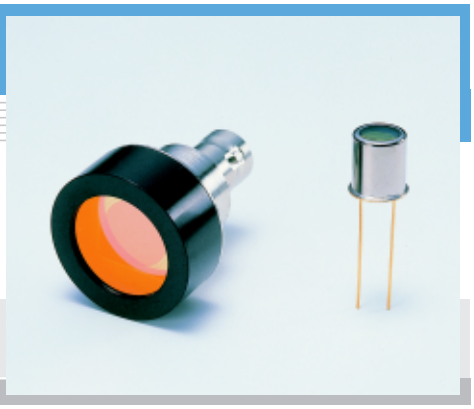
# Si photodiode
# S9219 series

## Spectral response like human eye



### Features

- Accurate visible-compensated filter is used
- High reliable metal package
- S9219: Metal package with BNC connector (active area: φ11.3 mm)
- S9219-01: TO-5 (active area: 3.6 × 3.6 mm)
- Deviation from standard spectral luminous efficiency V(λ) *1: fs =10 % Typ.

### Applications

- Photometry
- Luxmeter, etc.

■ Absolute maximum ratings

| Parameter | Symbol | S9219 | S9219-01 | Unit |
|---|---|---|---|---|
| Reverse voltage | VR Max. | 5 | 5 | V |
| Operating temperature | Topr | -20 to +50 | -40 to +50 | °C |
| Storage temperature | Tstg | -55 to +50 | -55 to +50 | °C |

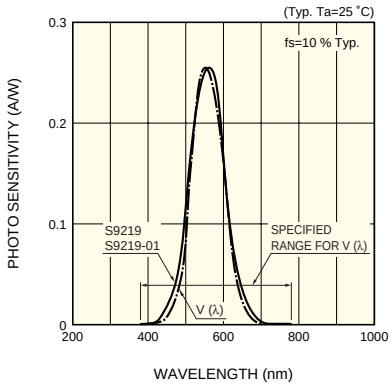
■ Electrical and optical characteristics (Ta=25 °C)

| Parameter | Symbol | Condition | S9219 | | S9219-01 | | Unit |
|---|---|---|---|---|---|---|---|
| | | | Typ. | Max. | Typ. | Max. | |
| Spectral response range | λ | *2 | 380 to 780 | - | 380 to 780 | - | nm |
| Peak sensitivity wavelength | λp | | 550 | - | 550 | - | nm |
| Photo sensitivity | S | λ=λp | 0.24 | - | 0.22 | - | A/W |
| Short circuit current | Isc | 100 *lx*, 2856 K | 3.8 | - | 0.5 | - | μA |
| Dark current | ID | VR=10 mV | 50 | 500 | 10 | 50 | pA |
| Rise time | tr | VR=0 V, RL=1 kΩ | 2.5 | - | 0.5 | - | μs |
| Terminal capacitance | Ct | VR=0 V, f=10 kHz | 1100 | - | 150 | - | pF |

*1: Standard spectral luminous efficiency V (λ): wavelength response of the human eye. The extent of deviation from V (λ) is indicated as fs (%).
*2: Conforms to specified range for V (λ)

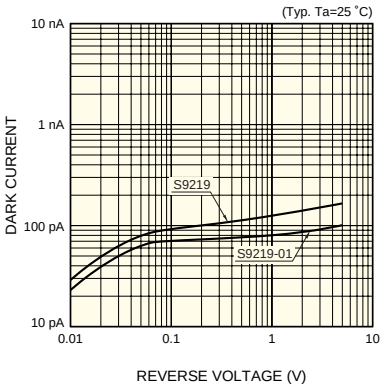
SOLID STATE DIVISION

## ■ Spectral response



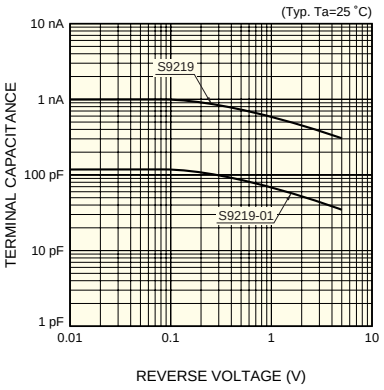

KSPDB0227EC

## ■ Dark current vs. reverse voltage




KSPDB0162EA

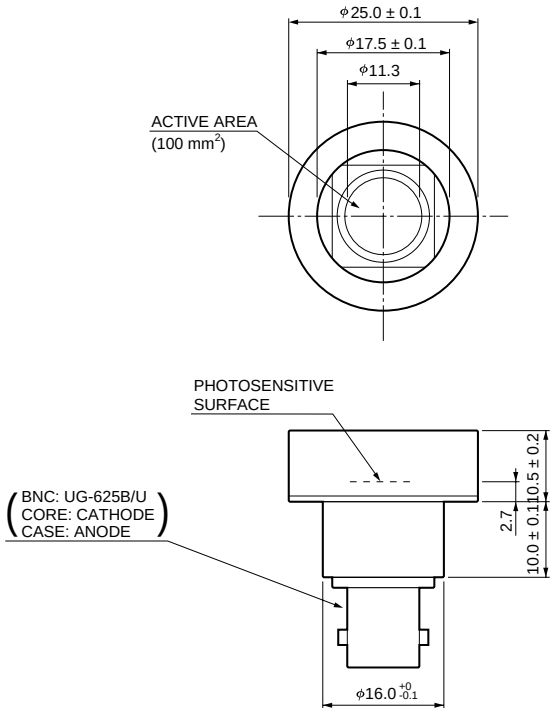
## ■ Terminal capacitance vs. reverse voltage




KSPDB0163EB

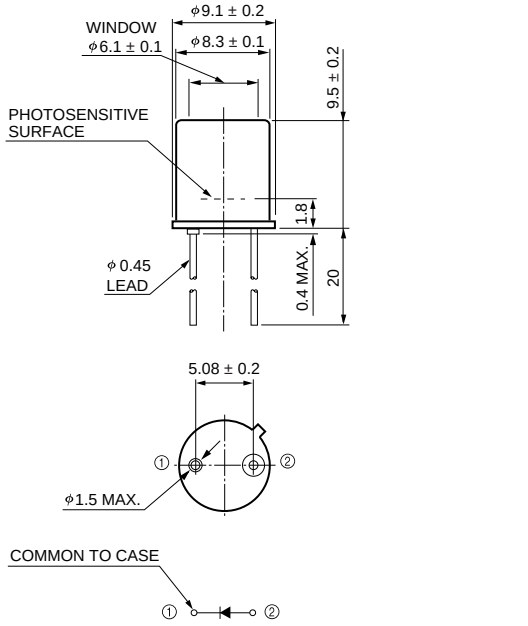
## ■ Dimensional outlines (unit: mm)

### S9219




KSPDA0077EA

### S9219-01




KSPDA0078EA

HAMAMATSU

Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions.
Specifications are subject to change without notice. No patent rights are granted to any of the circuits described herein. ©2005 Hamamatsu Photonics K.K.

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, http://www.hamamatsu.com
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) 08152-3750, Fax: (49) 08152-2658
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: Smidesvägen 12, SE-171 41 Solna, Sweden, Telephone: (46) 8-509-031-00, Fax: (46) 8-509-031-01
Italy: Hamamatsu Photonics Italia S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39) 02-935-81-733, Fax: (39) 02-935-81-741

Cat. No. KSPD1063E04
Mar. 2005 DN