

# 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.)

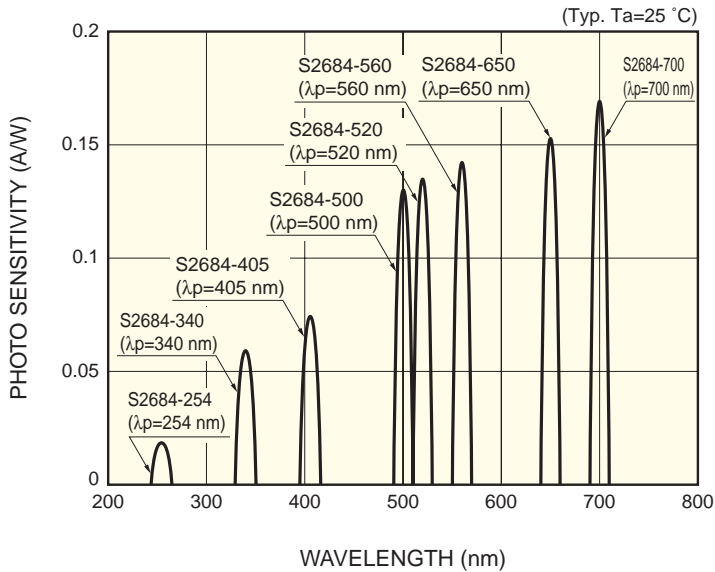
### ■ Absolute maximum ratings

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 ( $T_a=25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Peak sensitivity wavelength	$\lambda_p$		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 $I_D$	$TC_{ID}$		-	1.12	-	times/°C
Rise time	$t_r$	$V_R=0\text{ V}, R_L=1\text{ k}\Omega$	-	1	-	$\mu\text{s}$
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	-	G $\Omega$
Noise equivalent power	NEP	$V_R=0\text{ V}, \lambda=\lambda_p$	-	$9.1 \times 10^{-14}$	-	W/Hz <sup>1/2</sup>

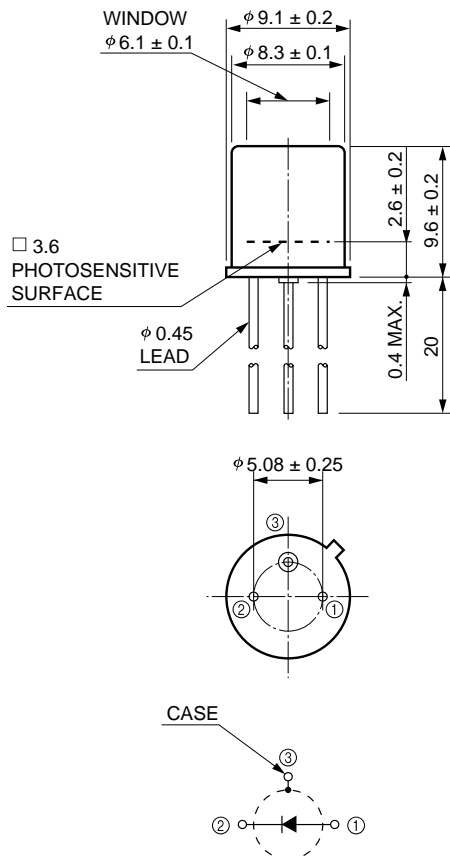
■ Spectral response (S2684-254, etc.)



Note) Made to order other than S2684-254.

KSPDB0135EB

■ Dimensional outline (unit: mm)



KSPDA0081EB

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