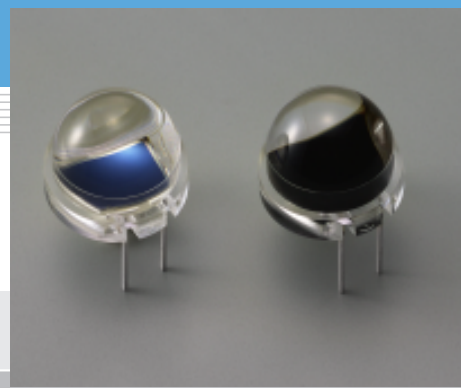


Si PIN photodiode S6968 series

φ14 mm lens plastic package



S6968 series is a Si PIN photodiode molded into a plastic package with a φ14 mm lens. Two types are provided, S6968 with a clear plastic package and S6968-01 with a visible-cut package.

Features

- Plastic packages with φ14 mm lens
- High-speed response: 50 MHz Typ. ($V_R=10$ V, $\lambda=850$ nm)
- High sensitivity: 0.63 A/W ($\lambda=850$ nm)
- Directivity: 35° (half angle)
- Visible-cut type (S6968-01)
- Active area size: φ14 mm
- Effective active area: 150 mm²

Applications

- Spatial light transmission
- Optical communication
- Optical data link
- High-speed optical measurement
- Optical switch
- Laser radar

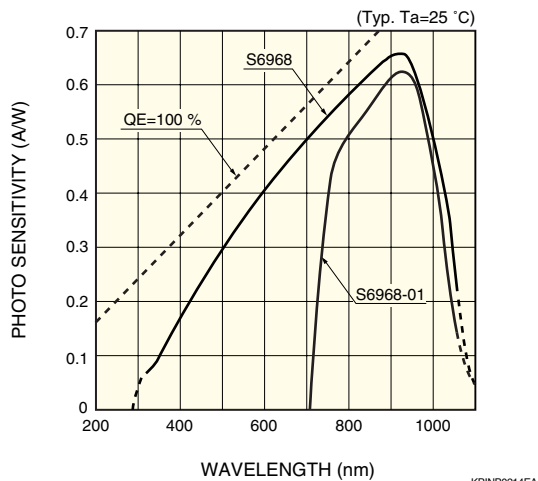
■ Absolute maximum ratings

Parameter	Symbol	Value	Unit
Reverse voltage	V_R Max.	35	V
Operating temperature	T_{opr}	-25 to +85	°C
Storage temperature	T_{stg}	-40 to +100	°C

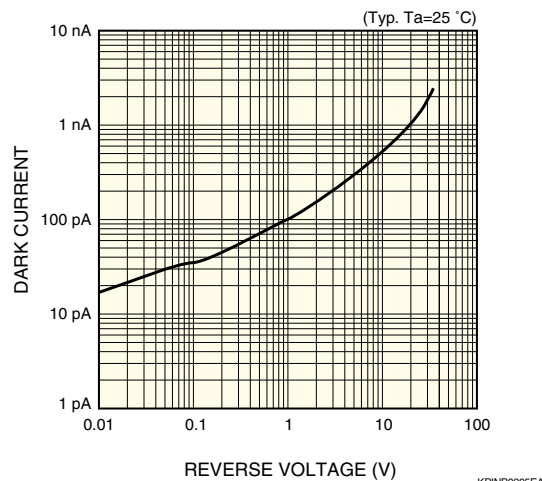
■ Electrical and optical characteristics ($T_a=25$ °C)

Parameter	Symbol	Condition	S6968			S6968-01			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Spectral response range	λ		-	320 to 1060	-	-	700 to 1060	-	nm
Peak sensitivity wavelength	λ_p		-	920	-	-	920	-	nm
Photo sensitivity	S	$\lambda=850$ nm	0.57	0.63	-	0.5	0.55	-	A/W
Short circuit current	I_{sc}	100 k Ω , 2856 K	83	104	-	57	72	-	μA
Dark current	I_D	$V_R=10$ V	-	0.5	5	-	0.5	5	nA
Temperature coefficient of I_D	T_{CID}		-	1.15	-	-	1.15	-	times/°C
Cut-off frequency	f_c	$V_R=10$ V, $R_L=50$ Ω $\lambda=850$ nm, -3 dB	30	50	-	30	50	-	MHz
Terminal capacitance	C_t	$V_R=10$ V, $f=1$ MHz	-	50	100	-	50	100	pF
Half angle	-		-	±35	-	-	±35	-	degree

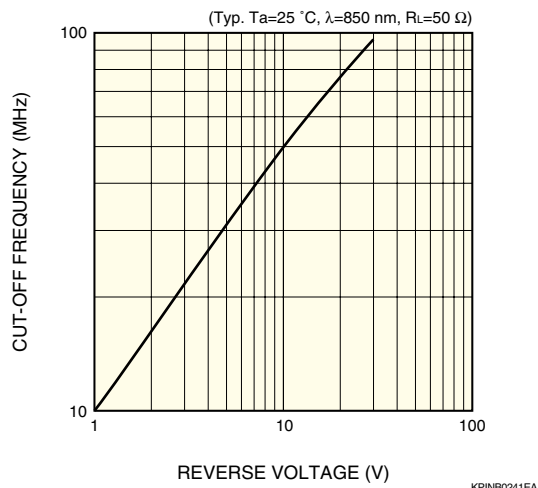
Spectral response



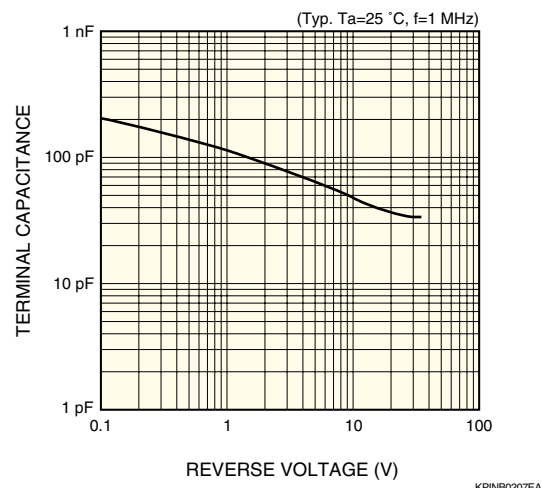
Dark current vs. reverse voltage



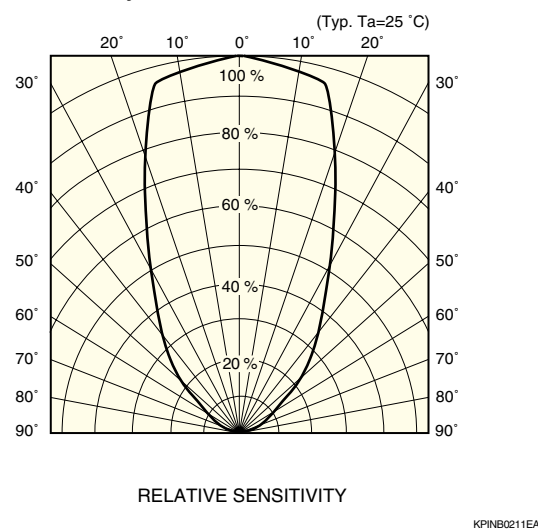
Cut-off frequency vs. reverse voltage



Terminal capacitance vs. reverse voltage

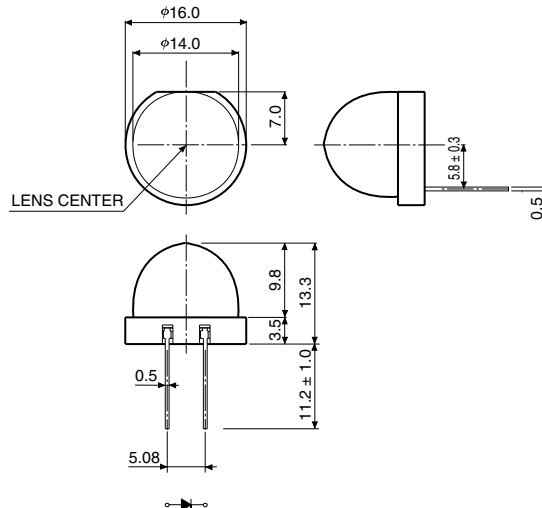


Directivity



Dimensional outline

(unit: mm, tolerance unless otherwise noted: ± 0.1)



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