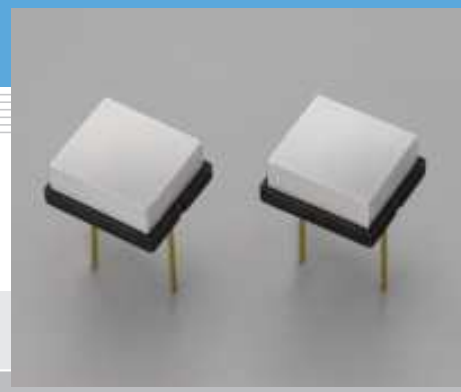


Si photodiode

S8559

Detector for X-ray monitor



Features

- Si photodiode coupled to low cost CsI scintillator
- Ideal for detection of X-ray energy below 100 keV

Applications

- X-ray detection
- X-ray monitors

■ Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Value	Unit
Reverse voltage	VR Max.	5	V
Operating temperature	Topr	-10 to +60	°C
Storage temperature	Tstg	-20 to +70	°C

■ Electrical and optical characteristics (without scintillator, Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	190 to 1000	-	nm
Peak sensitivity wavelength	λ_p			720	-	nm
Photo sensitivity	S	$\lambda=500$ nm	-	0.26	-	A/W
Dark current	ID	VR=10 mV	-	2	50	pA
Terminal capacitance	Ct	VR=0 V, f=10 kHz	-	950	-	pF

■ X-ray sensitivity (reference value, tube current: 1.0 mA, aluminum filter: t=6 mm, distance=830 mm)

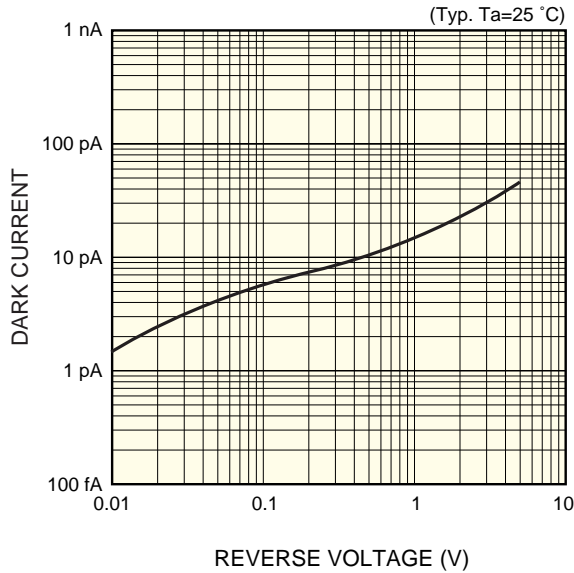
X-ray tube voltage	Typ.	Unit
120 kV	52	nA

Note) Depends on equipment and measurement conditions.

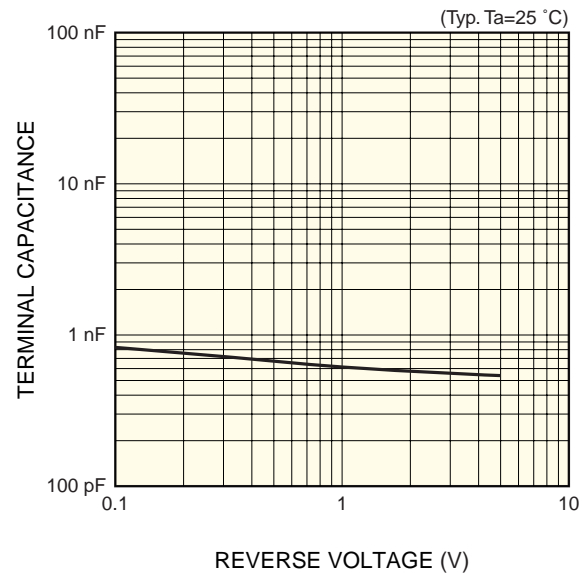
Handling precautions

Avoid storing or using S8559 at high humidity because CsI scintillator has deliquescence.

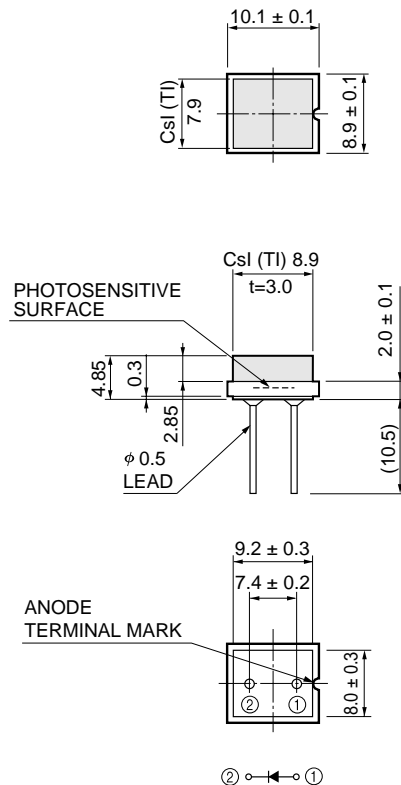
■ Dark current vs. reverse voltage



■ Terminal capacitance vs. reverse voltage



■ Dimensional outline (unit: mm)



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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