

Si PIN photodiodes



S2506 series

S6775 series

S6967

Plastic SIP (single in-line package)

S2506/S6775 series and S6967 are Si PIN photodiodes with large active areas, molded into a clear or visible-cut plastic SIP 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.

Features

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

Applications

- **FSO (free space optics)**
- **Optical switches**
- **Laser radar, etc.**

勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-54151736
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

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)	Power dissipation P (mW)	Operating temperature T _{opr} (°C)	Storage temperature T _{stg} (°C)
S2506-02	Plastic	2.77 × 2.77	7.7	35	150	-25 to +85	-40 to +100
S2506-04					50		
S6775		5.5 × 4.8	26.4		50		
S6775-01							
S6967							

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							
S6775	320 to 1100	960	0.7	0.45	0.55	0.6	30	0.5 *2	10 *2		15 *2	40 *2		1.8 × 10 ⁻¹⁴ *2
S6775-01	700 to 1100			0.68	-	0.48	0.54							
S6967	320 to 1060	900	0.65	0.45	0.55	0.6	26	5 *2	5 *2	50 *2	50 *2	2.0 × 10 ⁻¹⁴ *2		

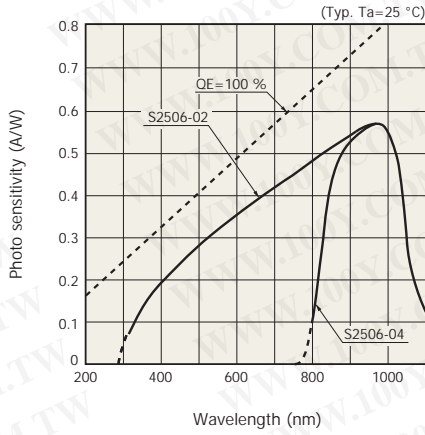
*1: V_R=12 V

*2: V_R=10 V

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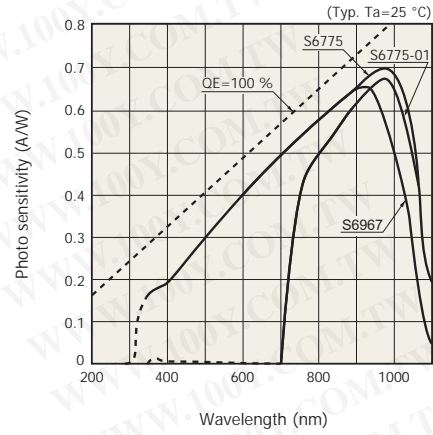
Spectral response

S2506 series



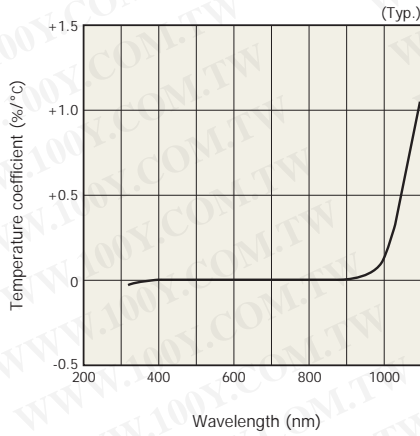
KPINB0348EB

S6775 series, S6967



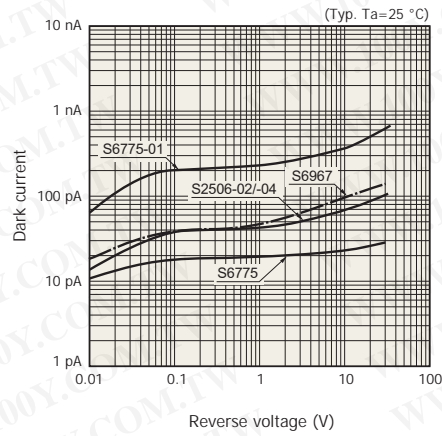
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Photo sensitivity temperature characteristic (S2506-02)



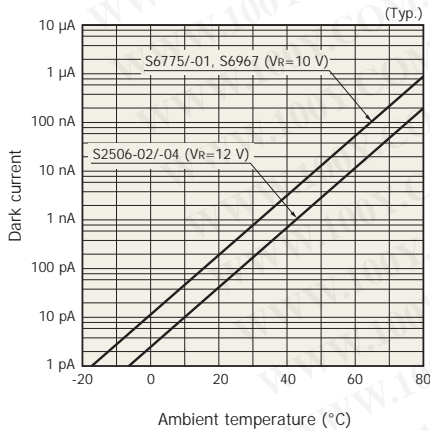
KPINB0063EC

Dark current vs. reverse voltage



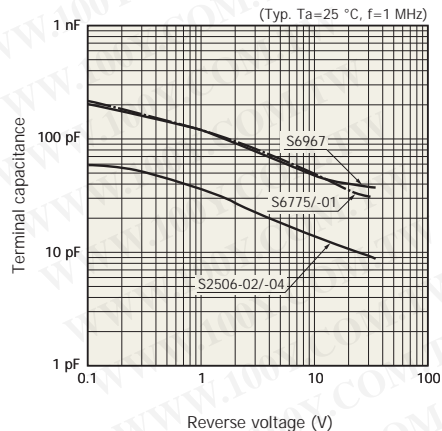
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Dark current vs. ambient temperature



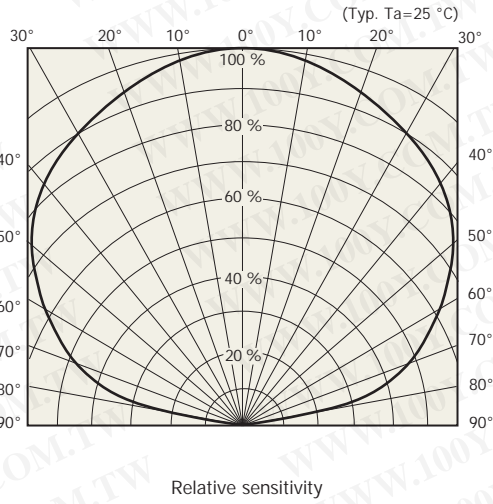
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Terminal capacitance vs. reverse voltage

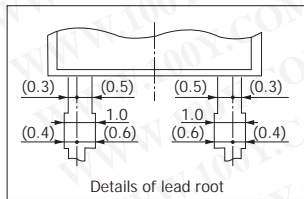
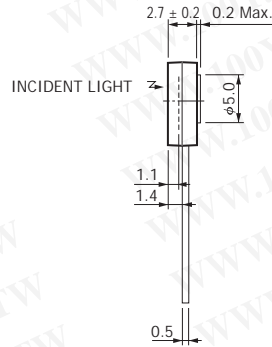
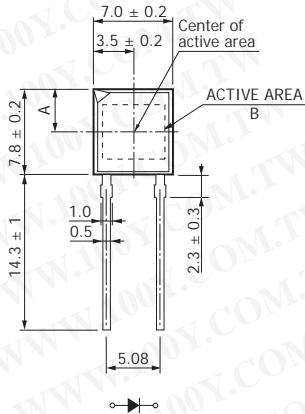


KPINB0170EC

Directivity (S2506-02)



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



Type No.	A	B
S2506 series	2.8 ± 0.2	2.77 × 2.77
S6775/series S6967	3.65 ± 0.2	5.5 × 4.8

Lead surface finish: Silver plating
 Packing: Polyethylene pack [anti-static type]
 (500 pcs/pack)

KPINA0084EC