

Si PIN photodiode

S7379-01, S6695-01, S6058, S7547

Quadrant photodiode / plastic package



These Si PIN photodiodes have a quadrant element molded into clear plastic packages, and feature high sensitivity, low noise and low cross-talk. S7547 is specifically developed for violet laser detection, providing greatly improved sensitivity at $\lambda=410$ nm.

Custom-designed devices (with different element shapes, number of elements, characteristics and packages) are also available to meet your specific needs. Feel free to contact our sales office.

Features

- Clear plastic package (4 × 4.8 mm)
- High sensitivity
- Uniform element characteristic
- Low cross-talk
- Low noise

Applications

- Signal readout for CD, DVD and MO (Magneto Optical) disc
- Laser beam alignment
- Position detection, etc.
- Violet laser detection (S7547)
- Optical disc (DVD, etc.) pickup using violet laser (S7547)

■ General ratings / Absolute maximum ratings

Type No.	Dimensional outline	Active area (mm)	Elements gap (μm)	Absolute maximum ratings		
				Reverse voltage VR Max. (V)	Operating temperature Topr (°C)	Storage temperature Tstg (°C)
S7379-01	①	φ1.0/4 element	20	20	-25 to +85	-40 to +100
S6695-01	②	2.0 × 2.0/4 element	15			
S6058	③	0.6 × 1.2/4 element	10			
S7547						

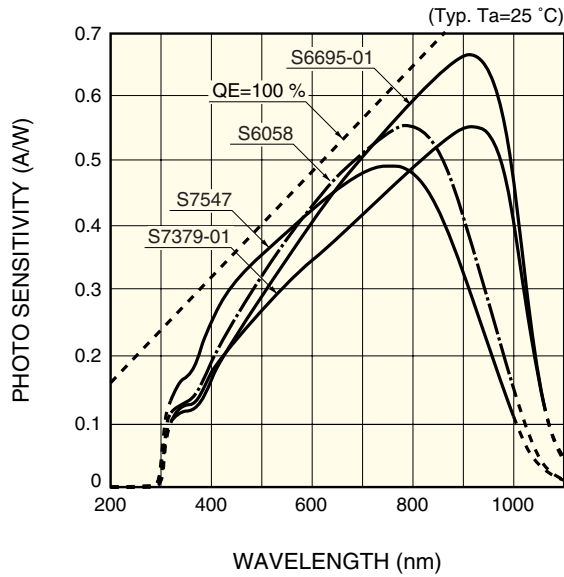
■ Electrical and optical characteristics (Typ. Ta=25 °C, unless otherwise noted, per 1 element)

Type No.	Spectral response range λ (nm)	Peak sensitivity wavelength λ_p (nm)	Photo sensitivity S		Dark current ID VR=10 V All elements		Temp. coefficient of ID TCID (times/°C)	Cut-off frequency fc VR=10 V RL=50 Ω $\lambda=830$ nm (MHz)	Terminal capacitance Ct VR=10 V f=1 MHz (pF)	NEP VR=10 V (W/Hz ^{1/2})
			$\lambda=\lambda_p$ (A/W)	$\lambda=410$ nm (A/W)	Typ. (nA)	Max. (nA)				
S7379-01	320 to 1060	900	0.55	0.19	0.04	0.2	1.15	80	1	6.5×10^{-15}
S6695-01			0.65	0.18	0.1 *1	1 *1		40 *1	3 *1	8.7×10^{-15} *1
S6058	320 to 1000	800	0.55	0.21	0.04 *2	0.2 *2		150 *2	1 *2	6.5×10^{-15} *2
S7547			0.5	0.27	0.01 *2	0.2 *2		500 *2	2 *2	3.6×10^{-15} *2

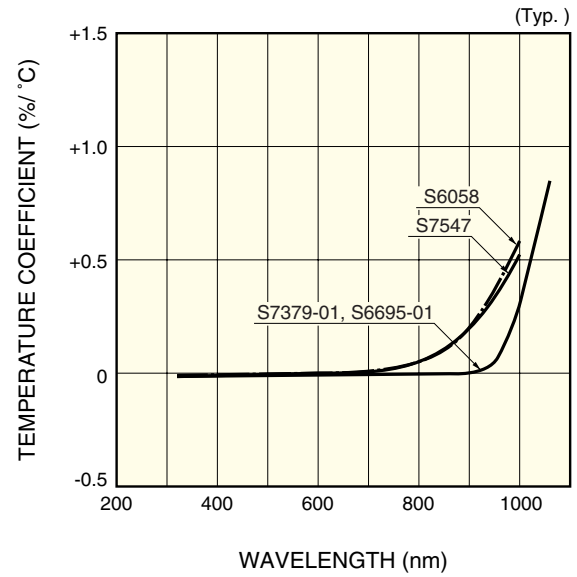
*1: VR=5 V

*2: VR=3 V

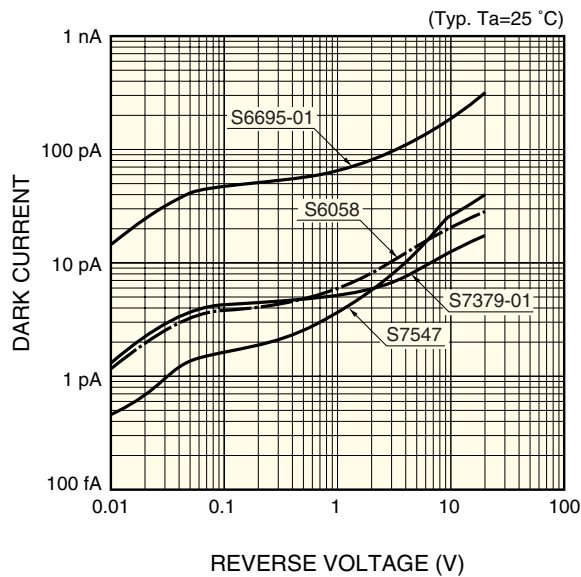
■ Spectral response



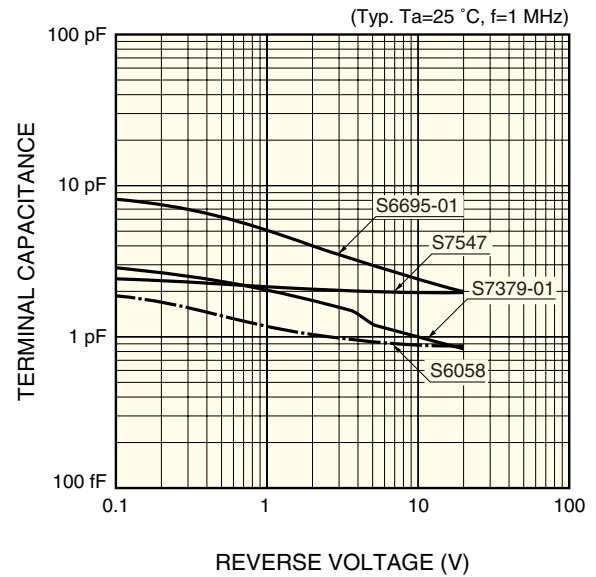
■ Photo sensitivity temperature characteristics



■ Dark current vs. reverse voltage

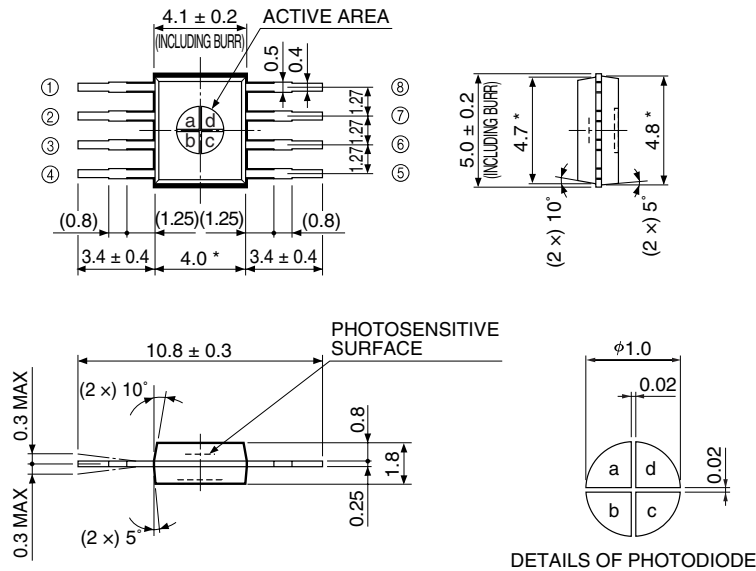


■ Terminal capacitance vs. reverse voltage



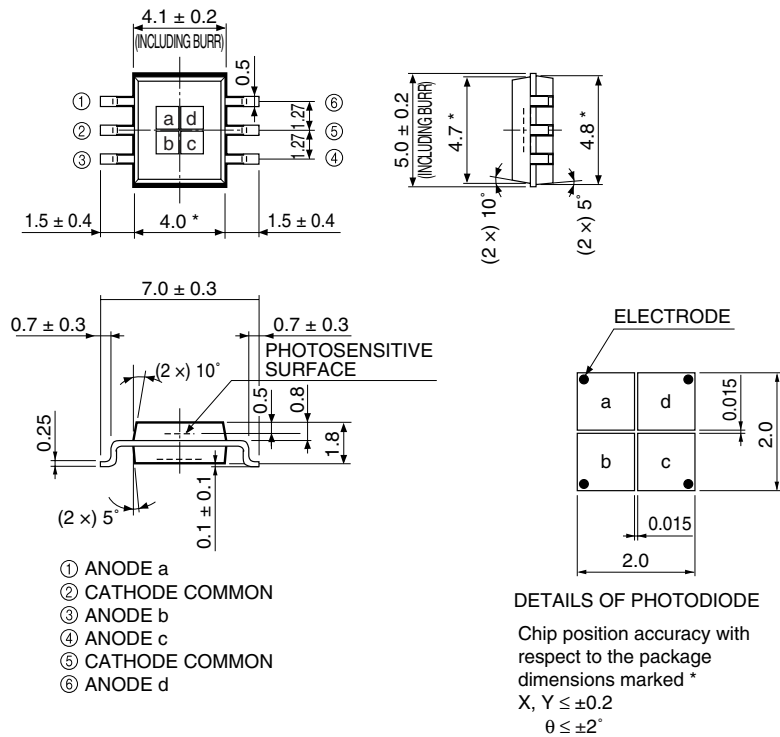
■ Dimensional outlines (unit: mm, tolerance unless otherwise noted: ± 0.1)

① S7379-01



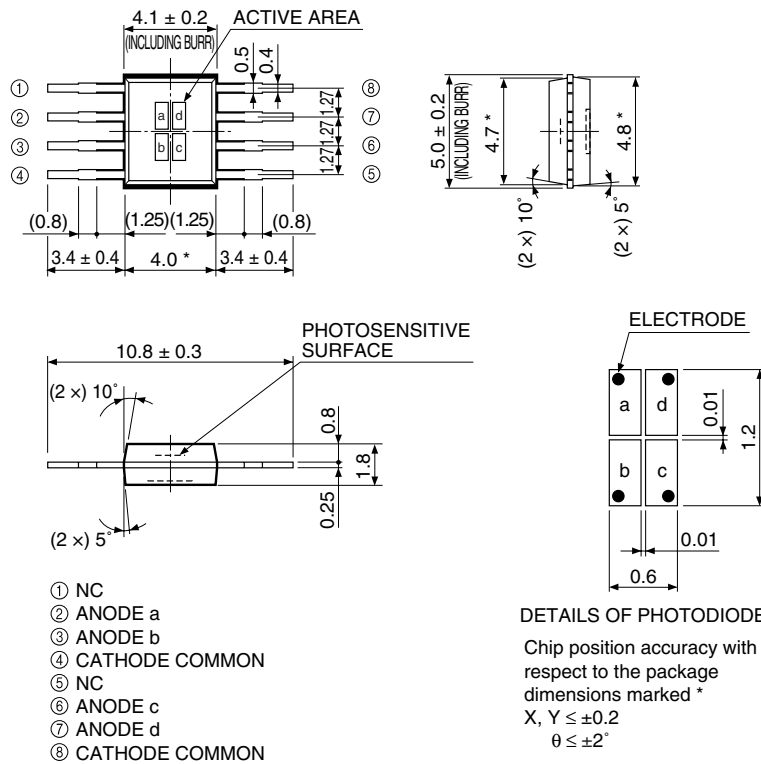
KMPDA0137EA

② S6695-01



KMPDA0121EA

③ S6058, S7547



KMPDA0007EB