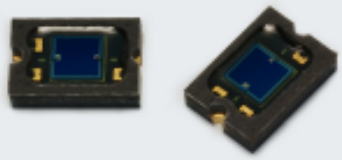
NEW

PHOTODIODE

Si photodiode
S9674



Suitable for lead-free solder reflow, operating/storage temperature: -40 to +125 ˚C

S9674 is a highly reliable photodiode designed for in-vehicle applications and is compatible with lead-free solder reflow processes. The newly developed small, thin leadless package allows reducing the mount area on a printed circuit board.

Features

- Suitable for lead-free solder reflow
  (Reflow peak temperature: 260 ˚C, JEDEC LEVEL 5a)
- Surface mount type, small and thin leadless package
- High reliability for automotive applications
  Operating/storage temperature: -40 to +125 ˚C
- Active area: 2 × 2 mm
- High sensitivity: 0.7 A/W (λ=960 nm)

Applications

- Automotive devices
  (For rain sensor and sun sensor, etc.)

■ Absolute maximum ratings

Parameter	Symbol	Value	Unit
Reverse voltage	V_R Max.	10	V
Operating temperature	Topr	-40 to +125	°C
Storage temperature	Tstg	-40 to +125	°C

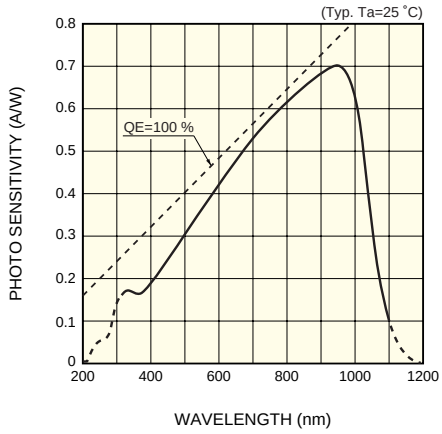
■ Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	320 to 1100	-	nm
Peak sensitivity wavelength	λp		-	960	-	nm
Photo sensitivity	S	λ=λp	0.6	0.7	-	A/W
Short circuit current	Isc	100 *lx*, 2856 K	-	4.8	-	μA
Temperature coefficient of Isc	-		-	+0.1	-	%/°C
Half-value angle	-		-	±60	-	degree
Dark current	I_D	V_R=5 V	-	0.005	1	nA
Temperature coefficient of I_D	T_{CID}		-	1.12	-	times/°C
Rise time	tr	V_R=0 V, R_L=1 kΩ 10 to 90 %	-	2	-	μs
Terminal capacitance	Ct	V_R=0 V, f=10 kHz	-	450	-	pF

PRELIMINARY DATA
Dec. 2006

SOLID STATE DIVISION

■ Spectral response



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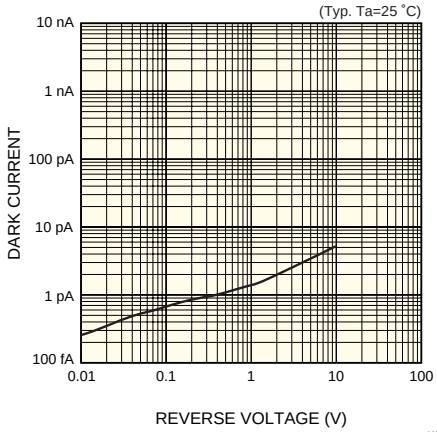
■ Dark current vs. reverse voltage



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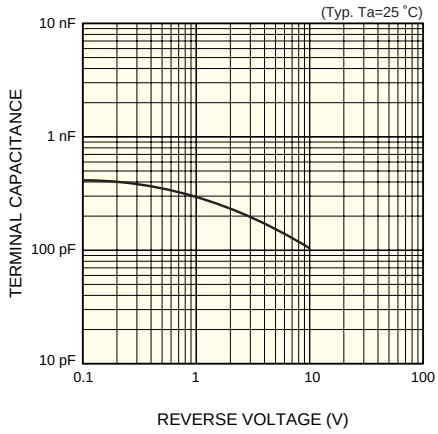
■ Terminal capacitance vs. reverse voltage



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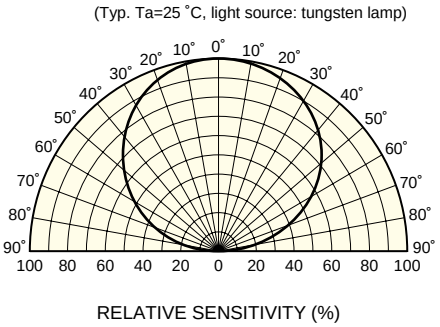
■ Directivity



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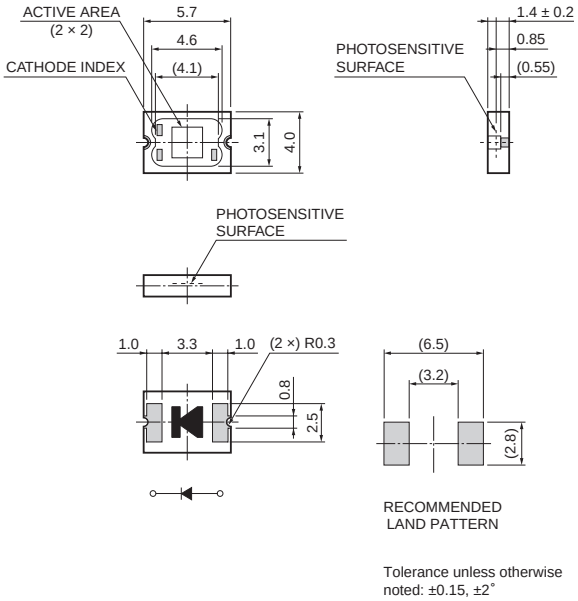
■ Dimensional outline (unit: mm)



Tolerance unless otherwise noted: ±0.15, ±2˚

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Cat. No. KSPD1070E01
Mar. 2007 DN