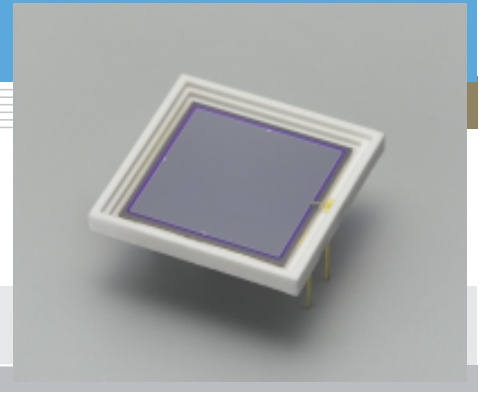


# Si photodiode S6337-01

Large area photodiode for UV to IR, precision photometry



S6337-01 is a large area Si photodiode that features excellent spatial response uniformity over a wide range from UV to IR. S6337-01 will prove useful for precision photometry and as a standard detector for spectral response calibration.

### Features

- Large active area: 18 × 18 mm
- Excellent uniformity even at wavelengths longer than 1000 nm
- High UV sensitivity
- Windowless package

### Applications

- Precision photometry
- Spectral response calibration
- Analytical equipment
- Trap detector

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

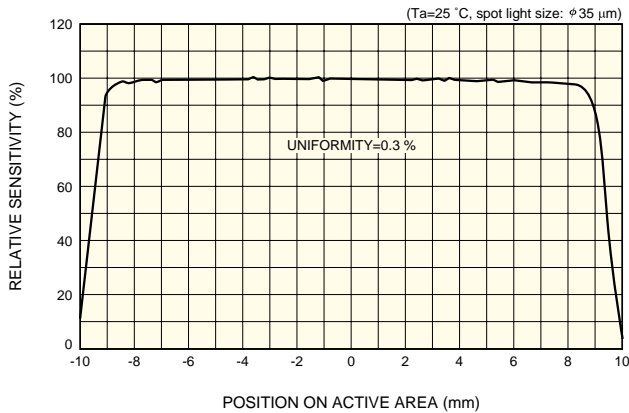
Parameter	Symbol	Value	Unit
Reverse voltage	V <sub>R</sub> Max.	5	V
Operating temperature	T <sub>opr</sub>	0 to +60	°C
Storage temperature	T <sub>stg</sub>	0 to +80	°C

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

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	$\lambda$		-	190 to 1100	-	nm
Peak sensitivity wavelength	$\lambda_p$		-	960	-	nm
Photo sensitivity	S	$\lambda = \lambda_p$	-	530	-	mA/W
Short circuit current	I <sub>sc</sub>	100 lx, 2856 K	200	250	-	$\mu$ A
Dark current	I <sub>D</sub>	V <sub>R</sub> =10 mV	-	50	1000	pA
Rise time	t <sub>r</sub>	V <sub>R</sub> =0 V, R <sub>L</sub> =1 k $\Omega$ , $\lambda$ =660 nm	-	7	-	$\mu$ s
Terminal capacitance	C <sub>t</sub>	V <sub>R</sub> =0 V, f=10 kHz	-	3.5	-	nF
Shunt resistance	R <sub>sh</sub>	V <sub>R</sub> =10 mV	10	200	-	M $\Omega$
Uniformity *	U	Within 80 % of active area $\lambda$ =190 to 1100 nm	-	-	0.5	%

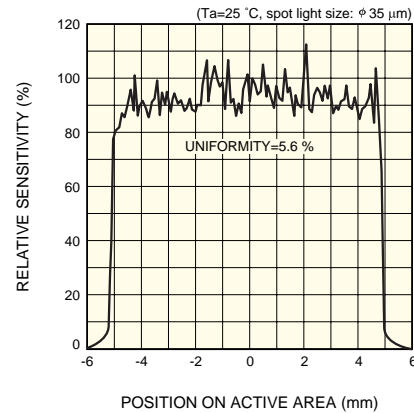
#### Sensitivity uniformity (typical example, $\lambda$ =1100 nm)

S6337-01 (18 × 18 mm)



KSPDB0177EA

S1337-1010BQ (10 × 10 mm)

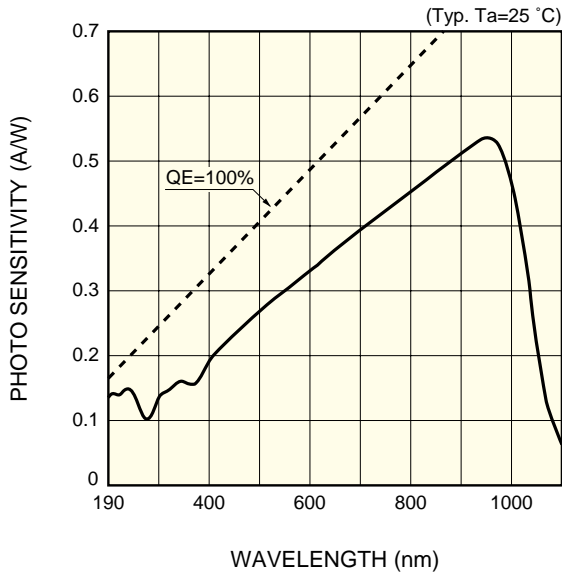


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\* Uniformity = R<sub>s</sub>/R<sub>m</sub>

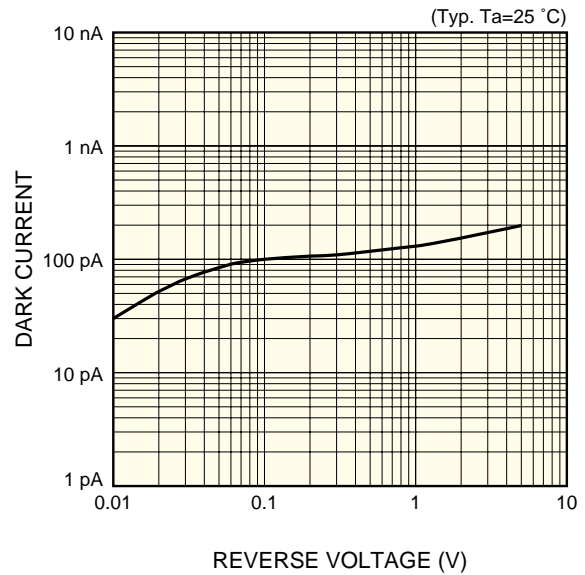
R<sub>s</sub>: Photo sensitivity at any point within 80 % of the active area  
R<sub>m</sub>: Averaged photo sensitivity within 80 % of the active area

■ Spectral response



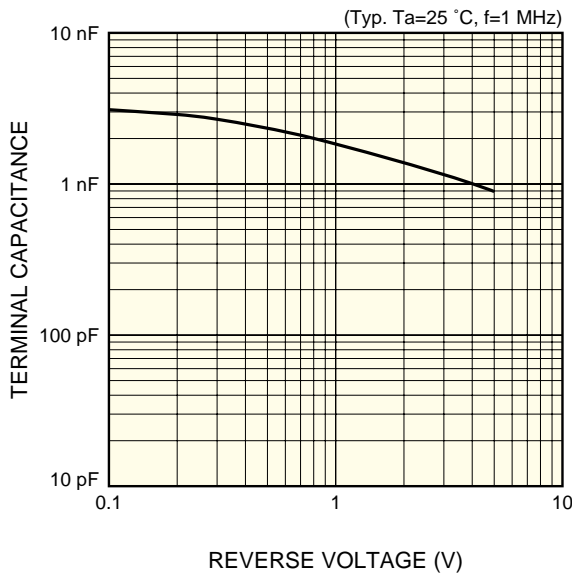
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■ Dark current vs. reverse voltage



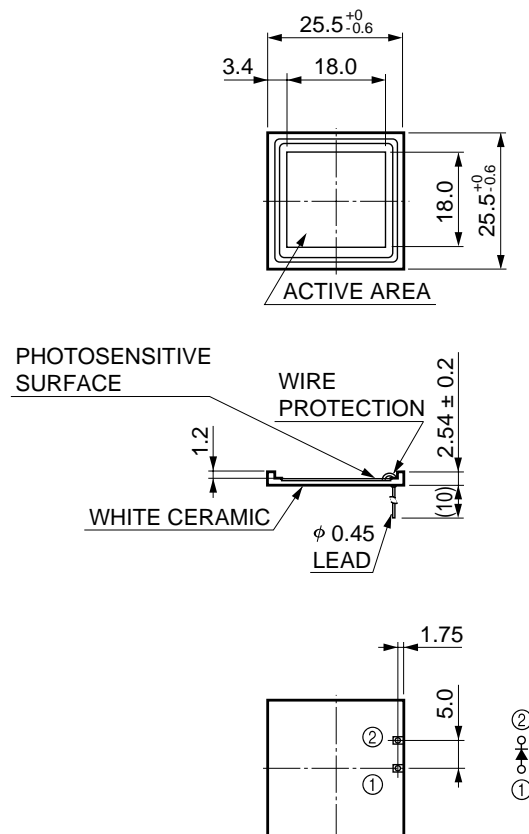
KSPDB0166EA

■ Terminal capacitance vs. reverse voltage



KSPDB0165EA

■ Dimensional outline (unit: mm)



KSPDA0128EA

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