

Si photodiodes

S1336 series

UV to near IR for precision photometry

Features

- High sensitivity in UV range
- Low capacitance
- High reliability

Applications

- Analytical instruments
- Optical measurement equipment

Structure / Absolute maximum ratings

Type no.	Dimensional outline/ Window material*	Package	Photosensitive area size (mm)	Absolute maximum ratings		
				Reverse voltage VR max (V)	Operating temperature Topr (°C)	Storage temperature Tstg (°C)
S1336-18BQ	(1)/Q	TO-18	1.1 × 1.1	5	-20 to +60	-55 to +80
S1336-18BK	(2)/K				-40 to +100	-55 to +125
S1336-5BQ	(3)/Q	TO-5	2.4 × 2.4		-20 to +60	-55 to +80
S1336-5BK	(4)/K				-40 to +100	-55 to +125
S1336-44BQ	(5)/Q		3.6 × 3.6		-20 to +60	-55 to +80
S1336-44BK	(6)/K				-40 to +100	-55 to +125
S1336-8BQ	(7)/Q	TO-8	5.8 × 5.8		-20 to +60	-55 to +80
S1336-8BK	(8)/K				-40 to +100	-55 to +125

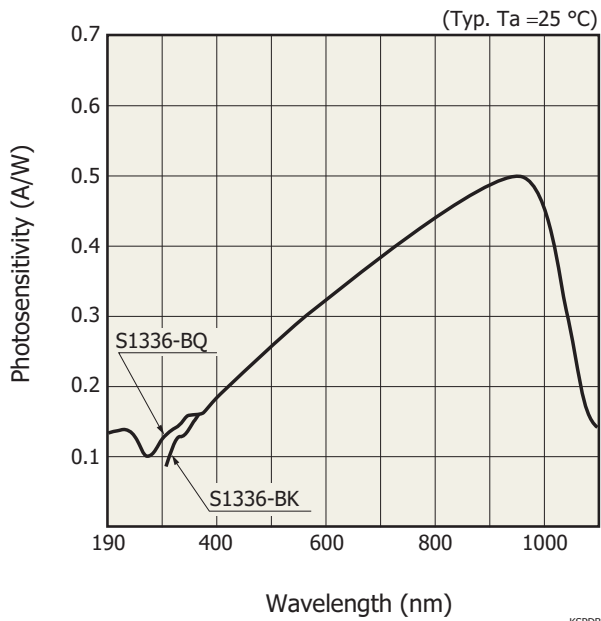
Note: Exceeding the absolute maximum ratings even momentarily may cause a drop in product quality. Always be sure to use the product within the absolute maximum ratings.

* Window material K=borosilicate glass, Q=quartz glass

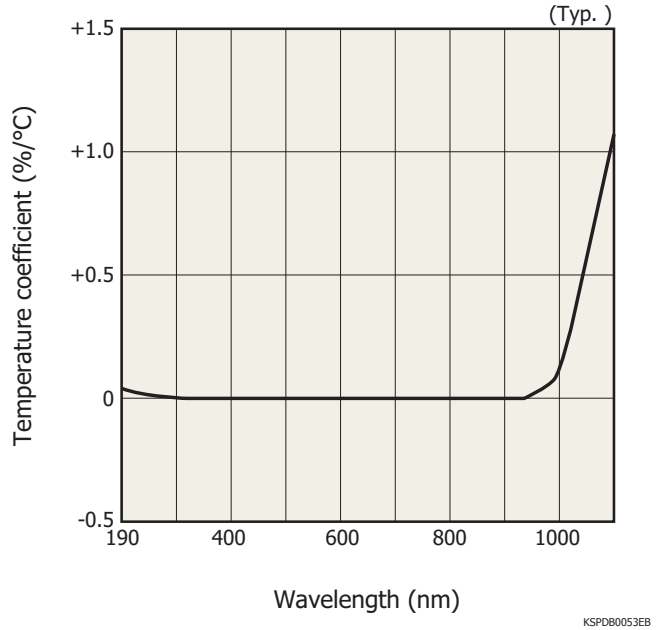
Electrical and optical characteristics (Typ. Ta=25 °C, unless otherwise noted)

Type no.	Spectral response range λ (nm)	Peak sensitivity wavelength λ_p (nm)	Photosensitivity S (A/W)			Short circuit current Isc 100 lx	Dark current ID VR=10 mV max. (pA)	Temp. coefficient of ID TCID (times/°C)	Rise time tr VR=0 V RL=1 kΩ (μs)	Terminal capacitance Ct VR=0 V f=10 kHz (pF)	Shunt resistance Rsh VR=10 mV		Noise equivalent power NEP (W/Hz ^{1/2})								
			λ_p	200 nm							He-Ne laser 633 nm	Min. (μA)		Typ. (μA)	Min. (GΩ)	Typ. (GΩ)					
				Min.	Typ.																
S1336-18BQ	190 to 1100	960	0.5	0.33	0.33	1	1.2	20	1.15	0.1	20	0.5	2	5.7×10^{-15}							
S1336-18BK	320 to 1100														-	-	0.9	1.0	0.5	2	
S1336-5BQ	190 to 1100														0.10	0.12	4	5	0.3	1	8.1×10^{-15}
S1336-5BK	320 to 1100														-	-	8	10	0.2	0.6	1.0×10^{-14}
S1336-44BQ	190 to 1100														0.10	0.12	22	28	0.1	0.4	1.3×10^{-14}
S1336-44BK	320 to 1100														-	-	-	-	-	-	-
S1336-8BQ	190 to 1100														0.10	0.12	-	-	-	-	-
S1336-8BK	320 to 1100														-	-	-	-	-	-	-

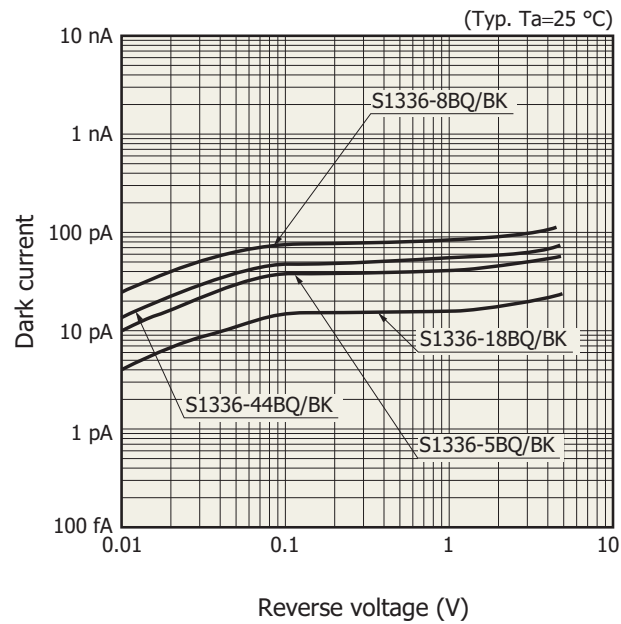
▣ Spectral response



▣ Photosensitivity temperature characteristic

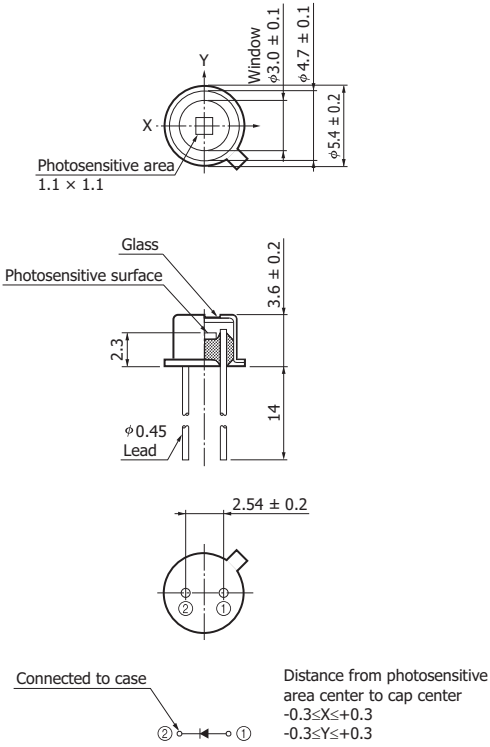


▣ Dark current vs. reverse voltage



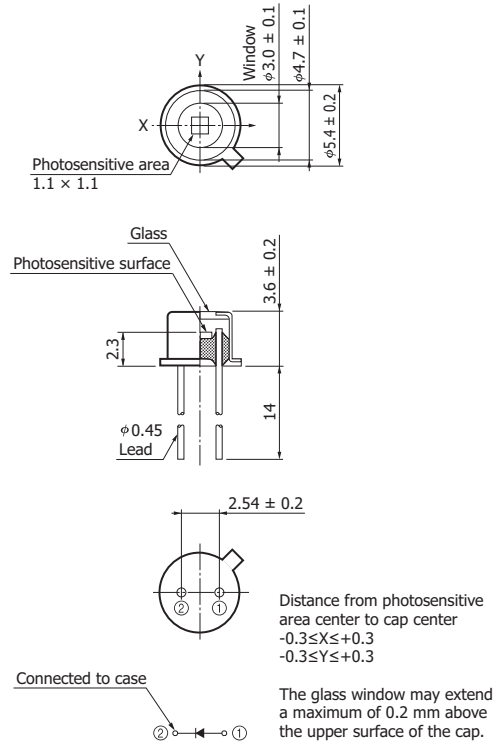
Dimensional outlines (unit: mm)

(1) S1336-18BQ



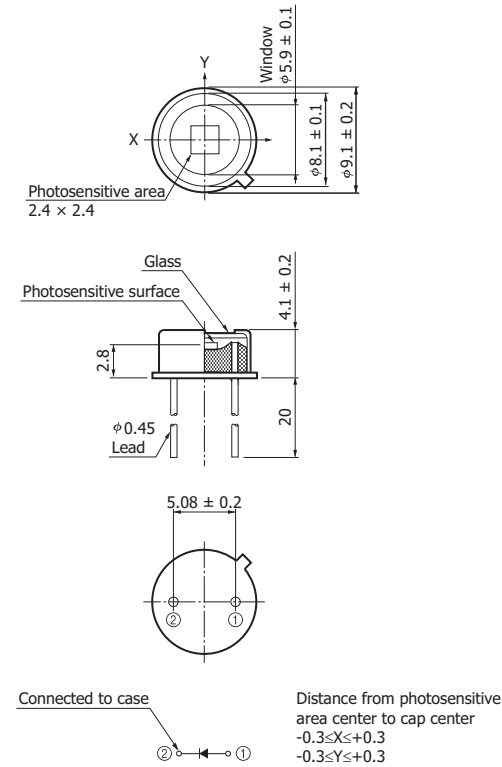
KSPDA0197EB

(2) S1336-18BK



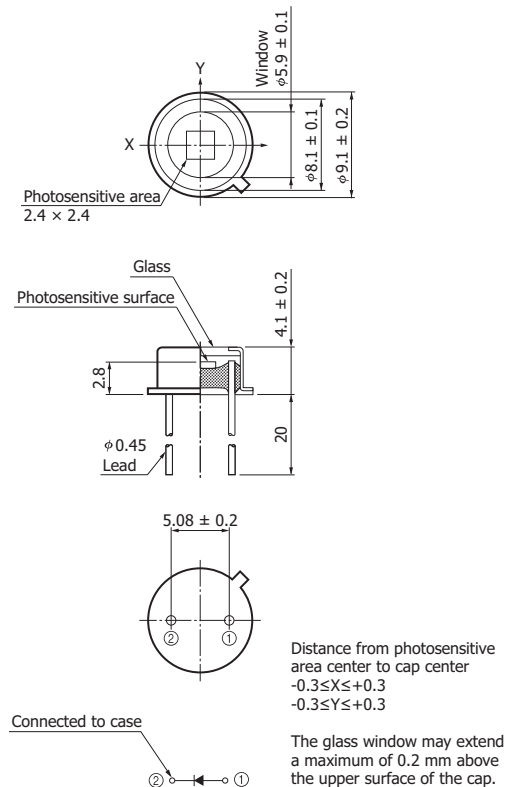
KSPDA0191EC

(3) S1336-5BQ



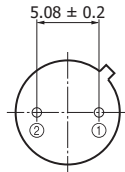
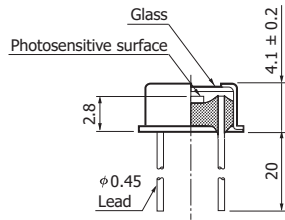
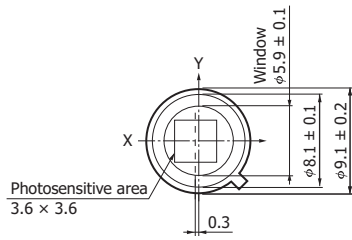
KSPDA0198EB

(4) S1336-5BK



KSPDA0192EC

(5) S1336-44BQ



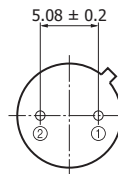
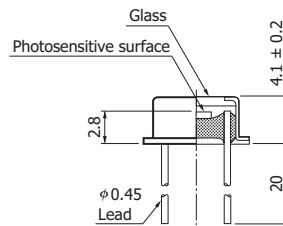
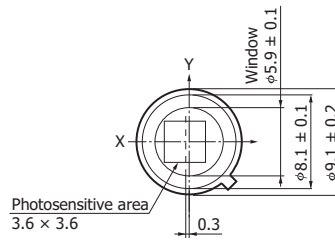
Connected to case



Distance from photosensitive area center to cap center
 $-0.6 \leq X \leq 0$
 $-0.3 \leq Y \leq +0.3$

KSPDA0199EB

(6) S1336-44BK



Connected to case

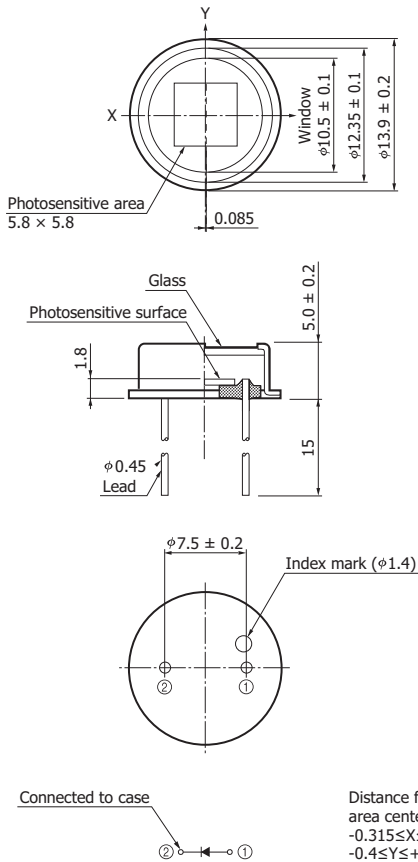


Distance from photosensitive area center to cap center
 $-0.6 \leq X \leq 0$
 $-0.3 \leq Y \leq +0.3$

The glass window may extend a maximum of 0.2 mm above the upper surface of the cap.

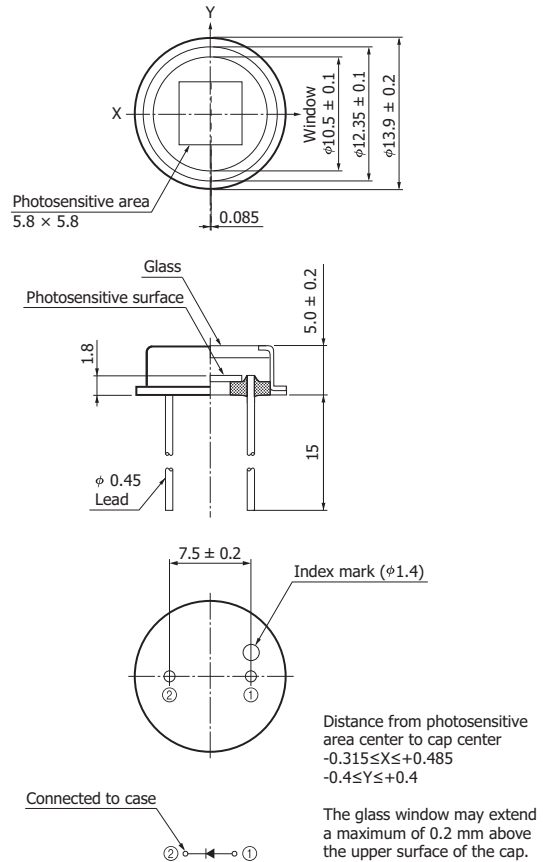
KSPDA0194EC

(7) S1336-8BQ



KSPDA0200EC

(8) S1336-8BK



KSPDA0193EC

Information described in this material is current as of January, 2014.

Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

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.

Copying or reprinting the contents described in this material in whole or in part is prohibited without our prior permission.

HAMAMATSU

www.hamamatsu.com

HAMAMATSU PHOTONICS K.K., Solid State Division

1126-1 Ichino-cho, Higashi-ku, Hamamatsu City, 435-8558 Japan, Telephone: (81) 53-434-3311, Fax: (81) 53-434-5184

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) 8152-375-0, Fax: (49) 8152-265-8

France: Hamamatsu Photonics France S.A.R.L.: 19, 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: Thorshamnsgatan 35 16440 Kista, Sweden, Telephone: (46) 8-509-031-00, Fax: (46) 8-509-031-01

Italy: Hamamatsu Photonics Italia S.R.L.: Strada della Moia, 1 int. 6, 20020 Arese, (Milano), Italy, Telephone: (39) 02-935-81-733, Fax: (39) 02-935-81-741

China: Hamamatsu Photonics (China) Co., Ltd.: 1201 Tower B, Jiaming Center, No.27 Dongsanhuan Beilu, Chaoyang District, Beijing 100020, China, Telephone: (86) 10-6586-6006, Fax: (86) 10-6586-2866