

## S1227 series

**For UV to visible, precision photometry;  
suppressed IR sensitivity**

### Features

- ➔ High UV sensitivity (quartz window type): QE 75 % ( $\lambda=200$  nm)
- ➔ Suppressed IR sensitivity
- ➔ Low dark current

### Applications

- ➔ Analytical equipment
- ➔ Optical measurement equipment, etc.

### Structure / Absolute maximum ratings

Type No.	Window material	Package (mm)	Photosensitive area size (mm)	Effective photosensitive area (mm <sup>2</sup> )	Absolute maximum ratings		
					Reverse voltage $V_R$ max (V)	Operating temperature $T_{opr}$ (°C)	Storage temperature $T_{stg}$ (°C)
S1227-16BQ	Quartz	2.7 × 15	1.1 × 5.9	5.9	5	-20 to +60	-20 to +80
S1227-16BR	Resin potting						
S1227-33BQ	Quartz	6 × 7.6	2.4 × 2.4	5.7			
S1227-33BR	Resin potting						
S1227-66BQ	Quartz	8.9 × 10.1	5.8 × 5.8	33			
S1227-66BR	Resin potting						
S1227-1010BQ	Quartz	15 × 16.5	10 × 10	100			
S1227-1010BR	Resin potting						

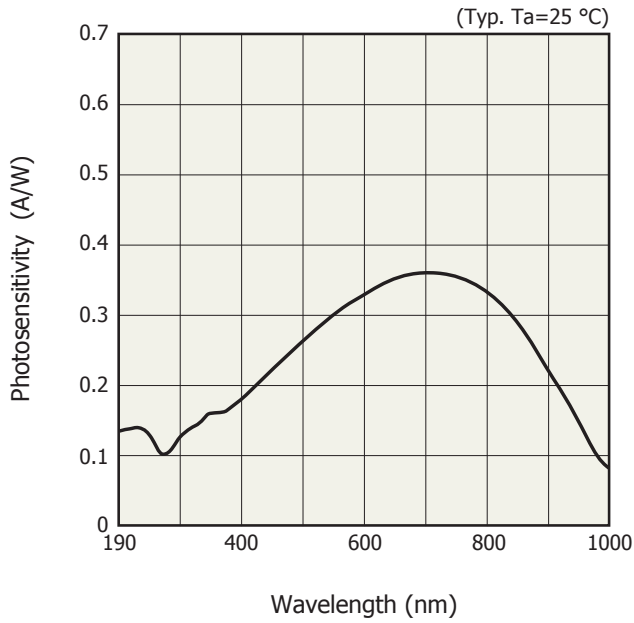
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

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

Type No.	Spectral response range $\lambda$ (nm)	Peak sensitivity wavelength $\lambda_p$ (nm)	Photosensitivity S (A/W)				Short circuit current $I_{sc}$ 100 lx		Dark current $I_D$ $V_R=10$ mV Max. (pA)	Temp. coefficient $T_{CD}$ (times/°C)	Rise time $t_r$ $V_R=0$ V $R_L=1$ k $\Omega$ ( $\mu$ s)	Terminal capacitance $C_t$ $V_R=0$ V $f=10$ kHz (pF)	Shunt resistance $R_{sh}$ $V_R=10$ mV (G $\Omega$ )		Noise equivalent power NEP (W/Hz <sup>1/2</sup> )
			$\lambda_p$	200 nm		He-Ne Laser 633 nm	Min. ( $\mu$ A)	Typ. ( $\mu$ A)					Min.	Typ.	
				Min.	Typ.										
S1227-16BQ	190 to 1000	720	0.36	0.10	0.12	0.34	2.0	3.2	5	1.12	0.5	170	2	20	$2.5 \times 10^{-15}$
S1227-16BR	340 to 1000		0.43	-	-	0.39	2.2	3.7							$2.1 \times 10^{-15}$
S1227-33BQ	190 to 1000		0.36	0.10	0.12	0.34	2.0	3.0	5		0.5	160	2	20	$2.5 \times 10^{-15}$
S1227-33BR	340 to 1000		0.43	-	-	0.39	2.2	3.7							$2.1 \times 10^{-15}$
S1227-66BQ	190 to 1000		0.36	0.10	0.12	0.34	11	16	20		2	950	0.5	5	$5.0 \times 10^{-15}$
S1227-66BR	340 to 1000		0.43	-	-	0.39	13	19							$4.2 \times 10^{-15}$
S1227-1010BQ	190 to 1000		0.36	0.10	0.12	0.34	32	44	50		7	3000	0.2	2	$8.0 \times 10^{-15}$
S1227-1010BR	340 to 1000		0.43	-	-	0.39	36	53							$6.7 \times 10^{-15}$

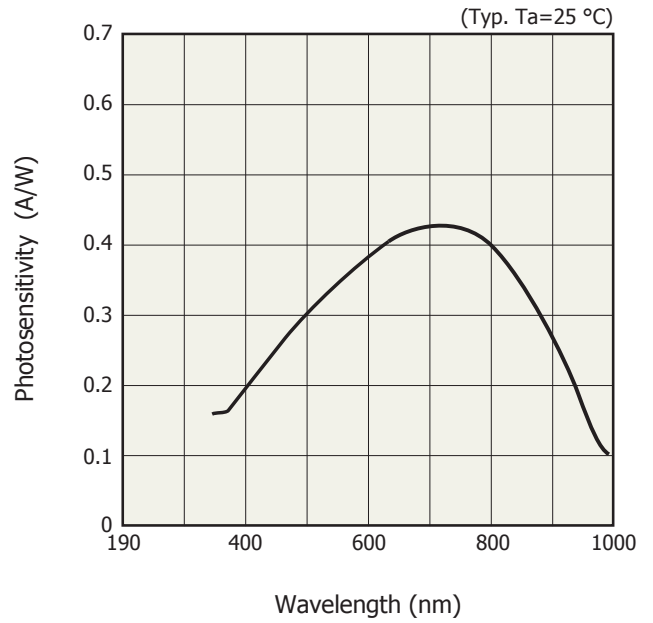
**Spectral response**

S1227-BQ series



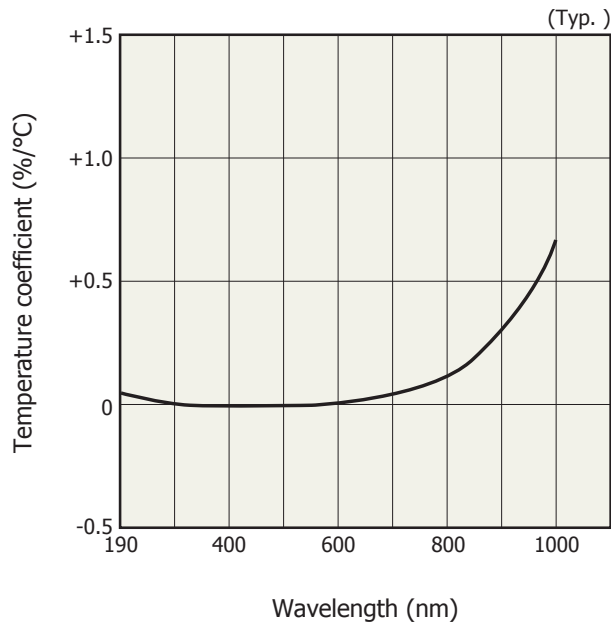
KSPDB0094EC

S1227-BR series



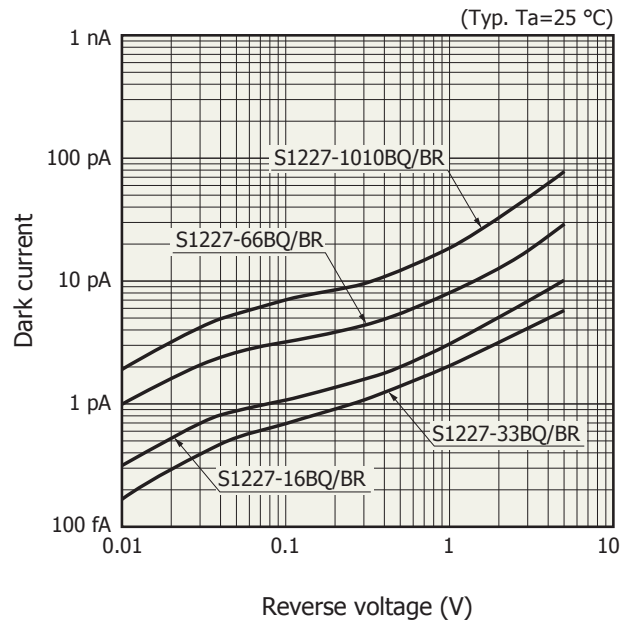
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**Photosensitivity temperature characteristics**



KSPDB0030EB

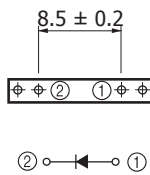
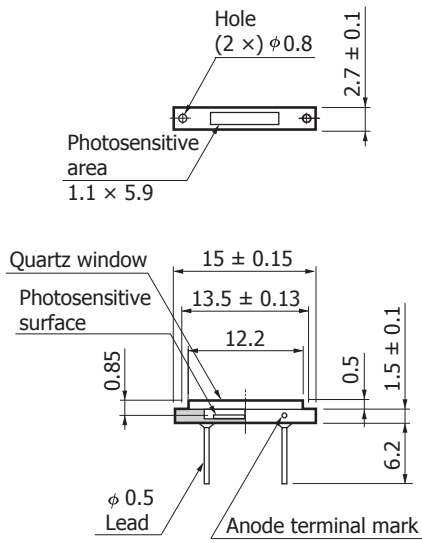
**Dark current vs. reverse voltage**



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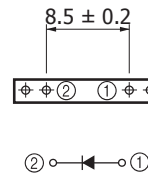
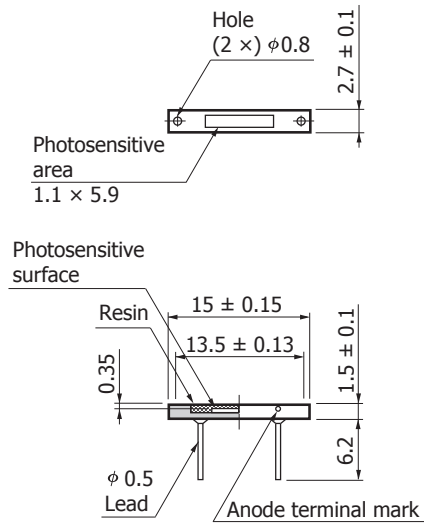
Dimensional outlines (unit: mm)

S1227-16BQ



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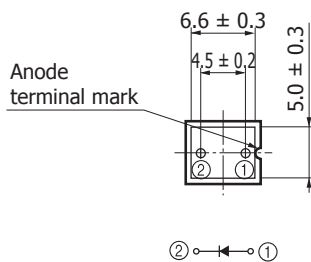
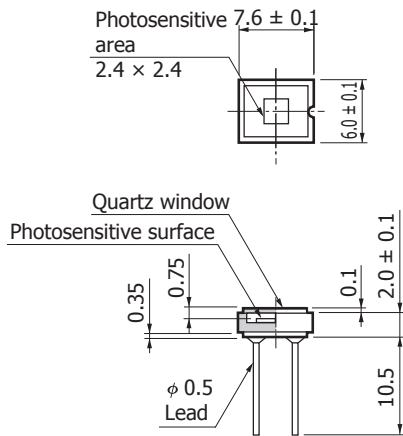
S1227-16BR



The resin potting may extend a maximum of 0.1 mm above the upper surface of the package.

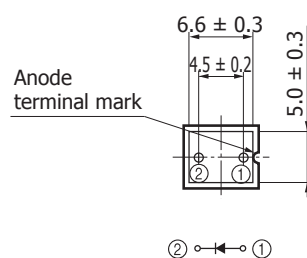
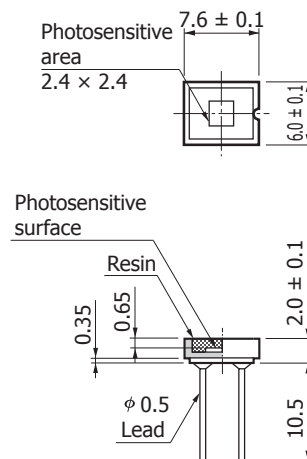
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S1227-33BQ



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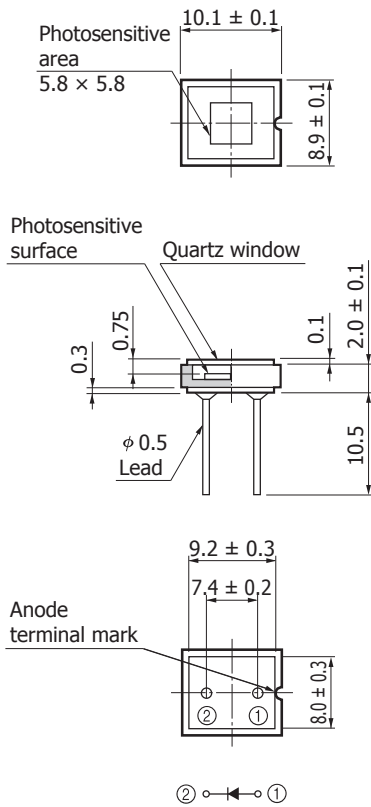
S1227-33BR



The resin potting may extend a maximum of 0.1 mm above the upper surface of the package.

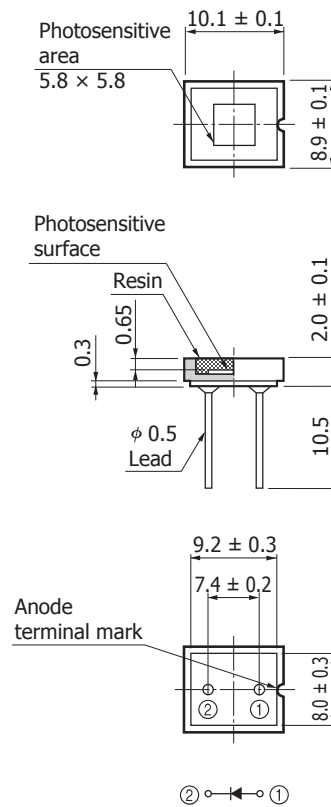
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S1227-66BQ



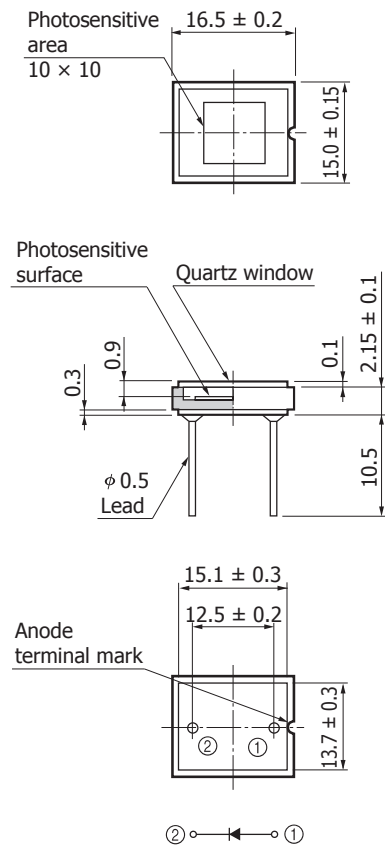
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S1227-66BR



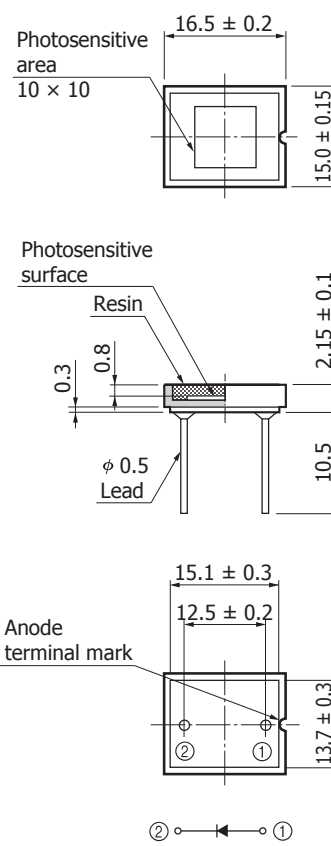
KSPDA0099EB

S1227-1010BQ



KSPDA0100EB

S1227-1010BR



KSPDA0101EB

Information described in this material is current as of November, 2012.

Product specifications are subject to change without prior notice due to improvements or other reasons. Before assembly into final products, please contact us for the delivery specification sheet to check the latest information.

Type numbers of products listed in the delivery specification sheets or supplied as samples may have a suffix "(X)" which means preliminary specifications or a suffix "(Z)" which means developmental specifications.

The product warranty is valid for one year after delivery and is limited to product repair or replacement for defects discovered and reported to us within that one year period. However, even if within the warranty period we accept absolutely no liability for any loss caused by natural disasters or improper product use.

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# HAMAMATSU

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