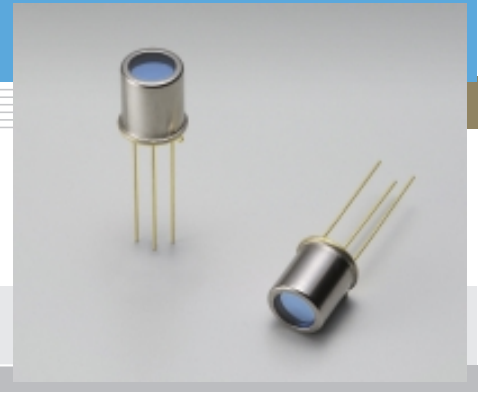


Si photodiode

S2684-254

Photodiode with interference filter for monochromatic light (254 nm) detection



S2684-254 uses an interference filter as its window to provide high sensitivity only to monochromatic light. The spectral response width is as narrow as 10 nm (FWHM), allowing accurate photometry without being adversely influenced by stray light. As the type No. implies, S2684-254 has a peak sensitivity wavelength at 254 nm. However, variant types are also available with different peak sensitivity wavelengths such as 340, 405, 500, 520, 560, 650 and 700 nm.

Features

- Monochromatic light detection with high sensitivity
- Low dark current

Applications

- Analytical instruments
- UV monitor (mercury lamp monitor, etc.)

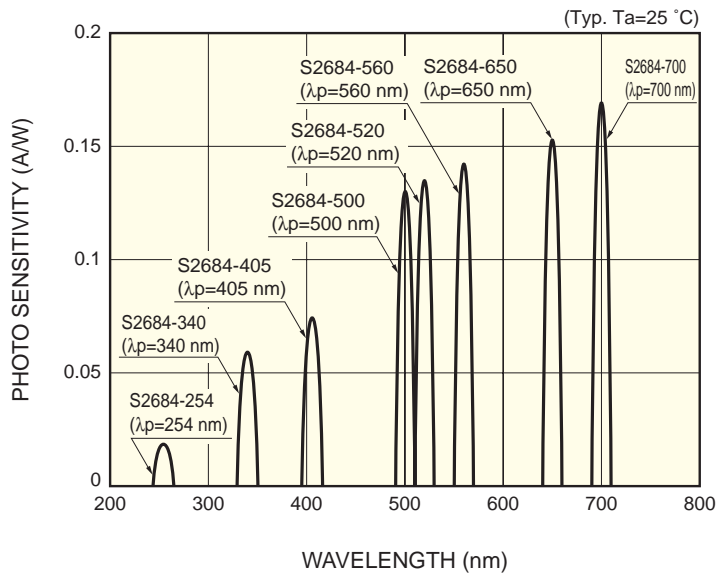
■ Absolute maximum ratings

Parameter	Symbol	Value	Unit
Reverse voltage	V_R Max.	5	V
Operating temperature	T_{opr}	-10 to +60	°C
Storage temperature	T_{stg}	-20 to +70	°C

■ Electrical and optical characteristics ($T_a=25\text{ °C}$)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak sensitivity wavelength	λ_p		252	254	256	nm
Spectral response half-width	FWHM		8	10	12	nm
Photo sensitivity	S	$\lambda=\lambda_p$	-	0.02	-	A/W
Dark current	I_D	$V_R=10\text{ mV}$	-	-	25	pA
Temperature coefficient of I_D	T_{CID}		-	1.12	-	times/°C
Rise time	t_r	$V_R=0\text{ V}, R_L=1\text{ k}\Omega$	-	1	-	μs
Terminal capacitance	C_t	$V_R=0\text{ V}, f=10\text{ kHz}$	-	380	-	pF
Shunt resistance	R_{sh}	$V_R=10\text{ mV}$	0.4	5	-	$\text{G}\Omega$
Noise equivalent power	NEP	$V_R=0\text{ V}, \lambda=\lambda_p$	-	9.1×10^{-14}	-	$\text{W}/\text{Hz}^{1/2}$

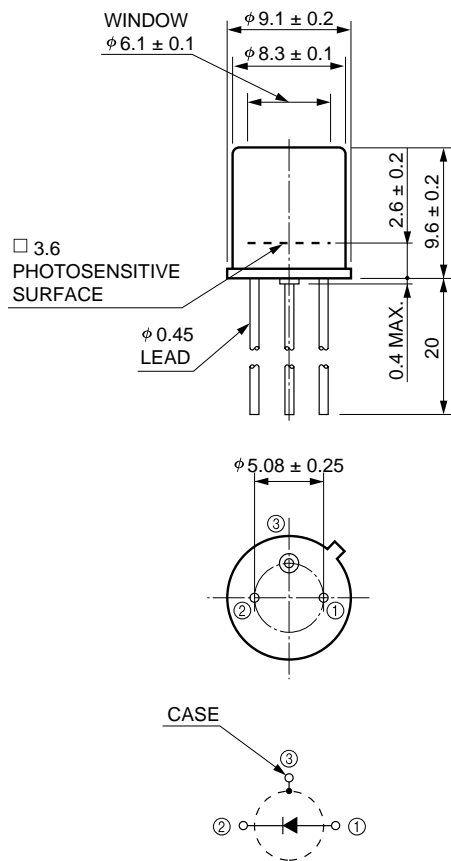
■ Spectral response (S2684-254, etc.)



Note) Made to order other than S2684-254.

KSPDB0135EB

■ Dimensional outline (unit: mm)



KSPDA0081EB

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. ©2006 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, 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