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PHOTODIODE



Si PIN photodiode
S2506/S6775/S6967 series, S6786

Plastic SIP (Single In-line Package)

S2506/S6775/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 near infrared range or near infrared range only. These Si PIN photodiodes feature high sensitivity, high-speed response and large active areas, allowing you to choose the optimum type that best matches your application.

Features

- 1 S2506-02: Visible to near infrared range
- S2506-04: Visible-cut
- S6786 : Visible to near infrared range, high sensitivity, high-speed response
- S6775, S6967: Visible to near infrared range, high sensitivity, high-speed response, large active area
- S6775-01, S6967-01: Visible-cut, high sensitivity, high-speed response, large active area
- 1 Plastic package: 7 × 7.8 mm
- 1 Active area size
 - S2506 series, S6786: 2.77 × 2.77 mm
 - S6775/S6967 series : 5.5 × 4.8 mm

Applications

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

s General ratings / Absolute maximum ratings

Type No.	Dimensional outline	Package	Active area size (mm)	Effective active area (mm ²)	Absolute maximum ratings			
					Reverse voltage VR Max. (V)	Power dissipation P (mW)	Operating temperature Topr (°C)	Storage temperature Tstg (°C)
S2506-02	⊙	Plastic	2.77 × 2.77	7.7	35	150	-25 to +85	-40 to +100
S2506-04								
S6786								
S6775	⊙	Plastic	5.5 × 4.8	26.4	50	-25 to +85	-40 to +100	
S6775-01								
S6967								
S6967-01								

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

Type No.	Spectral response range λ (nm)	Peak wavelength λp (nm)	Photo sensitivity S (A/W)				Short circuit current Isc (μA)	Dark current ID (nA)		Temp. coefficient of ID T CID (times/°C)	Cut-off frequency f _c (MHz)	Terminal capacitance Ct (pF)	NEP (W/Hz ^{1/2})
			λp	660 nm	780 nm	830 nm		Typ.	Max.				
S2506-02	320 to 1100	1060	0.56	0.40	0.48	0.5	7.3	0.1	10	1.15	25	15	1.0 × 10 ⁻⁴ *1
S2506-04	760 to 1100	1060	0.56	-	-	0.25	4.1	0.1	10	1.15	60	15	1.5 × 10 ⁻⁴ *2
S6786	320 to 1060	1060	0.65	0.45	0.55	0.6	7.5	0.3	5	1.15	60	15	1.5 × 10 ⁻⁴ *2
S6775	320 to 1100	1060	0.7	0.45	0.55	0.6	30	0.5	10	1.15	15	40	1.8 × 10 ⁻⁴ *2
S6775-01	700 to 1100	1060	0.68	0.48	0.54	0.54	21	0.5	10	1.15	15	40	1.9 × 10 ⁻⁴ *2
S6967	320 to 1060	1060	0.65	0.45	0.55	0.6	26	0.5	10	1.15	50	50	2.0 × 10 ⁻⁴ *2
S6967-01	700 to 1060	1060	0.63	0.48	0.54	0.54	18	0.5	10	1.15	50	50	2.0 × 10 ⁻⁴ *2

*1: VR=12 V
 *2: VR=10 V

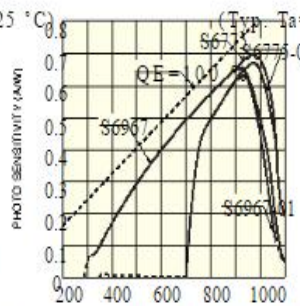
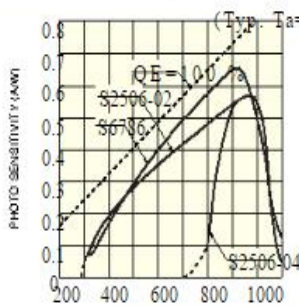


Si PIN photodiode S2506/S6775/S6967 series, S6786

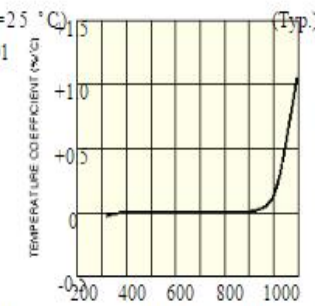
s Spectral response

S2506 series, S6786

S6775/S6967 series



s Photo sensitivity temperature characteristic (S2506-02)

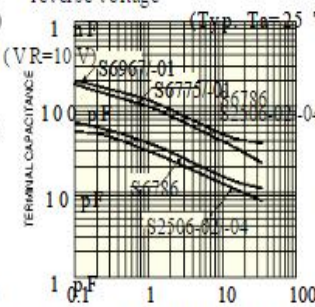
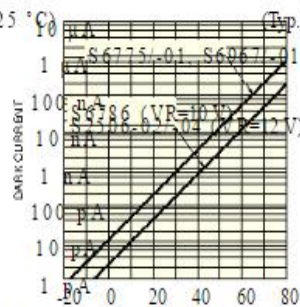
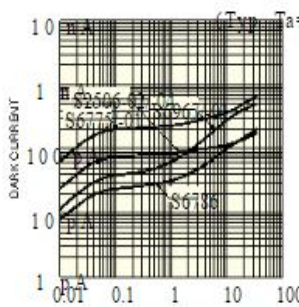


KPINB0348EA KPINB0349EA KPINB0063EC

s Dark current vs. reverse voltage

s Dark current vs. ambient temperature

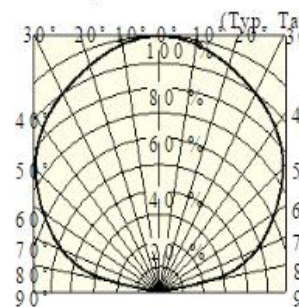
s Terminal capacitance vs. reverse voltage



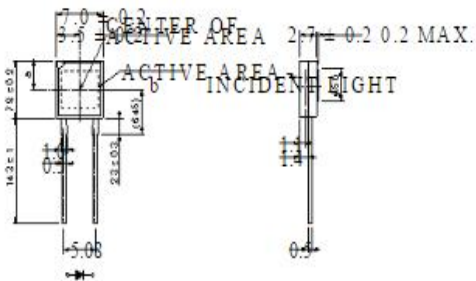
KPINB0168EB KPINB0169EB KPINB0170EB

s Directivity (S2506-02)

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



KPINB0065EB



Type No.	b
S2506	3.881 ± 0.177 × 2.77
S6775/S6967 series	5.05 ± 0.48

DETAILS OF LEAD ROOT

KPINA0084EB