

Si PIN photodiode S8359, S8701

High-speed photodiode with lens



S8359 and S8701 are Si PIN photodiodes molded into a clear plastic package with a $\phi 1.7$ mm lens.

Features

- Clear plastic package with $\phi 1.7$ mm lens
- High-speed response S8359: $f_c=200$ MHz Typ. ($V_R=5$ V)
S8701: $f_c=550$ MHz Typ. ($V_R=2$ V)
- High sensitivity

Applications

- Laser diode monitor (high-speed APC) in laser disk equipment
- Spatial light transmission
- Optical communications

■ Absolute maximum ratings

Parameter	Symbol	Value	Unit
Reverse voltage	V_R Max	10	V
Operating temperature	T_{opr}	-25 to +85	°C
Storage temperature	T_{stg}	-40 to +100	°C

■ Electrical and optical characteristics ($T_a=25$ °C)

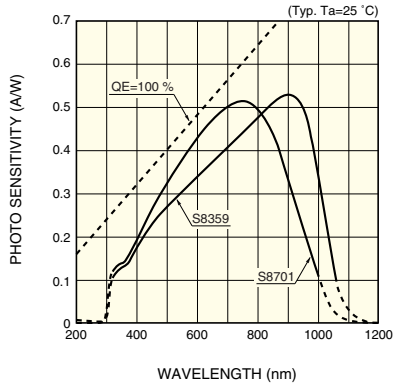
Parameter	Symbol	Condition	S8359			S8701			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Spectral response range	λ		-	320 to 1060	-	-	320 to 1000	-	nm
Peak sensitivity wavelength	λ_p		-	900	-	-	760	-	nm
Photo sensitivity	S	$\lambda=660$ nm	-	0.4	-	-	0.48	-	A/W
Dark current	I_D		-	0.01 *1	1 *1	-	-	0.3 *2	nA
Cut-off frequency	f_c	$R_L=50 \Omega$ $\lambda=780$ nm, -3 dB	100 *1	200	-	350 *3	550 *3	-	MHz
Terminal capacitance	C_t	$f=1$ MHz	-	3 *1	5 *1	-	3.5 *3	7 *3	pF
Half angle	-		-	± 25	-	-	± 20	-	degree

*1: $V_R=5$ V

*2: $V_R=3$ V

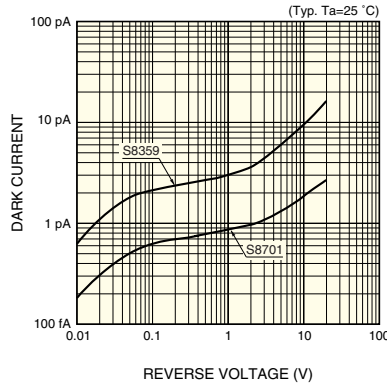
*3: $V_R=2$ V

■ Spectral response



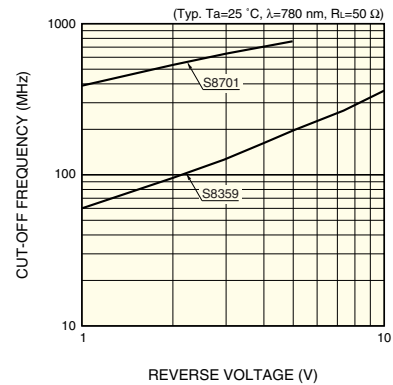
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■ Dark current vs. reverse voltage



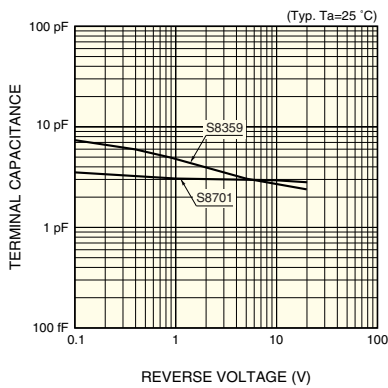
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■ Cut-off frequency vs. reverse voltage



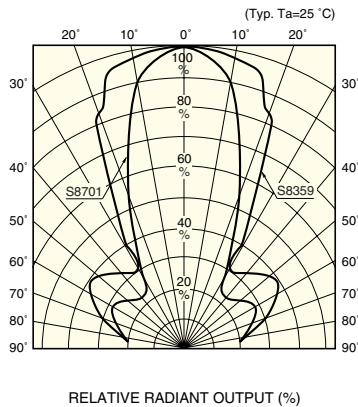
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■ Terminal capacitance vs. reverse voltage



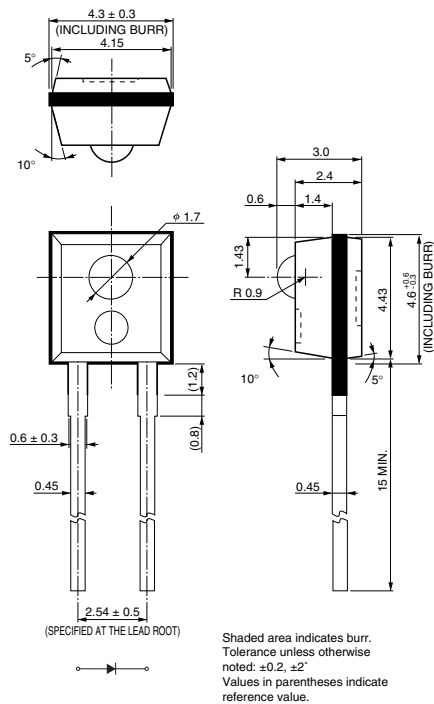
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■ Directivity



KPINB0270EA

■ Dimensional outline (unit: mm)



KPINA0089EA

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