Si PIN photodiode
S3994-01

Si PIN photodiode for optical power meters

S3994-01 is a Si PIN photodiode designed for optical power meters. Compared to the previous type (S3994), S3994-01 has an improved anti-reflection film and sensitivity optimized for detection of violet laser beams. The flat glass used as the light input window is less susceptible to scratches than resin windows, allowing easy handling.

Features

- Thin package (1.4 mm Max.)
- High sensitivity: 0.28 A/W Typ. (λ=410 nm)
- Large active area: 10 × 10 mm

Applications

- Violet laser detection

■ Absolute maximum ratings (Ta=25 °C)

Parameter	Symbol	Value	Unit
Reverse voltage	V_R Max.	50	V
Operating temperature	Topr	-20 to +60	°C
Storage temperature	Tstg	-20 to +80	°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	-	µm
Photo sensitivity	S	λ=410 nm	0.24	0.28	-	A/W
Dark current	I_D	V_R=30 V	-	3	10	nA
Terminal capacitance	Ct	V_R=30 V, f=1 MHz	-	40	-	pF
Cut-off frequency	fc	V_R=30 V, R_L=50 Ω -3 dB	-	20	-	MHz

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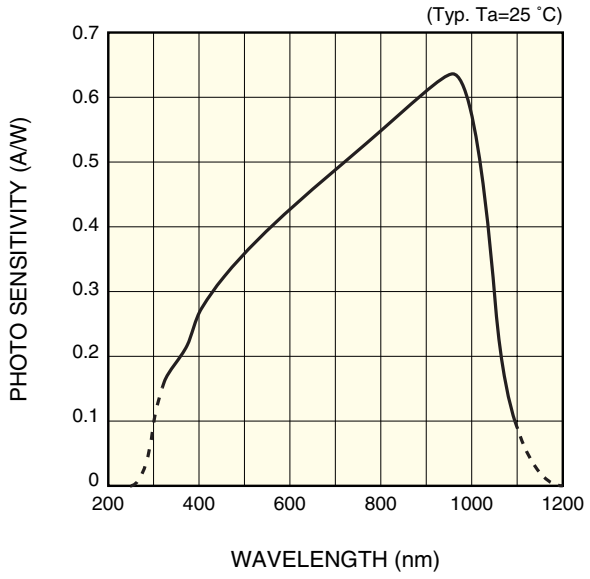
■ Spectral response



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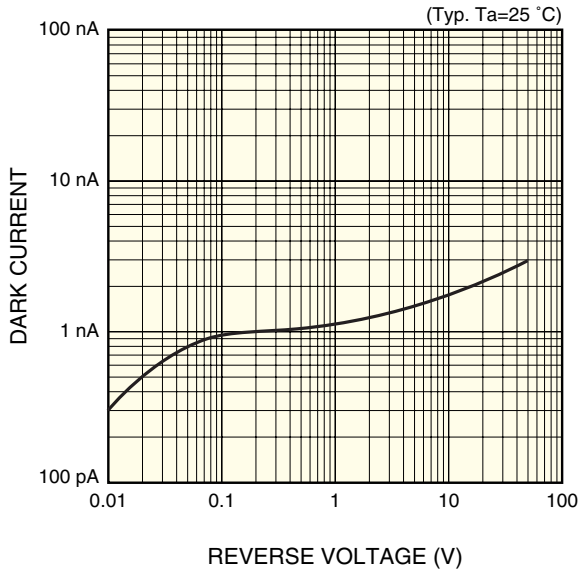
■ Dark current vs. reverse voltage



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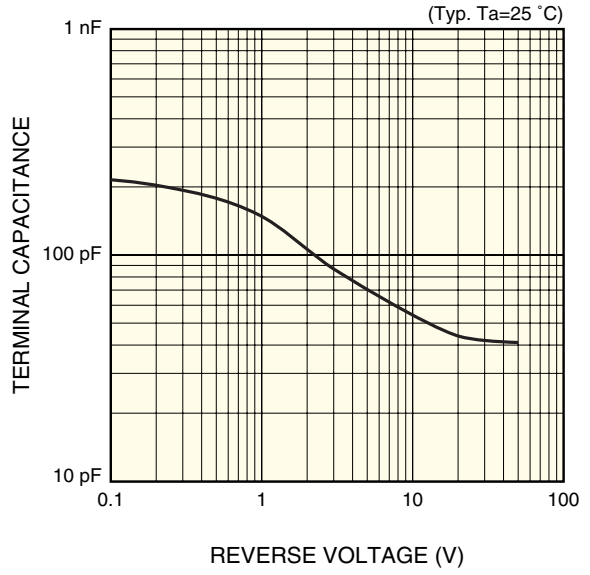
■ Terminal capacitance vs. reverse voltage



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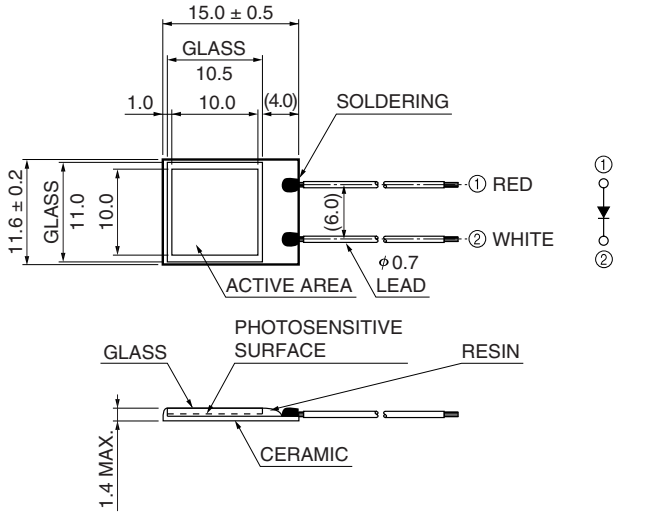
■ Dimensional outline (unit: mm)



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