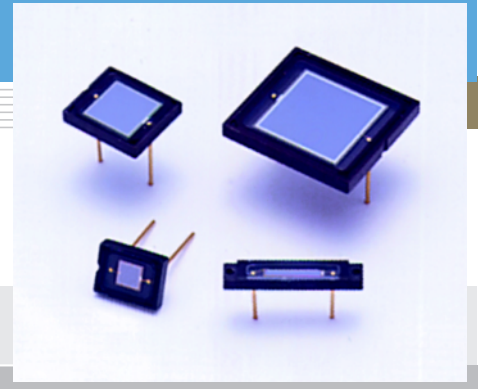


# Si photodiode S1337 series

For UV to IR, precision photometry



### Features

- High UV sensitivity: QE 75 % ( $\lambda=200$  nm)
- Low capacitance

### Applications

- Analytical equipment
- Optical measurement equipment

### General ratings / Absolute maximum ratings

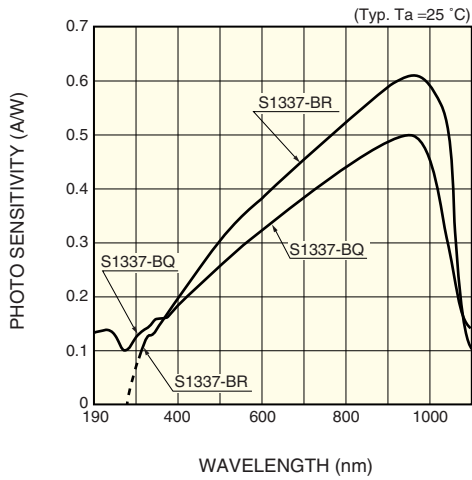
Type No.	Dimensional outline/ Window material *	Package (mm)	Active area size (mm)	Effective active area (mm <sup>2</sup> )	Absolute maximum ratings		
					Reverse voltage V <sub>R</sub> Max. (V)	Operating temperature T <sub>opr</sub> (°C)	Storage temperature T <sub>stg</sub> (°C)
S1337-16BQ	①/Q	2.7 × 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. T<sub>a</sub>=25 °C, unless otherwise noted)

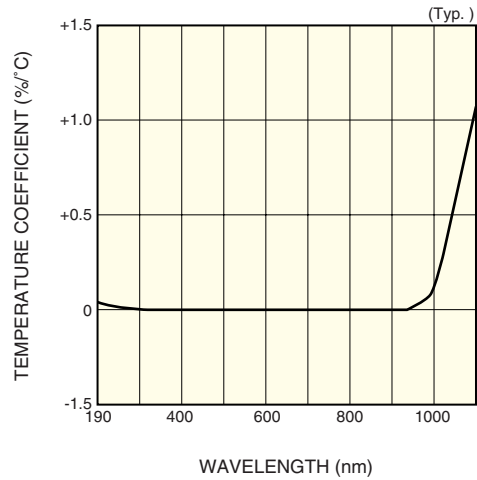
Type No.	Spectral response range $\lambda$ (nm)	Peak sensitivity wavelength $\lambda_p$ (nm)	Photo sensitivity S (A/W)				Short circuit current I <sub>sc</sub> 100 lx		Dark current I <sub>D</sub> V <sub>R</sub> =10 mV Max. (pA)	Temp. coefficient of I <sub>D</sub> T <sub>CID</sub> (times/°C)	Rise time t <sub>r</sub> V <sub>R</sub> =0 V R <sub>L</sub> =1 k $\Omega$ ( $\mu$ s)	Terminal capacitance C <sub>t</sub> V <sub>R</sub> =0 V f=10 kHz (pF)	Shunt resistance R <sub>sh</sub> V <sub>R</sub> =10 mV		NEP (W/Hz <sup>1/2</sup> )			
			$\lambda_p$	200 nm		He-Ne laser 633 nm	GaAs LED 930 nm	Min.					Typ.	Min.		Typ.		
				Min.	Typ.												(G $\Omega$ )	(G $\Omega$ )
S1337-16BQ	190 to 1100	960	0.5	0.10	0.12	0.33	0.5	4.0	5.3	1.15	0.2	65	0.3	1	8.1 × 10 <sup>-15</sup>			
S1337-16BR	320 to 1100		0.62	-	-	0.4	0.6	4.4	6.2						30	6.5 × 10 <sup>-15</sup>		
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 <sup>-15</sup>
S1337-33BR	320 to 1100		0.62	-	-	0.4	0.6	4.4	6.2									6.5 × 10 <sup>-15</sup>
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 <sup>-14</sup>
S1337-66BR	320 to 1100		0.62	-	-	0.4	0.6	22	33									1.0 × 10 <sup>-14</sup>
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 <sup>-14</sup>
S1337-1010BR	320 to 1100		0.62	-	-	0.4	0.6	70	95									1.5 × 10 <sup>-14</sup>

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

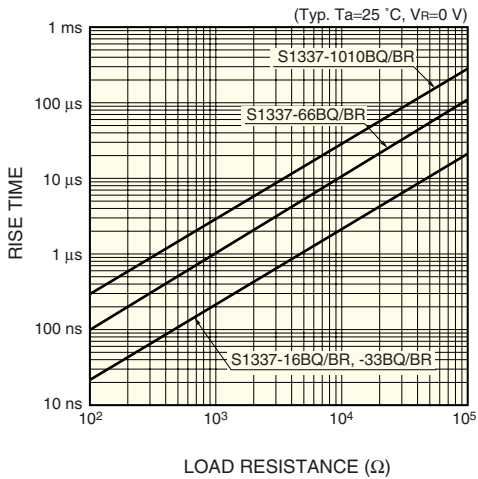
■ Spectral response



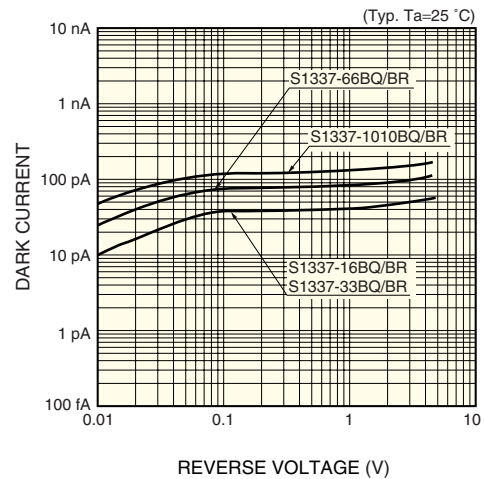
■ Photo sensitivity temperature characteristic



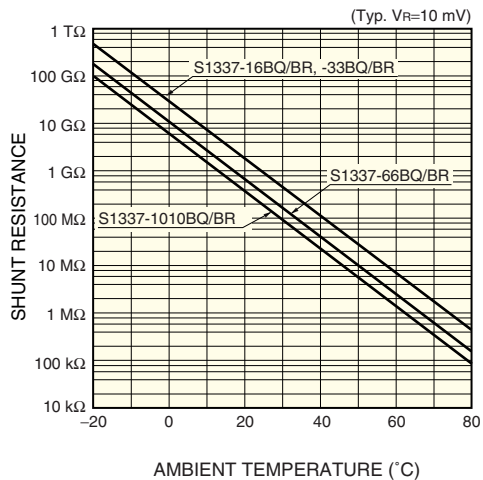
■ Rise time vs. load resistance



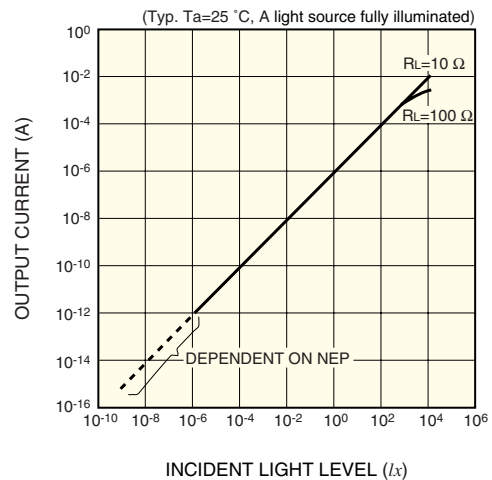
■ Dark current vs. reverse voltage



■ Shunt resistance vs. ambient temperature

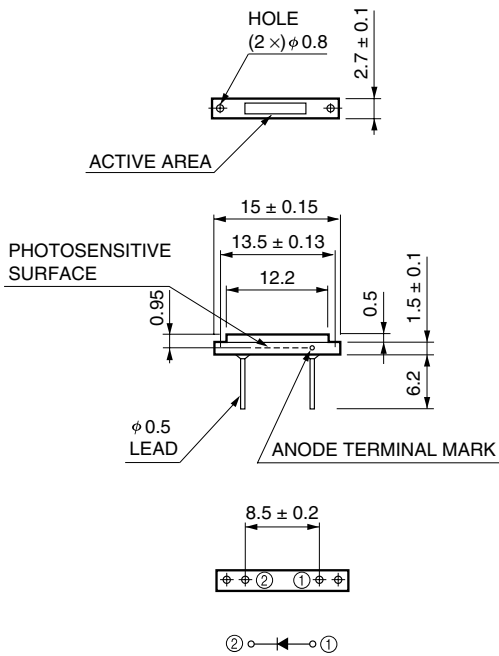


■ Photo sensitivity linearity (S1337-1010BQ / BR)



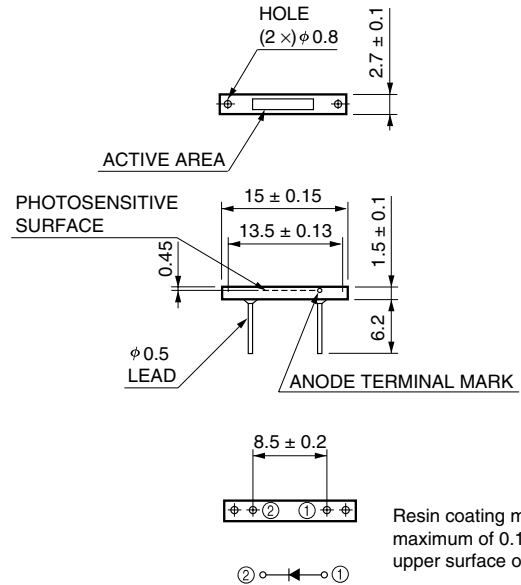
## Dimensional outlines (unit: mm)

① S1337-16BQ



KSPDA0105EA

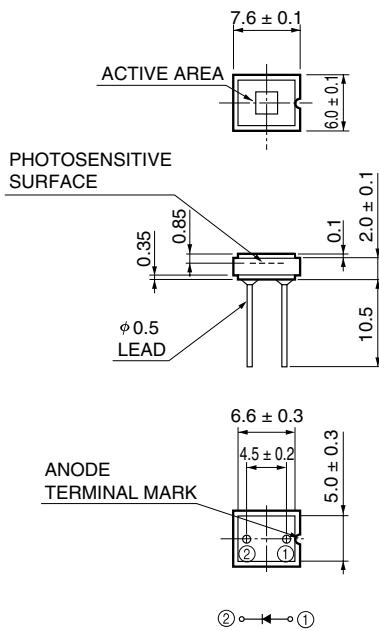
② S1337-16BR



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

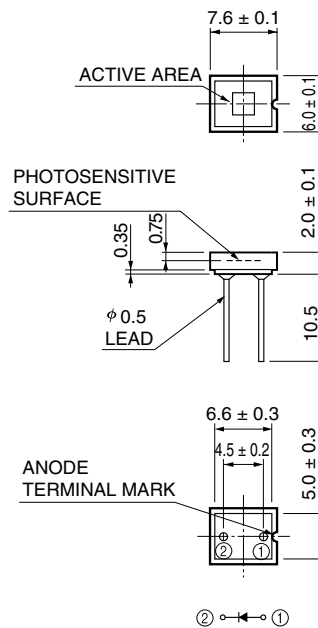
KSPDA0106EA

③ S1337-33BQ



KSPDA0107EA

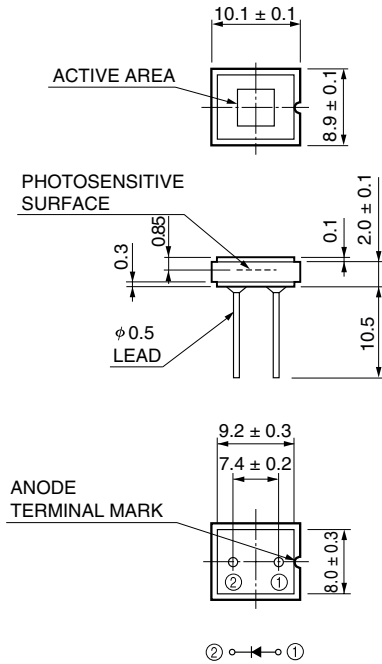
④ S1337-33BR



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

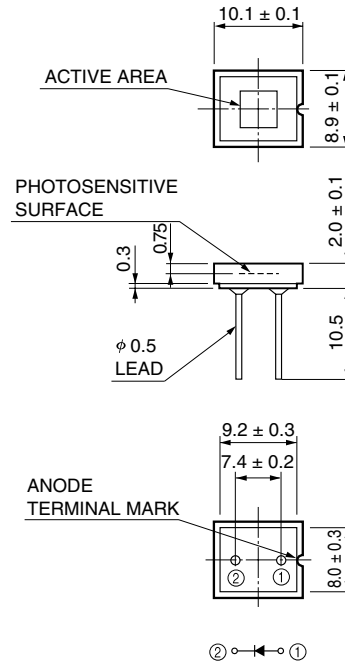
KSPDA0108EA

⑤ S1337-66BQ



KSPDA0109EA

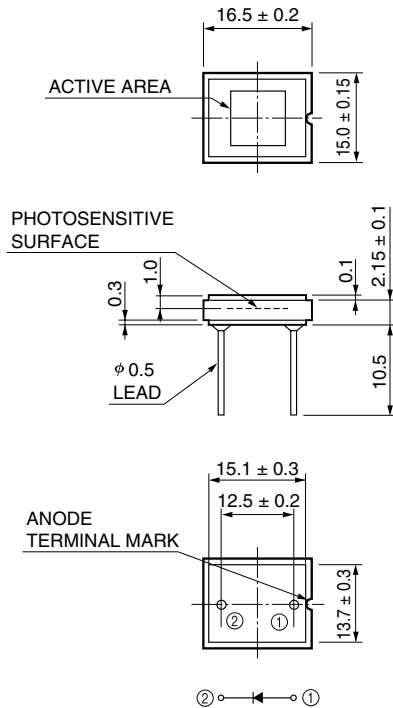
⑥ S1337-66BR



KSPDA0110EA

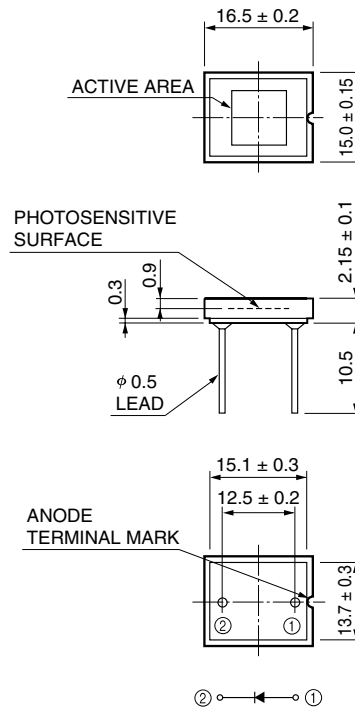
Resin coating may extend a maximum of 0.1 mm above the upper surface of the package.

⑦ S1337-1010BQ



KSPDA0111EA

⑧ S1337-1010BR



KSPDA0112EA

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

## HAMAMATSU

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