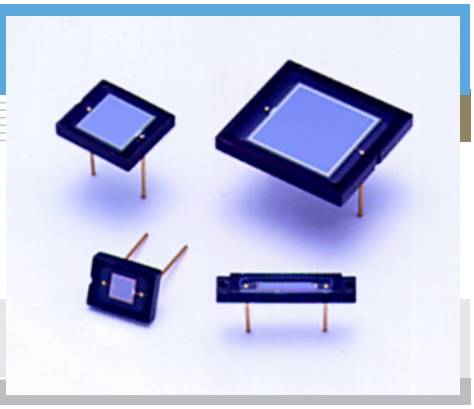
Si photodiode
S1337 series

For UV to IR, precision photometry



Features

- High UV sensitivity: QE 75 % (λ=200 nm)
- Low capacitance

Applications

- Analytical equipment
- Optical measurement equipment

■ General ratings / Absolute maximum ratings

Type No.	Dimensional outline/ Window material *	Package (mm)	Active area size (mm)	Effective active area (mm^2)	Absolute maximum ratings		
					Reverse voltage V_R Max. (V)	Operating temperature Topr (°C)	Storage temperature Tstg (°C)
S1337-16BQ	①/Q	2.7 × 15	1.1 × 5.9	5.9	5	-20 to +60	-20 to +80
S1337-16BR	②/R						
S1337-33BQ	③/Q	6 × 7.6	2.4 × 2.4	5.7			
S1337-33BR	④/R						
S1337-66BQ	⑤/Q	8.9 × 10.1	5.8 × 5.8	33			
S1337-66BR	⑥/R						
S1337-1010BQ	⑦/Q	15 × 16.5	10 × 10	100			
S1337-1010BR	⑧/R						

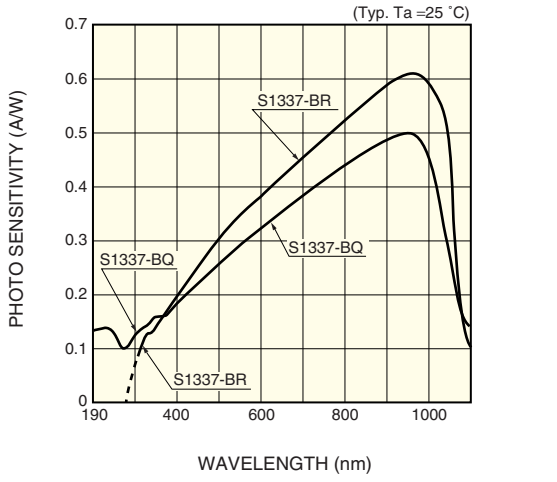
■ Electrical and optical characteristics (Typ. Ta=25 °C, unless otherwise noted)

Type No.	Spectral response range λ (nm)	Peak sensitivity wavelength λp (nm)	Photo sensitivity S (A/W)					Short circuit current Isc 100 lx		Dark current I_D V_R=10 mV Max. (pA)	Temp. coefficient of I_D T_{CID} (times/°C)	Rise time tr V_R=0 V R_L=1 kΩ (μs)	Terminal capacitance Ct V_R=0 V f=10 kHz (pF)	Shunt resistance Rsh V_R=10 mV		NEP (W/$Hz^{1/2}$)
			λp	200 nm		He-Ne laser 633 nm	GaAs LED 930 nm	Min. (μA)	Typ. (μA)					Min. (GΩ)	Typ. (GΩ)	
				Min.	Typ.											
S1337-16BQ	190 to 1100	960	0.5	0.10	0.12	0.33	0.5	4.0	5.3	30	1.15	0.2	65	0.3	1	8.1×10^{-15}
S1337-16BR	320 to 1100		0.62	-	-	0.4	0.6	4.4	6.2							6.5×10^{-15}
S1337-33BQ	190 to 1100		0.5	0.10	0.12	0.33	0.5	4.0	5.0	30		0.2	65	0.3	1	8.1×10^{-15}
S1337-33BR	320 to 1100		0.62	-	-	0.4	0.6	4.4	6.2							6.5×10^{-15}
S1337-66BQ	190 to 1100		0.5	0.10	0.12	0.33	0.5	20	27	100		1	380	0.1	0.4	1.3×10^{-14}
S1337-66BR	320 to 1100		0.62	-	-	0.4	0.6	22	33							1.0×10^{-14}
S1337-1010BQ	190 to 1100		0.5	0.10	0.12	0.33	0.5	65	78	200		3	1100	0.05	0.2	1.8×10^{-14}
S1337-1010BR	320 to 1100		0.62	-	-	0.4	0.6	70	95							1.5×10^{-14}

* Window material Q: quartz glass, R: resin coating

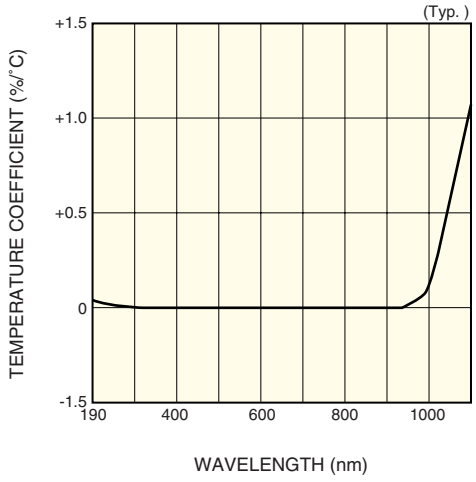
SOLID STATE DIVISION

■ Spectral response



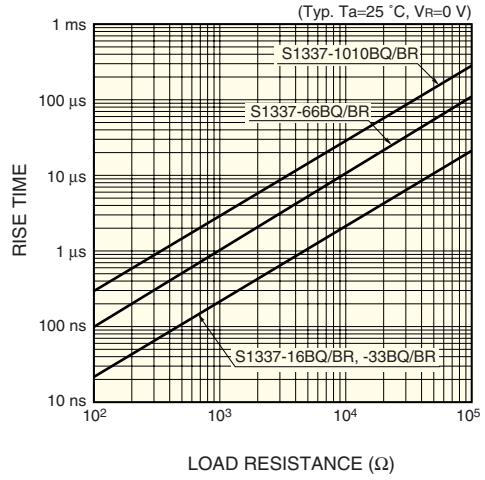
KSPDB0102EA

■ Photo sensitivity temperature characteristic



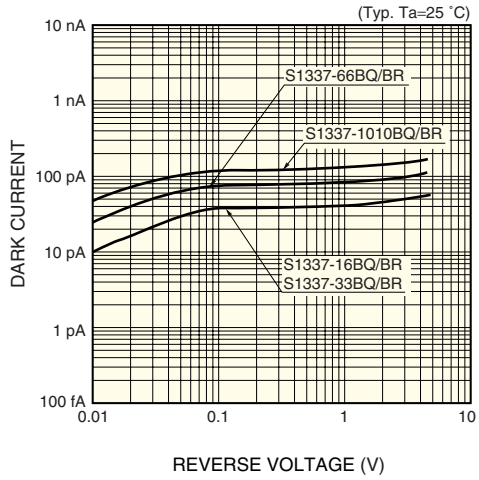
KSPDB0053EB

■ Rise time vs. load resistance



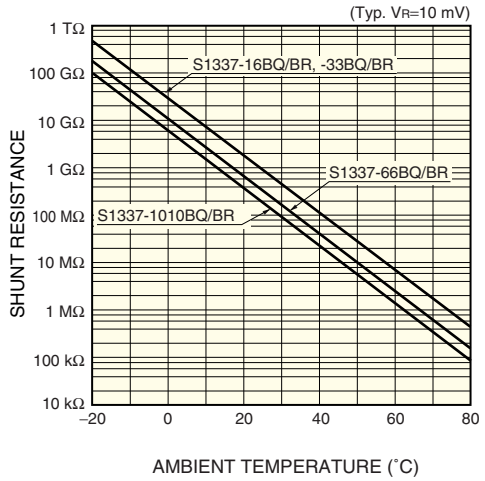
KSPDB0103EA

■ Dark current vs. reverse voltage



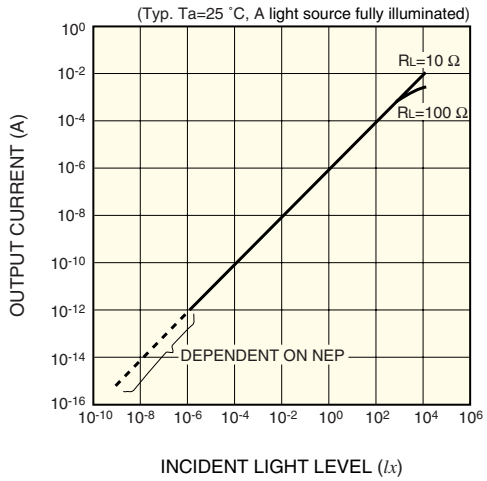
KSPDB0104EA

■ Shunt resistance vs. ambient temperature



KSPDB0105EA

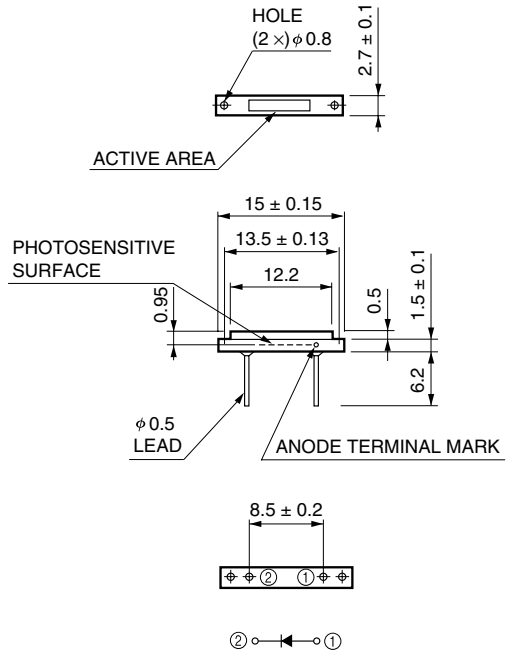
■ Photo sensitivity linearity (S1337-1010BQ / BR)



KSPDB0026EB

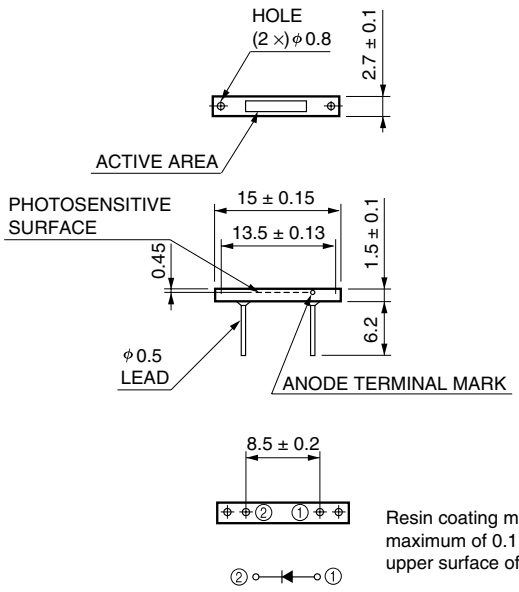
■ Dimensional outlines (unit: mm)

① S1337-16BQ



KSPDA0105EA

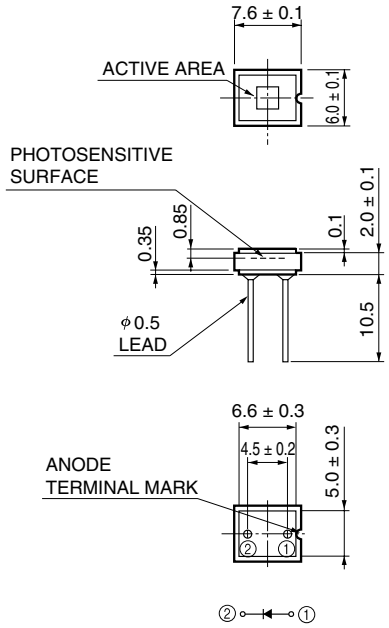
② S1337-16BR



Resin coating may extend a maximum of 0.1 mm above the upper surface of the package.

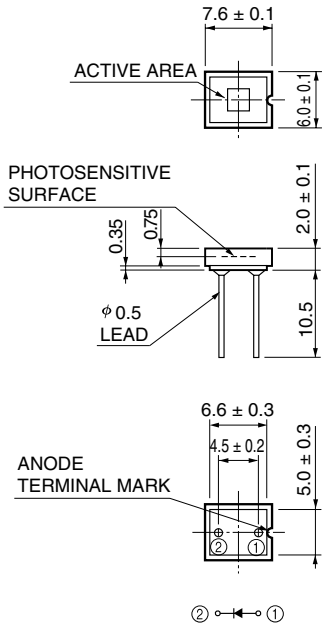
KSPDA0106EA

③ S1337-33BQ



KSPDA0107EA

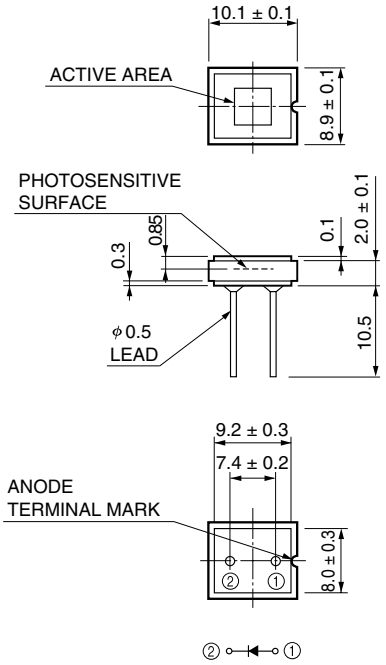
④ S1337-33BR



Resin coating may extend a maximum of 0.1 mm above the upper surface of the package.

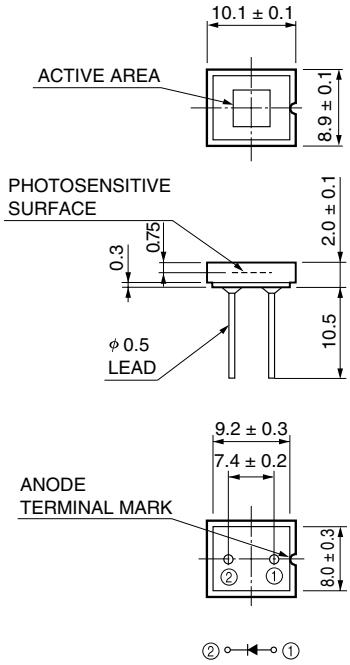
KSPDA0108EA

⑤ S1337-66BQ



KSPDA0109EA

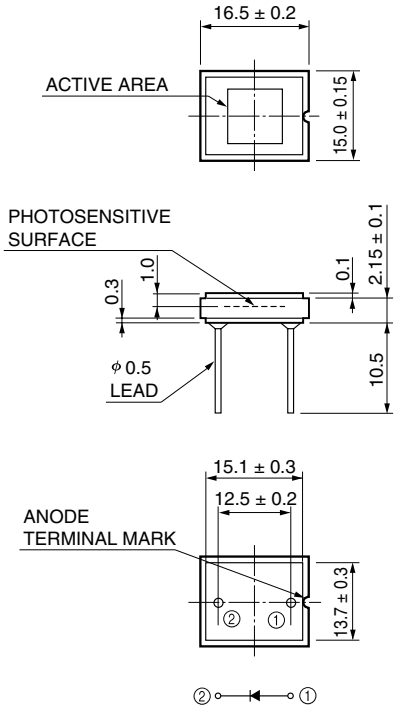
⑥ S1337-66BR



Resin coating may extend a maximum of 0.1 mm above the upper surface of the package.

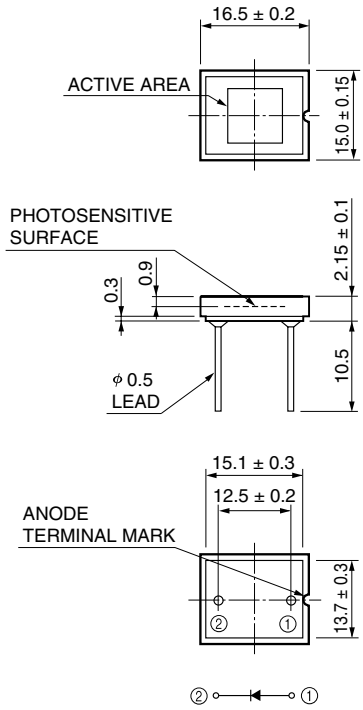
KSPDA0110EA

⑦ S1337-1010BQ



KSPDA0111EA

⑧ S1337-1010BR



Resin coating may extend a maximum of 0.1 mm above the upper surface of the package.

KSPDA0112EA

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. KSPD1032E01
Mar. 2001 DN