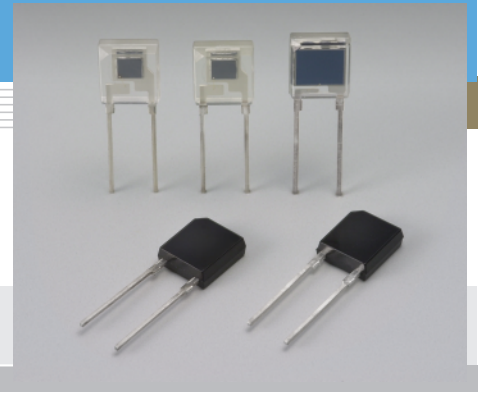


Si PIN photodiode S2506/S6967 series, S6786

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		50		
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				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							26						
S6967-01	700 to 1060						0.63	-		0.48			

*1: V_R=12 V

*2: V_R=10 V

SOLID STATE DIVISION

Spectral response

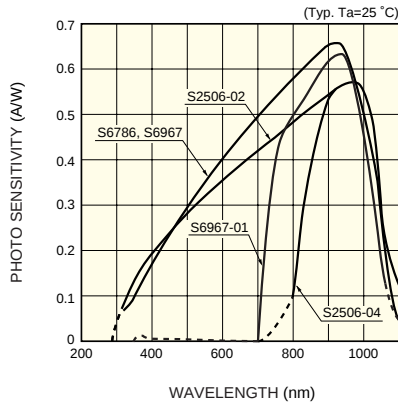
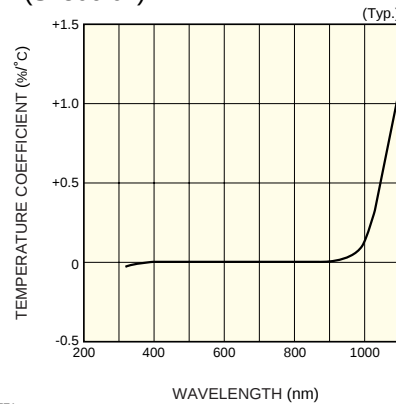
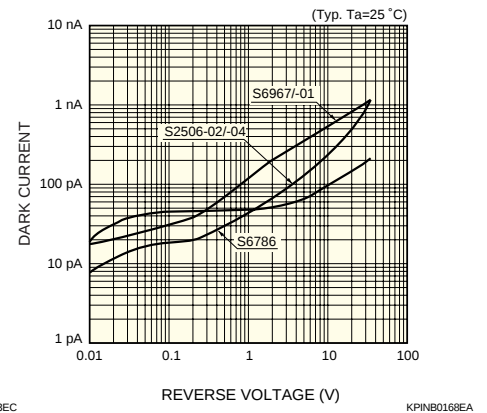


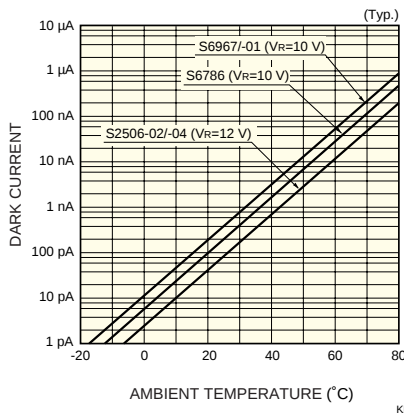
Photo sensitivity temperature characteristic (S2506-02)



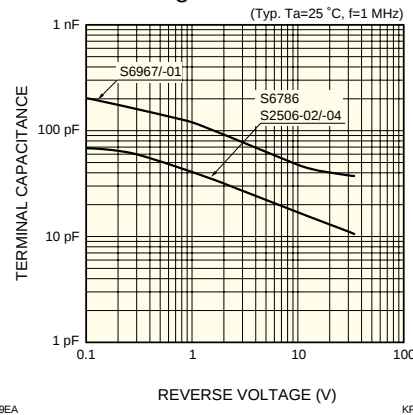
Dark current vs. reverse voltage



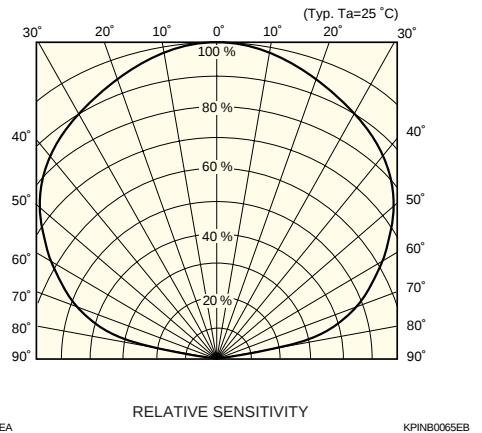
Dark current vs. ambient temperature



Terminal capacitance vs. reverse voltage

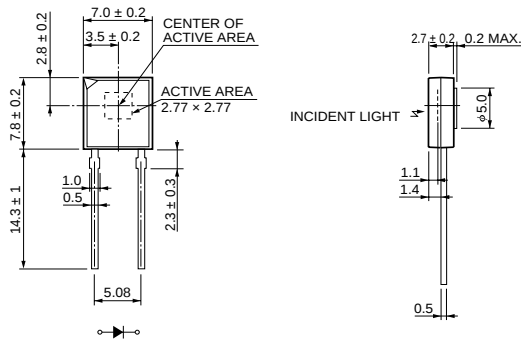


Directivity (S2506-02)

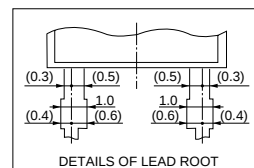
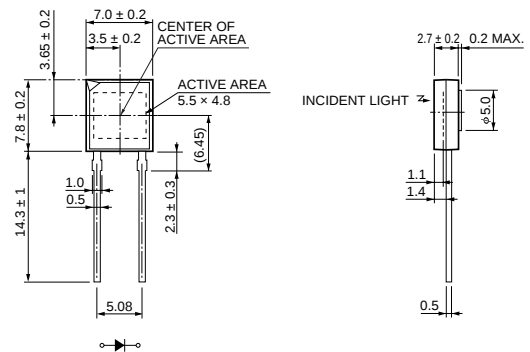


Dimensional outline (unit: mm, tolerance unless otherwise noted: ±0.1)

S2506 series, S6786



S6967 series



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

Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are subject to change without notice. No patent rights are granted to any of the circuits described herein. ©2001 Hamamatsu Photonics K.K.