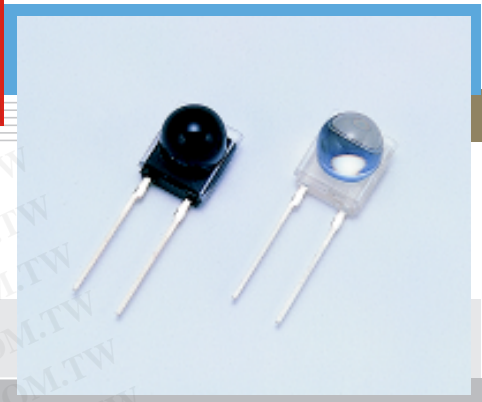


# Si PIN photodiode S6436 series

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. ( $V_R=10\text{ V}$ ,  $\lambda=850\text{ nm}$ )
- High sensitivity: 0.63 A/W ( $\lambda=850\text{ nm}$ )
- 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

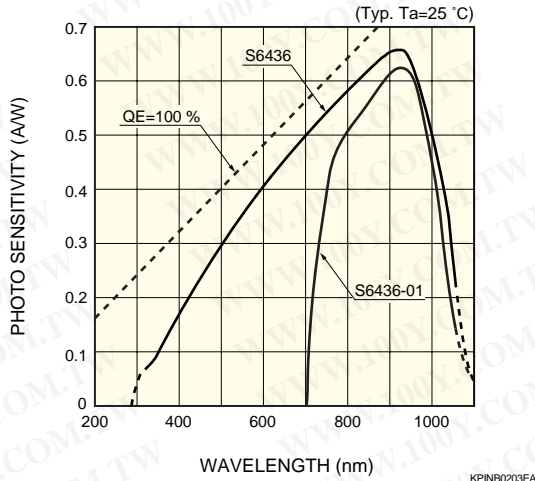
### ■ Absolute maximum ratings

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

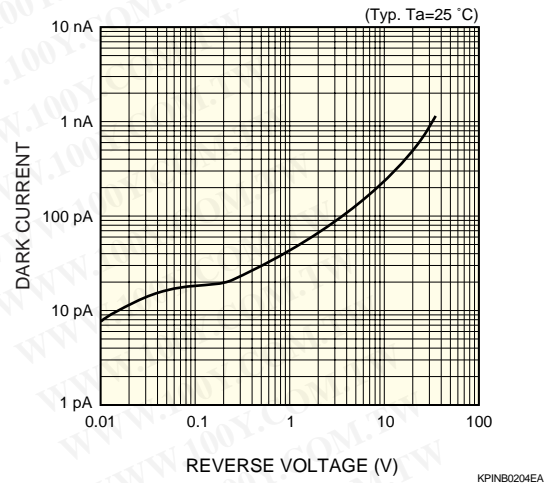
### ■ Electrical and optical characteristics ( $T_a=25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Condition	S6436			S6436-01			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Spectral response range	$\lambda$		-	320 to 1060	-	-	700 to 1060	-	nm
Peak sensitivity wavelength	$\lambda_p$		-	920	-	-	920	-	nm
Photo sensitivity	S	$\lambda=850\text{ nm}$	0.57	0.63	-	0.5	0.55	-	A/W
Short circuit current	$I_{sc}$	100 $\mu\text{A}$ , 2856 K	24	30	-	17	22	-	$\mu\text{A}$
Dark current	$I_D$	$V_R=10\text{ V}$	-	0.3	5	-	0.3	5	nA
Temperature coefficient of dark current	$T_{CID}$		-	1.15	-	-	1.15	-	times/°C
Cut-off frequency	$f_c$	$V_R=10\text{ V}$ , $R_L=50\ \Omega$ $\lambda=850\text{ nm}$ , -3 dB	30	60	-	30	60	-	MHz
Terminal capacitance	$C_t$	$V_R=10\text{ V}$ , $f=1\text{ MHz}$	-	15	30	-	15	30	pF
Half angle	-		-	$\pm 25$	-	-	$\pm 25$	-	degree

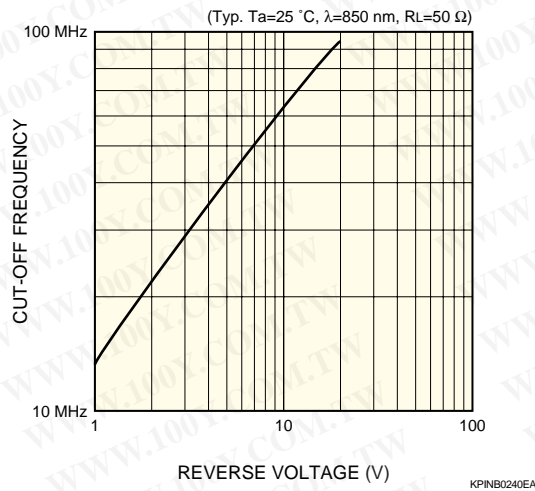
■ Spectral response



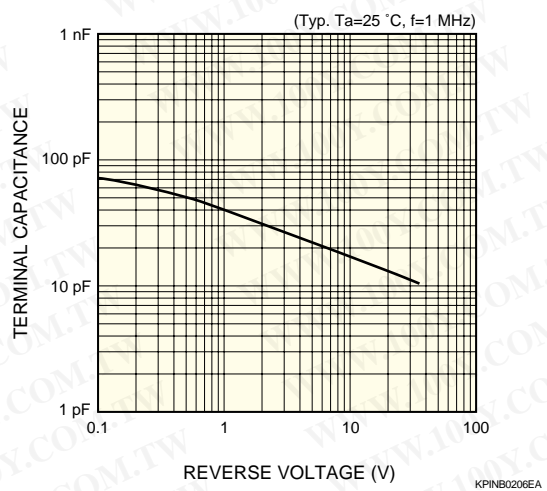
■ Dark current vs. reverse voltage



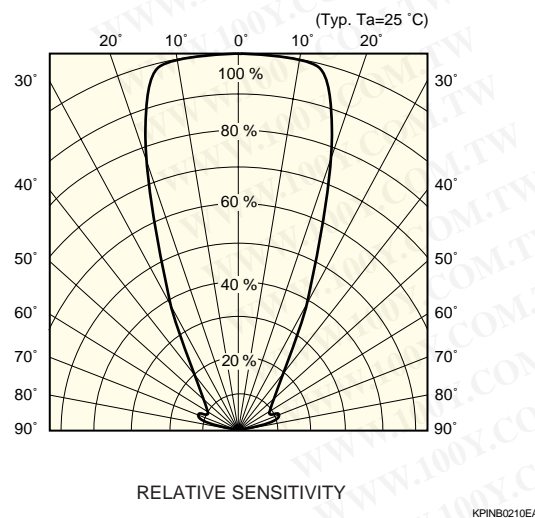
■ Cut-off frequency vs. reverse voltage



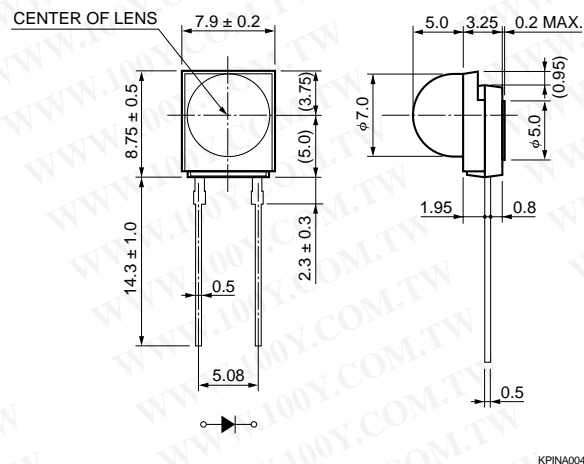
■ Terminal capacitance vs. reverse voltage



■ Directivity



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



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