

Si photodiode S9682, S9683

Highly reliable photodiode for VUV detection



S9682 and S9683 are Si photodiodes specifically designed to detect VUV (vacuum ultraviolet) radiation with high reliability. These photodiodes are hermetically sealed in a metal package with a quartz window. There is no outgassing from the inside of the package, eliminating the cause of decrease in VUV sensitivity.

Features

- Highly stable sensitivity and dark current against ArF excimer laser radiation ($\lambda=193$ nm)
- Hermetically sealed metal package with quartz window
- Large active area:
S9682: 5.8 × 5.8 mm (TO-8 metal package)
S9683: 10 × 10 mm (1 inch metal package)

Applications

- ArF excimer laser detection
- UV detection

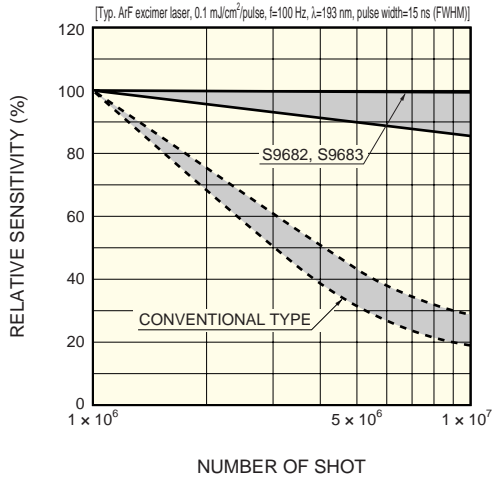
■ Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Value	Unit
Reverse voltage	VR Max.	5	V
Operating temperature	Topr	-40 to +100	°C
Storage temperature	Tstg	-55 to +125	°C

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

Parameter	Symbol	Condition	S9682			S9683			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Spectral response range	λ		-	193 to 1000	-	-	193 to 1000	-	nm
Peak sensitivity wavelength	λ_p		-	760	-	-	760	-	nm
Photo sensitivity	S	$\lambda=193$ nm	45	60	-	45	60	-	mA/W
Dark current	ID	VR=10 mV	-	0.02	0.5	-	0.05	1.0	nA
Terminal capacitance	Ct	VR=0 V, f=10 kHz	-	1.0	-	-	4.0	-	nF
Rise time	tr	VR=0 V, RL=1 k Ω 10 to 90 %	-	2	-	-	9	-	μ s

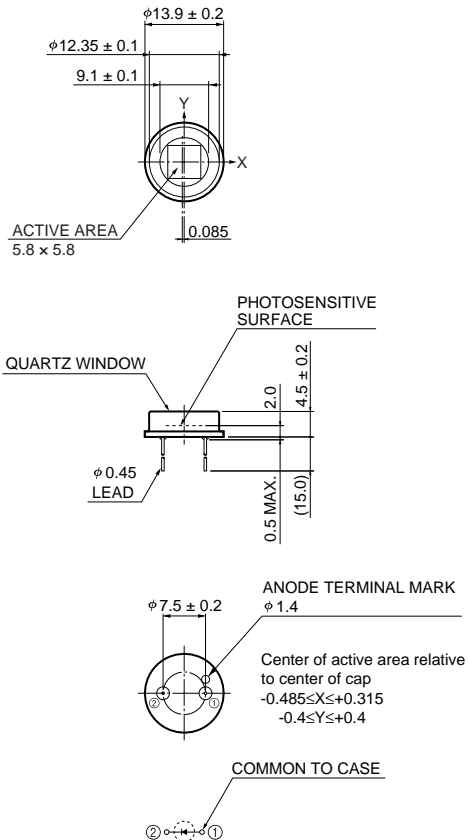
■ Variation in sensitivity due to VUV exposure



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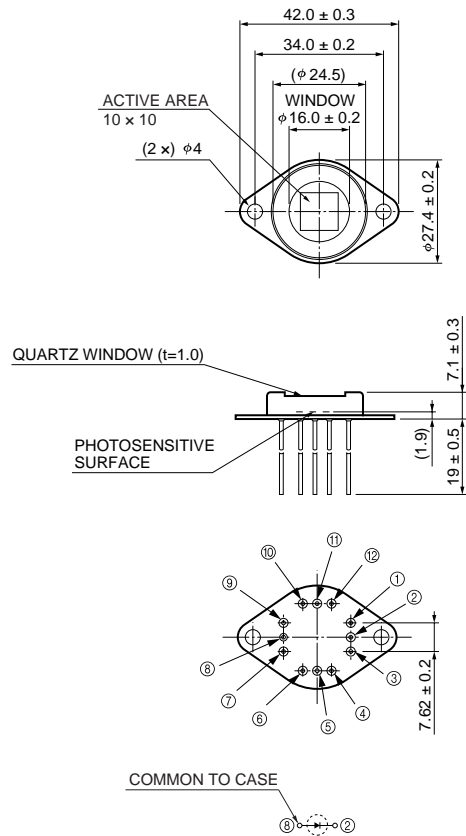
■ Dimensional outlines (unit: mm)

S9682



KSPDA0165EC

S9683



KSPDA0166EA

Information described in this material is current as of June, 2011. Product specifications are subject to change without prior notice due to improvements or other reasons. Before assembly into final products, please contact us for the delivery specification sheet to check the latest information.
Type numbers of products listed in the delivery specification sheets or supplied as samples may have a suffix "(X)" which means preliminary specifications or a suffix "(Z)" which means developmental 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.
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