

S12915 series

For visible to IR, general-purpose photometry

These Si photodiodes have high sensitivity in the visible range to near IR. They provide higher sensitivity than the S2387 series and can be used in high-humidity environments.

Features

- High sensitivity in visible to infrared range
- Low dark current
- High linearity

Applications

- Analytical equipment
- Optical measurement equipment, etc.

Structure / Absolute maximum ratings

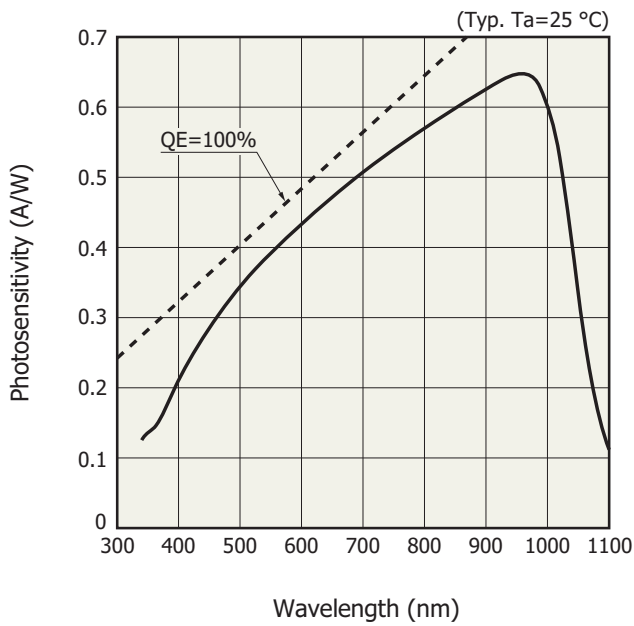
Type no.	Window material	Package (mm)	Photosensitive area size (mm)	Effective photosensitive area (mm ²)	Absolute maximum ratings		
					Reverse voltage V _R max (V)	Operating temperature T _{opr} (°C)	Storage temperature T _{stg} (°C)
S12915-16R	Resin potting	2.7 × 15	1.0 × 6.0	6.0	30	-20 to +60	-20 to +80
S12915-33R		6 × 7.6	2.4 × 2.4	5.7			
S12915-66R		8.9 × 10.1	5.8 × 5.8	33			
S12915-1010R		15 × 16.5	10 × 10	100			

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)

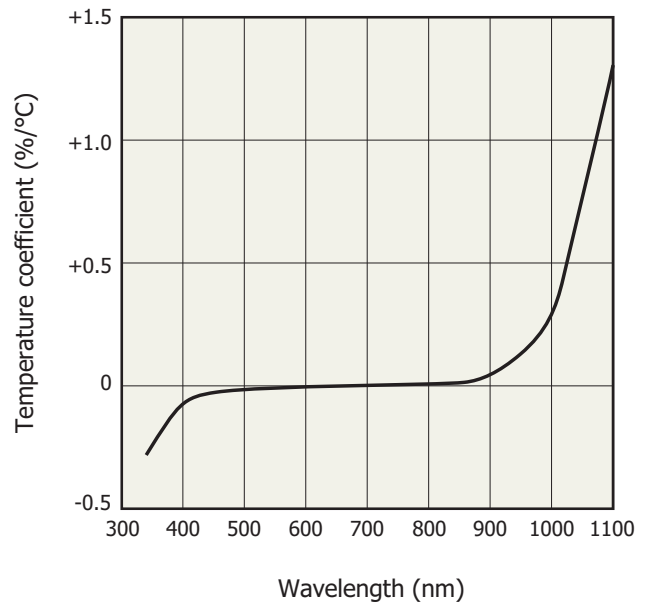
Type no.	Spectral response range λ (nm)	Peak sensitivity wavelength λ _p (nm)	Photosensitivity S λ=λ _p (A/W)	Short circuit current I _{sc} 100 lx		Dark current I _D V _R =10 mV Max. (pA)	Temp. coefficient of I _D T _{CID} (times/°C)	Rise time t _r V _R =0 V R _L =1 kΩ (μs)	Terminal capacitance C _t V _R =0 V f=10 kHz (pF)	Shunt resistance R _{sh} V _R =10 mV		Noise equivalent power NEP V _R =0 V λ=λ _p (W/Hz ^{1/2})	
				Min. (μA)	Typ. (μA)					Min. (GΩ)	Typ. (GΩ)		
S12915-16R	340 to 1100	960	0.64	4.6	5.8	5	1.12	1.8	740	2	50	9.0 × 10 ⁻¹⁶	
S12915-33R				5.0	5.7			1.6	680				
S12915-66R				26	33	50		9	4000	0.2	10		2.0 × 10 ⁻¹⁵
S12915-1010R				76	95	200		33	13000	0.05	5		2.8 × 10 ⁻¹⁵

Spectral response



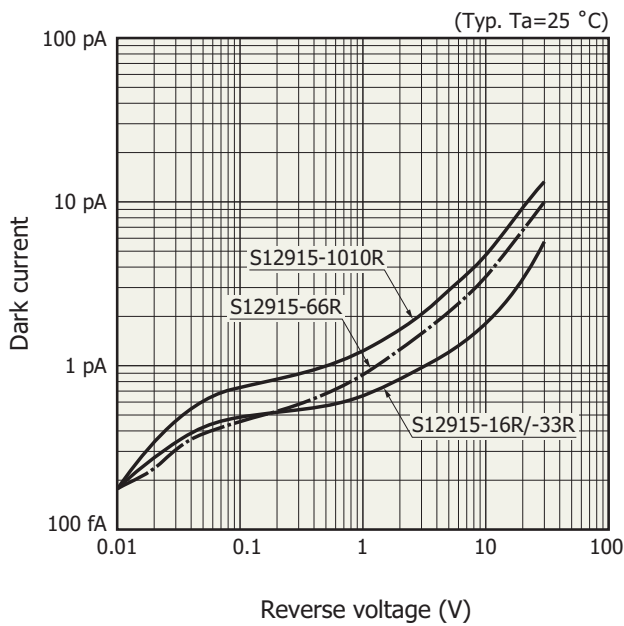
KSPDB0363EA

Photosensitivity temperature characteristics



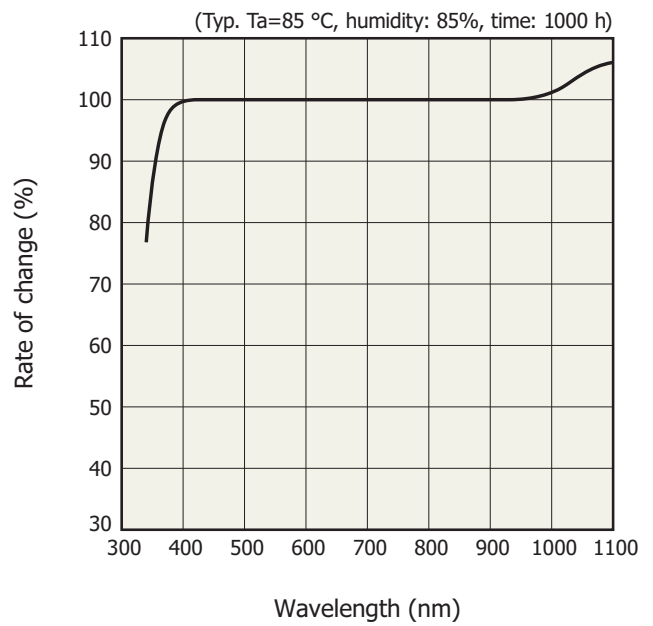
KSPDB0364EA

Dark current vs. reverse voltage



KSPDB0365EA

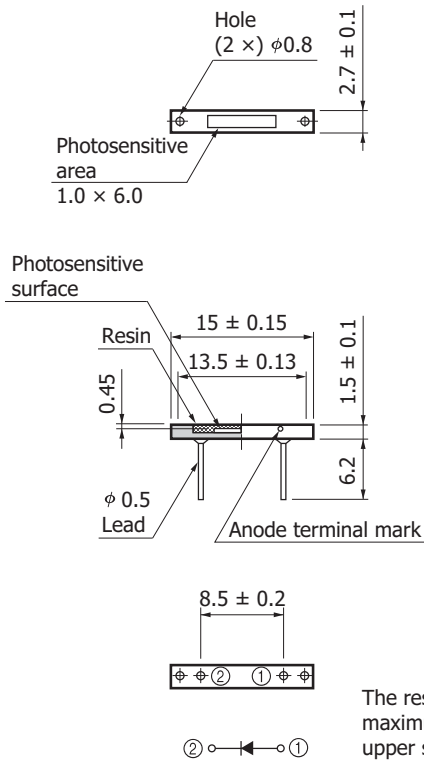
Changes to spectral sensitivity due high temperature and high humidity



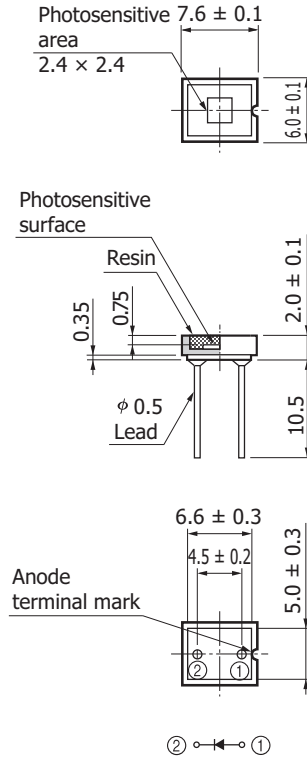
KSPDB0366EA

Dimensional outlines (unit: mm)

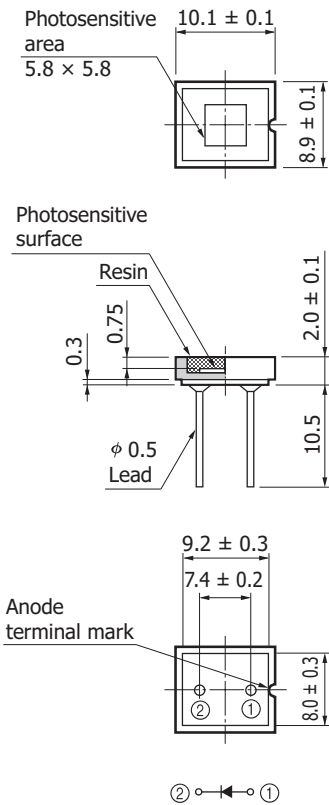
S12915-16R



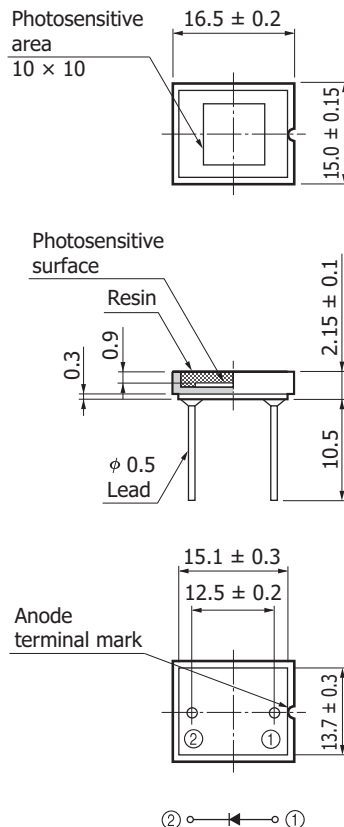
S12915-33R



S12915-66R



S12915-1010R



Products corresponding to current products

Current product	Compatible products
S2387-16R	S12915-16R
S2387-33R	S12915-33R
S2387-66R	S12915-66R
S2387-1010R	S12915-1010R

Related information

http://www.hamamatsu.com/sp/ssd/doc_en.html

■ Precautions

- Disclaimer
- Metal, ceramic, plastic package products

■ Technical information

- Si photodiode / Application circuit examples

Information described in this material is current as of September 2018.

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.

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, Bridgewater, N.J. 08807, U.S.A., Telephone: (1) 908-231-0960, Fax: (1) 908-231-1218, E-mail: usa@hamamatsu.com

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49) 8152-375-0, Fax: (49) 8152-265-8, E-mail: info@hamamatsu.de

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, E-mail: infos@hamamatsu.fr

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, E-mail: info@hamamatsu.co.uk

North Europe: Hamamatsu Photonics Norden AB: Torshamnsgatan 35 16440 Kista, Sweden, Telephone: (46)8-509 031 00, Fax: (46)8-509 031 01, E-mail: info@hamamatsu.se

Italy: Hamamatsu Photonics Italia S.r.l.: Strada della Moia, 1 int. 6, 20020 Arese (Milano), Italy, Telephone: (39)02-93 58 17 33, Fax: (39)02-93 58 17 41, E-mail: info@hamamatsu.it

China: Hamamatsu Photonics (China) Co., Ltd.: B1201, Jiaming Center, No.27 Dongsanhuan Beilu, Chaoyang District, Beijing 100020, China, Telephone: (86) 10-6586-6006, Fax: (86) 10-6586-2866, E-mail: hpc@hamamatsu.com.cn

Taiwan: Hamamatsu Photonics Taiwan Co., Ltd.: 8F-3, No. 158, Section2, Gongdao 5th Road, East District, Hsinchu, 300, Taiwan R.O.C. Telephone: (886)03-659-0080, Fax: (886)03-659-0081, E-mail: info@hamamatsu.com.tw