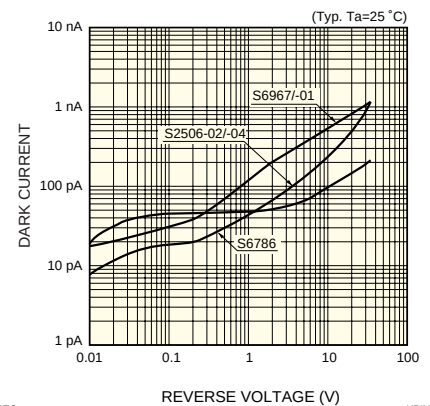
KPINB0167EA

Photo sensitivity temperature characteristic (S2506-02)



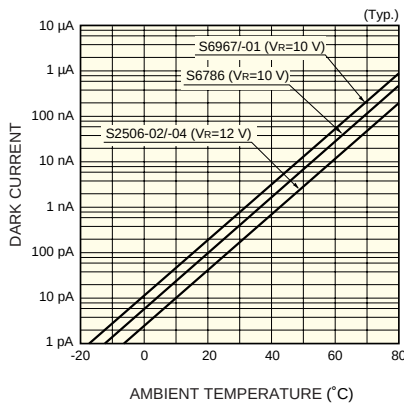
KPINB0063EC

Dark current vs. reverse voltage



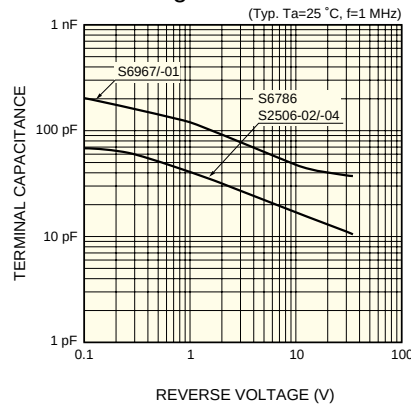
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Dark current vs. ambient temperature



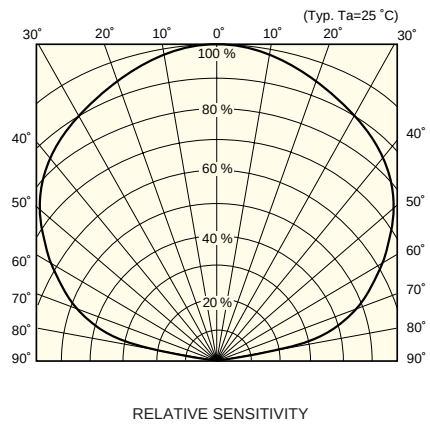
KPINB0169EA

Terminal capacitance vs. reverse voltage



KPINB0170EA

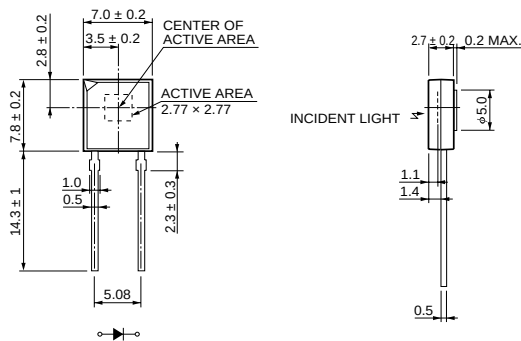
Directivity (S2506-02)



KPINB0065EB

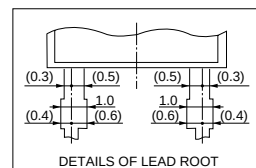
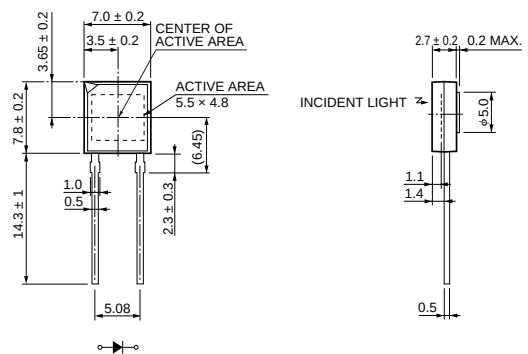
Dimensional outline (unit: mm, tolerance unless otherwise noted: ±0.1)

S2506 series, S6786



KPINA0076EA

S6967 series



KPINA0084EA

HAMAMATSU

HAMAMATSU PHOTONICS K.K., Solid State Division

1126-1 Ichino-cho, Hamamatsu City, 435-8558 Japan, Telephone: (81) 053-434-3311, Fax: (81) 053-434-5184, <http://www.hamamatsu.com>

U.S.A.: Hamamatsu Corporation, 360 Foothill Road, P.O.Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1) 908-231-0960, Fax: (1) 908-231-1218

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49) 08152-3750, Fax: (49) 08152-2658

France: Hamamatsu Photonics France S.A.R.L.: 8, Rue du Saule Trappu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: 33-(1) 69 53 71 00, Fax: 33-(1) 69 53 71 10

United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, United Kingdom, Telephone: (44) 1707-294888, Fax: (44) 1707-325777

North Europe: Hamamatsu Photonics Norden AB: Smidesvägen 12, SE-171 41 Solna, Sweden, Telephone: (46) 8-509-031-00, Fax: (46) 8-509-031-01

Italy: Hamamatsu Photonics Italia S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39) 02-935-81-733, Fax: (39) 02-935-81-741

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