

Si PIN photodiode

S7797, S5052, S8255, S5573

φ3 mm lens plastic package



These Si PIN photodiodes are molded into to a clear plastic package with a φ3 mm lens. To meet your application, various types are available with different time response characteristics.

Features

- Clear plastic package with φ3 mm lens
- High-speed response
 - S7797: 500 MHz Typ. ($V_R=2.5$ V)
 - S5052: 500 MHz Typ. ($V_R=5$ V)
 - S8255: 200 MHz Typ. ($V_R=5$ V)
 - S5573: 80 MHz Typ. ($V_R=5$ V)

Applications

- Laser diode monitor in optical disk drive (high-speed APC)
- Spatial light transmission

General ratings / Absolute maximum ratings

Type No.	Package (mm)	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)
S7797	Plastic package with lens	φ3.0	7.0	20	50	-25 to +85	-40 to +100
S5052							
S8255							
S5573							

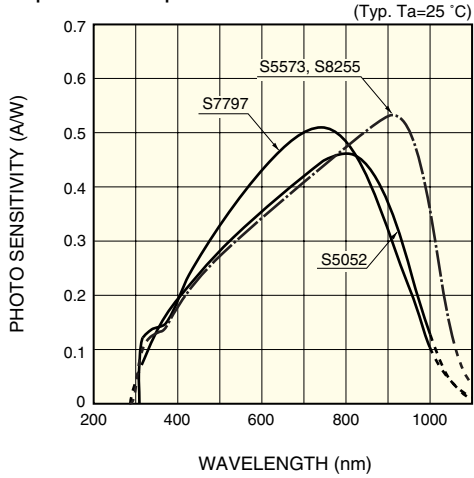
Electrical and optical characteristics (Typ. $T_a=25$ °C, unless otherwise noted)

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 2856 K (μ A)	Dark current I_D (nA)		Temp. coefficient of I_D T_{CID} (times/°C)	Cut-off frequency f_c $R_L=50 \Omega$ -3dB (MHz)	Terminal capacitance C_t $f=1$ MHz (pF)	NEP (W/Hz ^{1/2})
			λ_p	660 nm	780 nm	830 nm		Typ.	Max.				
S7797	320 to 1000	760	0.52	0.48	0.51	0.48	2.8	0.01 *1	0.3 *1	1.15	500 *1	6 *1	3.4×10^{-15} *1
S5052		800	0.46	0.4	0.45	0.45	2.8	0.02 *2	0.3 *2		500 *2	4 *2	5.5×10^{-15} *2
S8255	320 to 1060	900	0.53	0.4	0.48	0.5	4.0	0.01 *2	1 *2	1.15	200 *2	3 *2	3.4×10^{-15} *2
S5573							4.5	0.025 *2	1 *2		80 *2		5.3×10^{-15} *2

*1: $V_R=2.5$ V

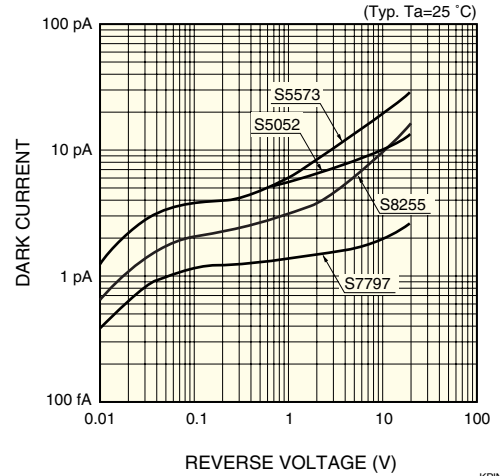
*2: $V_R=5$ V

■ Spectral response



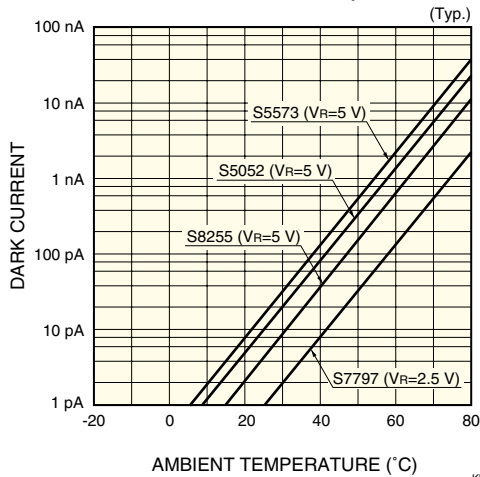
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■ Dark current vs. reverse voltage



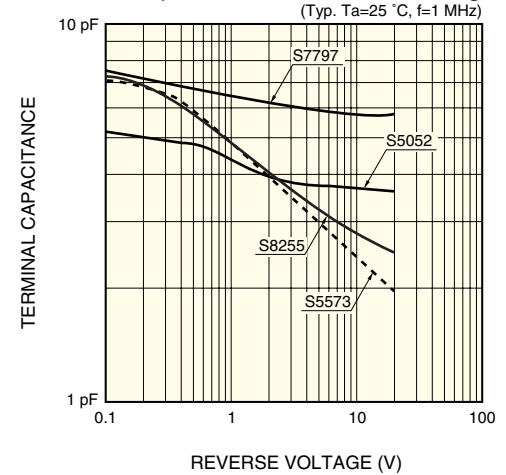
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■ Dark current vs. ambient temperature



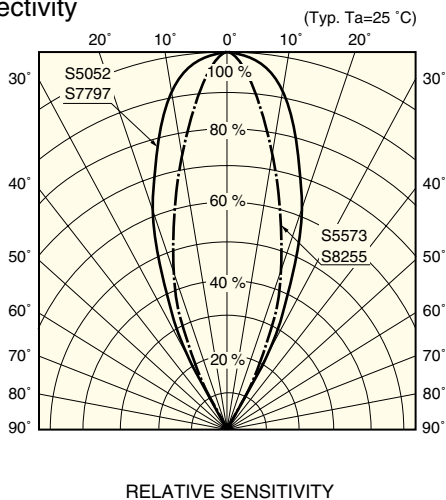
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■ Terminal capacitance vs. reverse voltage



KPINB0179EA

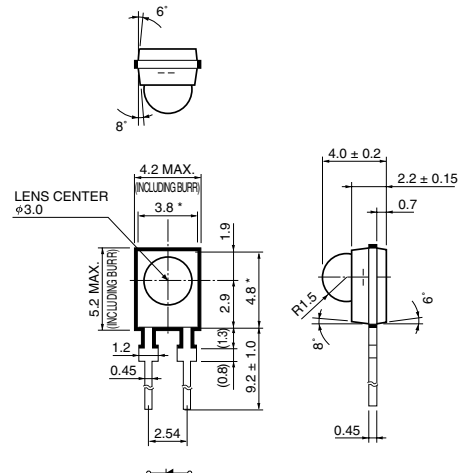
■ Directivity



KPINB0180EA

■ Dimensional outline

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



Chip position accuracy with respect to the package dimension marked *
 $X, Y \pm 0.2$
 $\theta \pm 2^\circ$

KPINA0032EA

HAMAMATSU

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