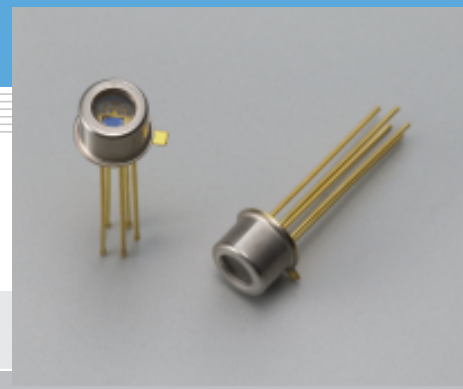


Si PIN photodiode

S8284

Quadrant PIN photodiode for violet laser



S8284 is a high-sensitivity Si PIN photodiode optimized for violet laser detection and especially ideal for optical disc pickups using a violet laser which has now been put into practical use. S8284 offers 30 % higher sensitivity (at 410 nm) than the conventional type (S1651). S8284 also features high-speed response at a low bias voltage.

Features

- TO-18 package
- High sensitivity: 0.3 A/W Typ. ($\lambda=410$ nm)
- High-speed response: 500 MHz Typ. ($V_R=3$ V)
- Active area: 0.6 × 1.2 mm/4 elements

Applications

- Violet laser detection
- Optical disc pickup using violet laser

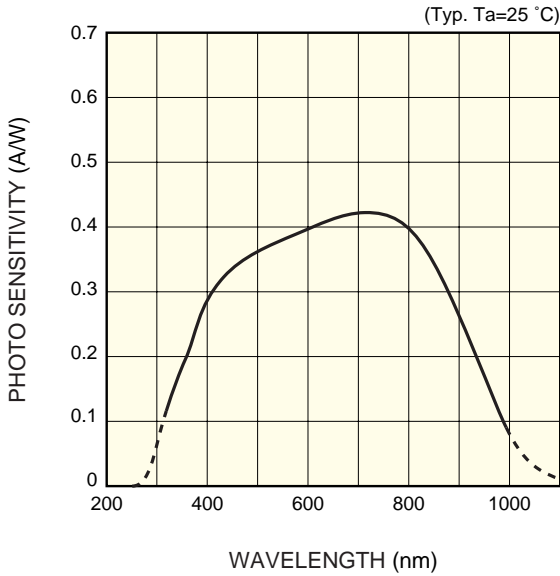
■ Absolute maximum ratings ($T_a=25$ °C)

Parameter	Symbol	Value	Unit
Reverse voltage	V_R Max.	20	V
Operating temperature	T_{opr}	-20 to +100	°C
Storage temperature	T_{stg}	-55 to +125	°C

■ Electrical and optical characteristics (Typ. $T_a=25$ °C, per 1 element, unless otherwise noted)

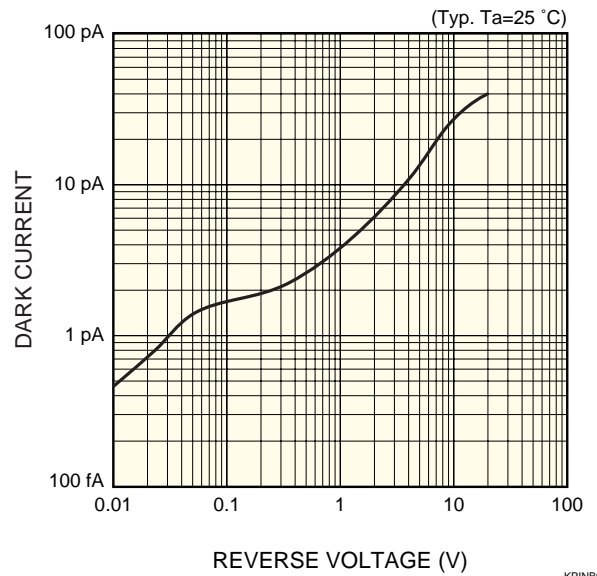
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	λ		-	320 to 1000	-	nm
Peak sensitivity wavelength	λ_p		-	760	-	nm
Photo sensitivity	S	$\lambda=410$ nm	0.26	0.30	-	A/W
Dark current	I_D	$V_R=3$ V, all elements	-	10	200	pA
Terminal capacitance	C_t	$V_R=3$ V, $f=1$ MHz	-	2	4	pF
Cut-off frequency	f_c	$V_R=3$ V, $R_L=50$ Ω -3 dB	300	500	-	MHz

■ Spectral response



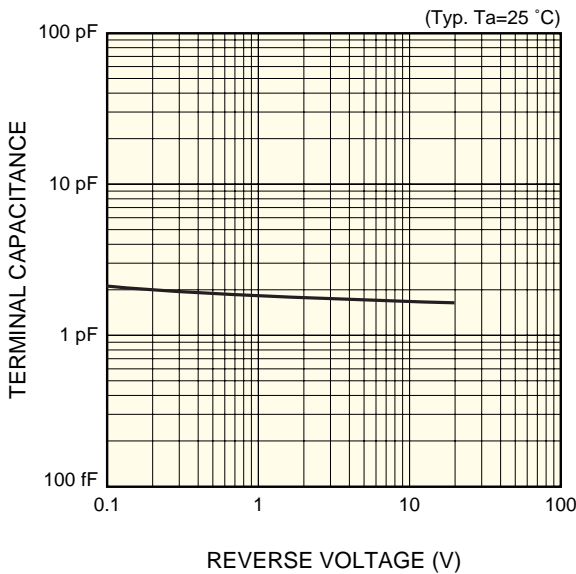
KPINB0195EA

■ Dark current vs. reverse voltage



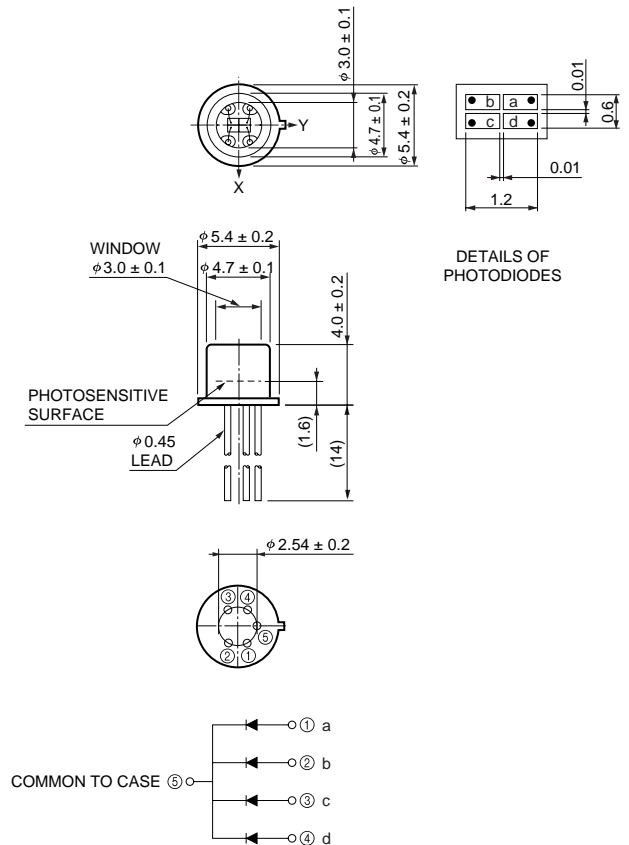
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■ Terminal capacitance vs. reverse voltage



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■ Dimensional outline (unit: mm)



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