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 λ=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 V_R 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 λp (nm)	Photo sensitivity S		Dark current I_D V_R=10 V All elements		Temp. coefficient of I_D T_{CID} (times/°C)	Cut-off frequency fc V_R=10 V R_L=50 Ω λ=830 nm (MHz)	Terminal capacitance Ct V_R=10 V f=1 MHz (pF)	NEP V_R=10 V (W/Hz$^{1/2}$)
			λ=λp (A/W)	λ=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		760	0.5	0.27	0.01 *2	0.2 *2		500 *2	2 *2	3.6×10^{-15} *2

*1: V_R=5 V
*2: V_R=3 V

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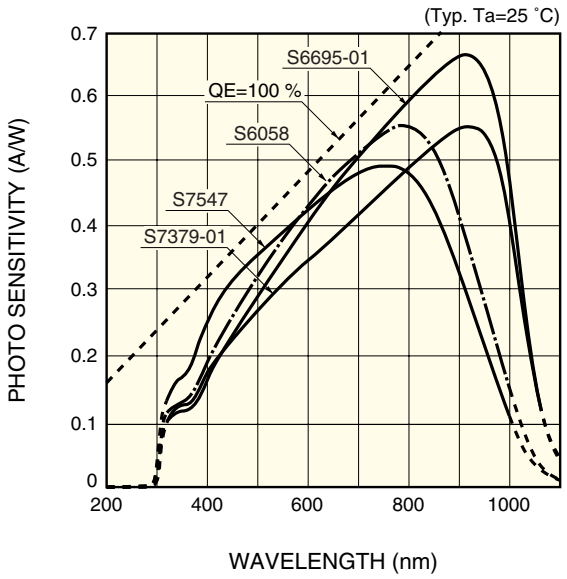
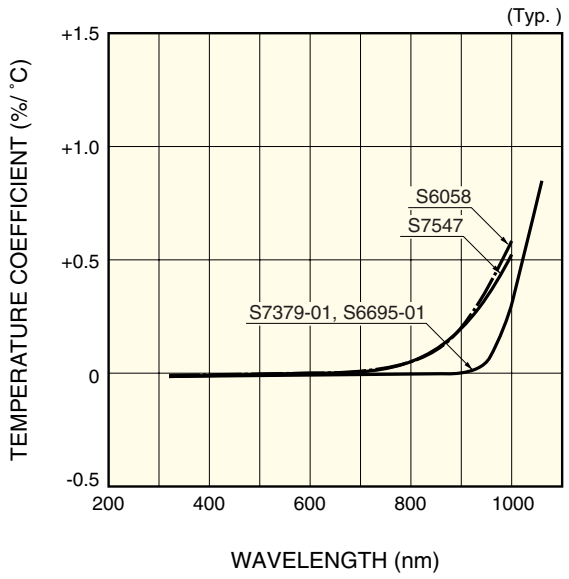
■ Spectral response



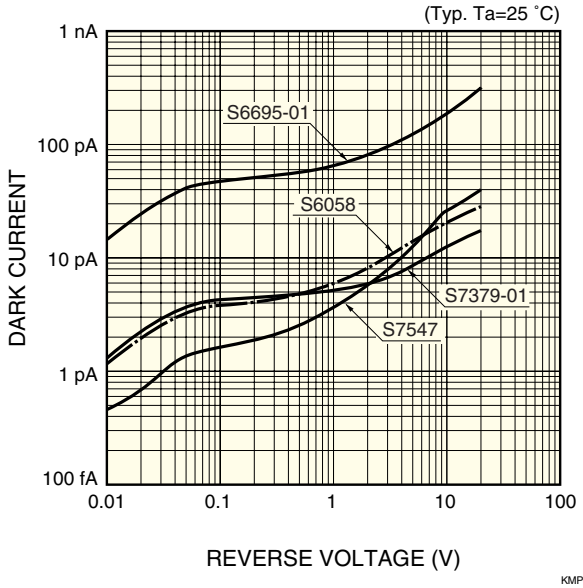
KMPDB0145EA

■ Photo sensitivity temperature characteristics



KMPDB0146EA

■ Dark current vs. reverse voltage



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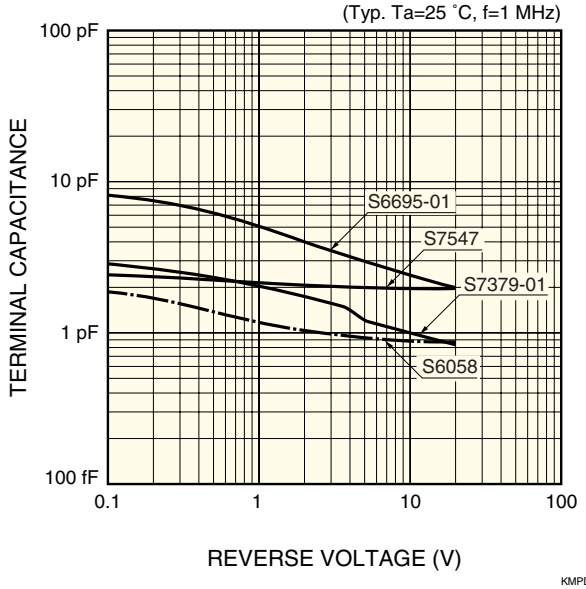
■ Terminal capacitance vs. reverse voltage



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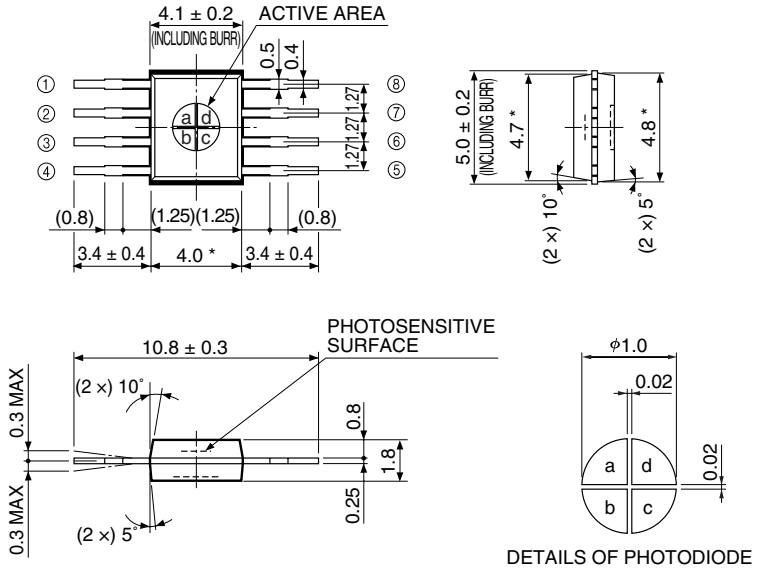
■ Dimensional outlines (unit: mm, tolerance unless otherwise noted: ±0.1)

① S7379-01



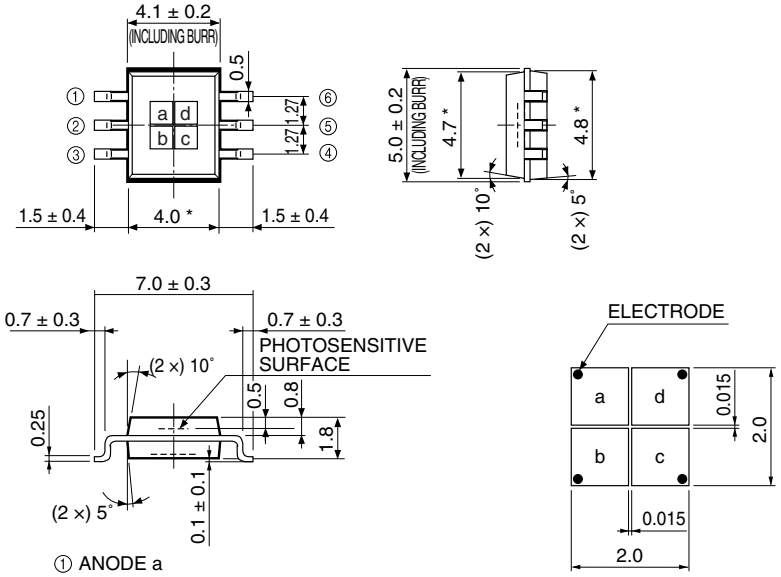
DETAILS OF PHOTODIODE

① NC
② ANODE a
③ ANODE b
④ CATHODE COMMON
⑤ NC
⑥ ANODE c
⑦ ANODE d
⑧ CATHODE COMMON

Chip position accuracy with respect to the package dimensions marked *
X, Y ≤ ±0.2
θ ≤ ±2°

KMPDA0137EA

② S6695-01



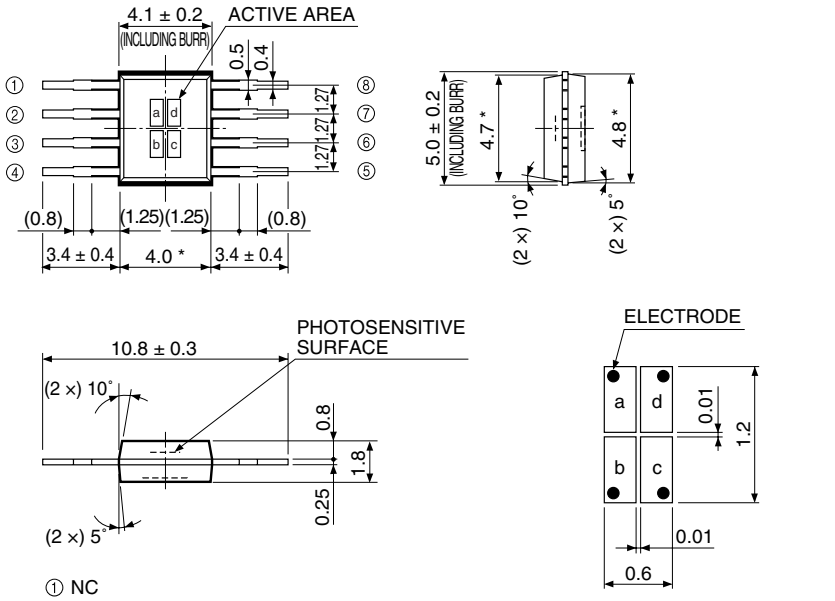
DETAILS OF PHOTODIODE

① ANODE a
② CATHODE COMMON
③ ANODE b
④ ANODE c
⑤ CATHODE COMMON
⑥ ANODE d

Chip position accuracy with respect to the package dimensions marked *
X, Y ≤ ±0.2
θ ≤ ±2°

KMPDA0121EA

③ S6058, S7547



① NC
② ANODE a
③ ANODE b
④ CATHODE COMMON
⑤ NC
⑥ ANODE c
⑦ ANODE d
⑧ CATHODE COMMON

DETAILS OF PHOTODIODE

Chip position accuracy with respect to the package dimensions marked *
X, Y ≤ ±0.2
θ ≤ ±2°

KMPDA0007EB

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 Trapu, 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

Cat. No. KMPD1053E04
Sep. 2001 DN