



S8193

## Detector for X-ray monitors

### Features

- ➔ High sensitivity, high reliability photodiode with ceramic scintillator
- ➔ High X-ray sensitivity: 1.8 times that of CWO
- ➔ Less afterglow than CsI: <0.1%/3 ms, <0.01%/30 ms
- ➔ Unlike CsI, has no deliquescence

### Applications

- ➔ X-ray analysis, X-ray detection

### Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub> max	5	V
Operating temperature	T <sub>opr</sub>	-10 to +60	°C
Storage temperature	T <sub>stg</sub>	-20 to +70	°C

### Electrical and optical characteristics (without scintillator, Ta=25°C)

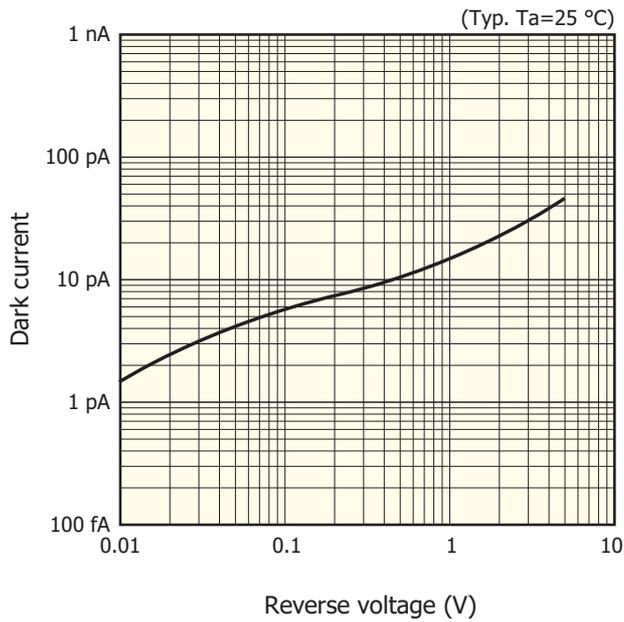
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	$\lambda$		-	190 to 1000	-	nm
Peak sensitivity wavelength	$\lambda_p$			720	-	nm
Photosensitivity	S	$\lambda=500$ nm	-	0.26	-	A/W
		$\lambda=\lambda_p$	-	0.5	-	A/W
Dark current	I <sub>D</sub>	V <sub>R</sub> =10 mV	-	2	50	pA
Terminal capacitance	C <sub>t</sub>	V <sub>R</sub> =0 V, f=10 kHz	-	950	-	pF

### X-ray sensitivity (reference value, tube current: 1.0 mA, aluminum filter: t=6 mm, distance=830 mm)

X-ray tube voltage	Typ.	Unit
120 keV	30	nA

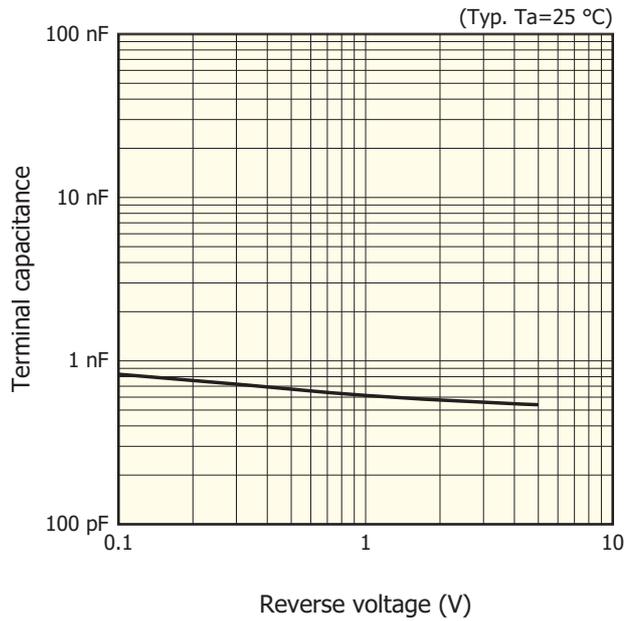
Note: Depends on equipment and measurement conditions

Dark current vs. reverse voltage



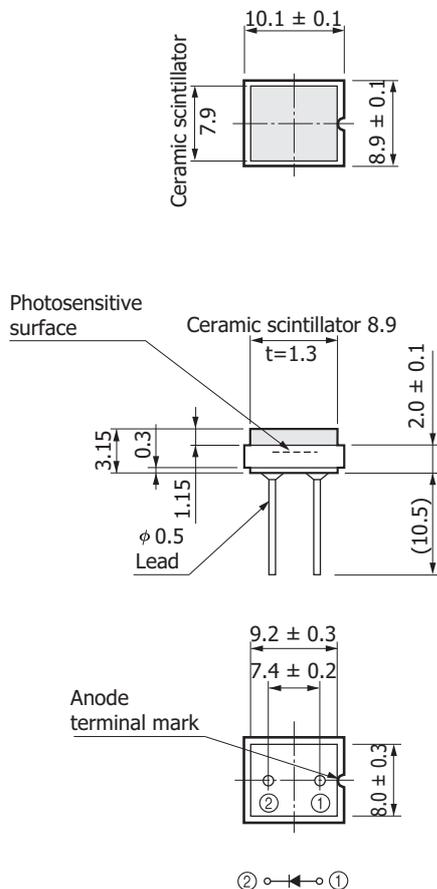
KSPD80362EA

Terminal capacitance vs. reverse voltage



KSPD80153EA

Dimensional outline (unit: mm)



KSPD80129EB

**Related information**

[www.hamamatsu.com/sp/ssd/doc\\_en.html](http://www.hamamatsu.com/sp/ssd/doc_en.html)

## ■ Precautions

- Disclaimer
- Metal, ceramic, plastic package products

Information described in this material is current as of September 2016.

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.

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**HAMAMATSU**[www.hamamatsu.com](http://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, Bridgewater, N.J. 08807, 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: Torshamnsgatan 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) 02-93581733, Fax: (39) 02-93581741

China: Hamamatsu Photonics (China) Co., Ltd.: B1201, Jiaming Center, No.27 Dongsanhuan Bellu, Chaoyang District, Beijing 100020, China, Telephone: (86) 10-6586-6006, Fax: (86) 10-6586-2866