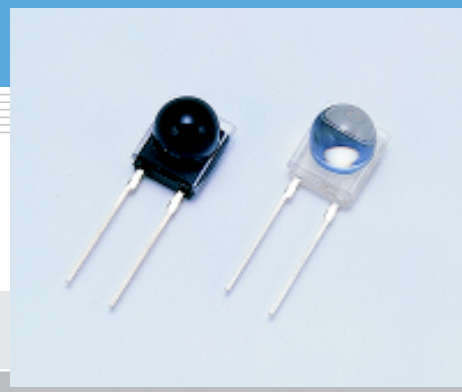


Si PIN photodiode S6436 series

φ7 mm lens plastic package



S6436 series is Si PIN photodiode molded into a plastic package with a φ7 mm lens. Two types are available: S6436 of clear plastic package and S6436-01 of visible-cut package.

Features

- Plastic package with φ7 mm lens
- High-speed response: 60 MHz Typ. ($V_R=10$ V, $\lambda=850$ nm)
- High sensitivity: 0.63 A/W ($\lambda=850$ nm)
- Directivity: $\pm 25^\circ$ (half angle)
- S6436-01: visible-cut type

Applications

- Spatial light transmission
- Optical communications
- Optical data link
- High-speed optical measurement
- Optical switches
- Laser radars

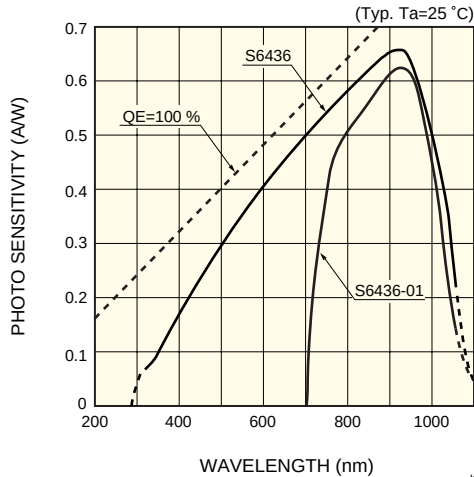
Absolute maximum ratings

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 ($T_a=25^\circ\text{C}$)

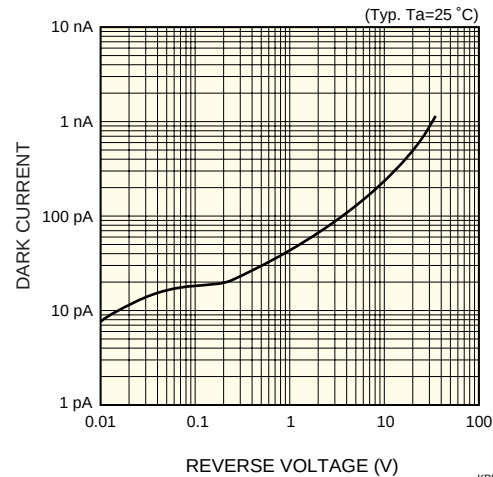
Parameter	Symbol	Condition	S6436			S6436-01			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Spectral response range	λ		-	320 to 1060	-	-	700 to 1060	-	nm
Peak sensitivity wavelength	λ_p		-	920	-	-	920	-	nm
Photo sensitivity	S	$\lambda=850$ nm	0.57	0.63	-	0.5	0.55	-	A/W
Short circuit current	I_{sc}	100 μ A, 2856 K	24	30	-	17	22	-	μ A
Dark current	I_D	$V_R=10$ V	-	0.3	5	-	0.3	5	nA
Temperature coefficient of dark current	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	60	-	30	60	-	MHz
Terminal capacitance	C_t	$V_R=10$ V, $f=1$ MHz	-	15	30	-	15	30	pF
Half angle	-		-	± 25	-	-	± 25	-	degree

Spectral response



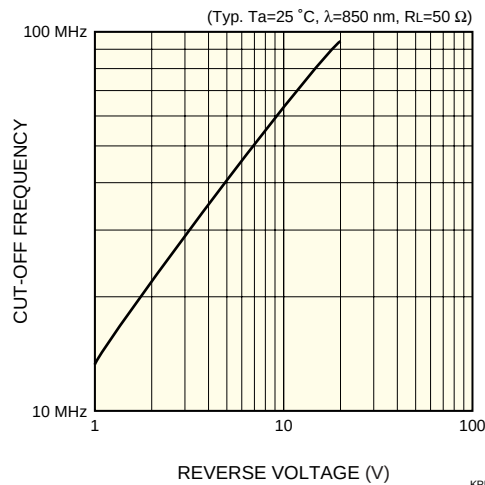
KPINB0203EA

Dark current vs. reverse voltage



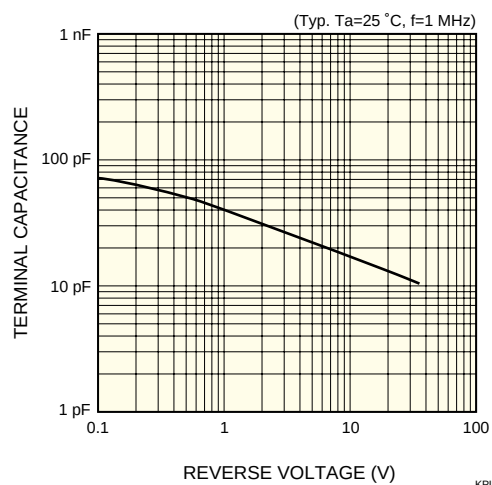
KPINB0204EA

Cut-off frequency vs. reverse voltage



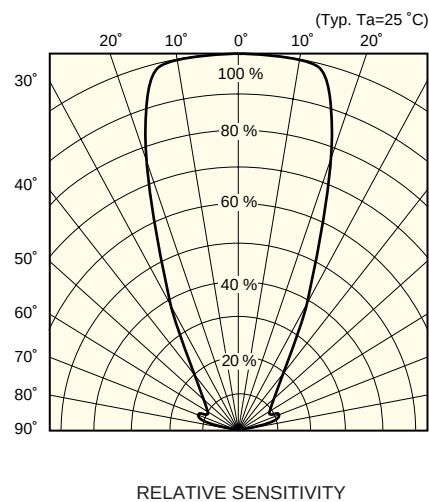
KPINB0204EA

Terminal capacitance vs. reverse voltage



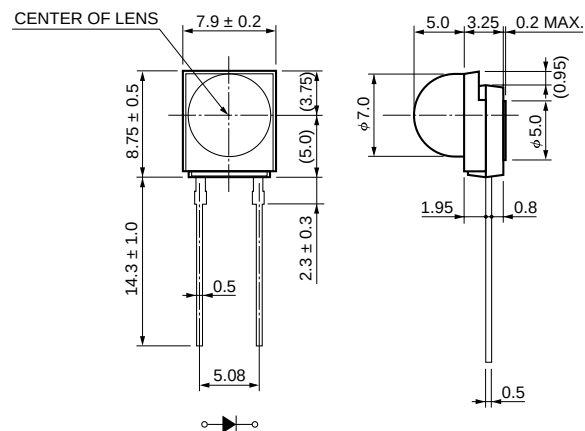
KPINB0206EA

Directivity



KPINB0210EA

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



KPINA0047EA

HAMAMATSU

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