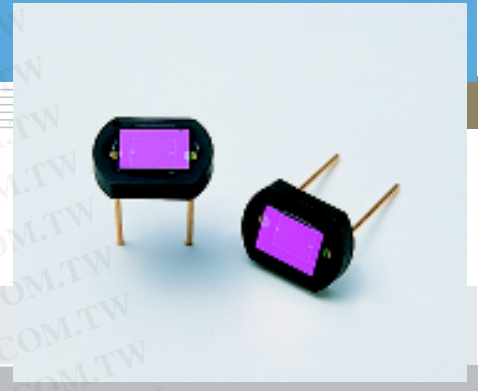


# Si photodiode S7686



Photodiode with sensitivity close to spectral luminous efficiency

S7686 is a Si photodiode having a spectral response characteristic that is more similar to the human eye sensitivity (spectral luminous efficiency) than our conventional visible-compensated sensors (S1133, etc.).

## Features

- Spectral response analogous to CIE spectral luminous efficiency  
Spectral response range: 480 to 660 nm  
Peak sensitivity wavelength: 550 nm
- Ceramic package for reliability
- Active area: 2.4 x 2.8 mm
- High-speed response: 0.5  $\mu$ s ( $V_R=0$  V,  $R_L=1$  k $\Omega$ )
- fs value: 8 % Typ. (vertical light input)

## Applications

- Illuminometer
- Luminance meter

勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-54151736  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

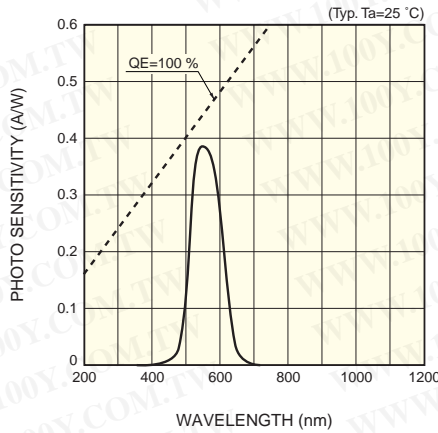
### ■ Absolute maximum ratings ( $T_a=25$ °C)

Parameter	Symbol	Value	Unit
Reverse voltage	$V_R$ Max.	10	V
Operating temperature	$T_{opr}$	-10 to +60	°C
Storage temperature	$T_{stg}$	-20 to +70	°C

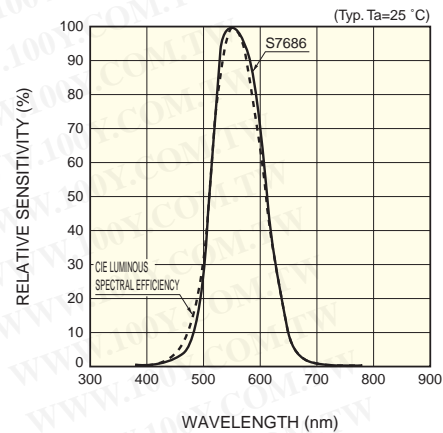
### ■ Electrical and optical characteristics ( $T_a=25$ °C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Spectral response range	$\lambda$		-	480 to 660	-	nm
Peak sensitivity wavelength	$\lambda_p$		-	550	-	nm
Photo sensitivity	S	$\lambda=\lambda_p$	-	0.38	-	A/W
Short circuit current	$I_{sc}$	100 lx, 2856 K	-	0.45	-	$\mu$ A
Dark current	$I_D$	$V_R=1$ V	-	2	20	pA
Rise time	$t_r$	$V_R=0$ V, $R_L=1$ k $\Omega$	-	0.5	-	$\mu$ s
Terminal capacitance	$C_t$	$V_R=0$ V, $f=10$ kHz	-	200	-	pF

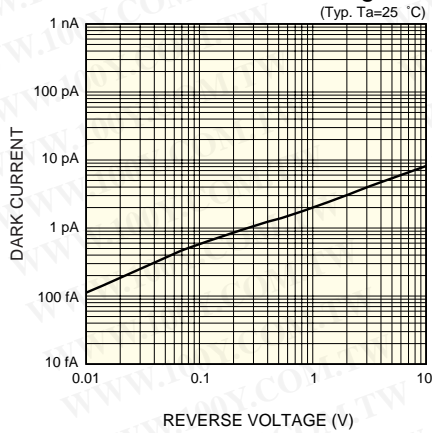
■ Spectral response



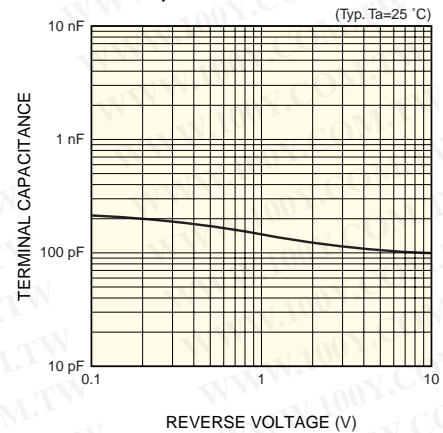
■ Spectral response (relative value)



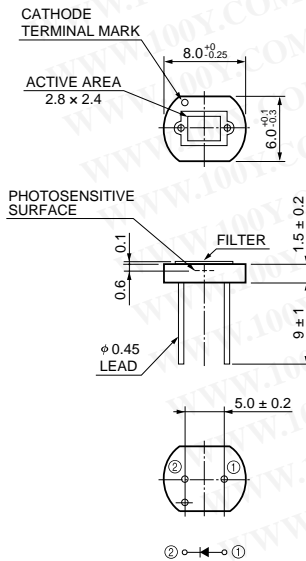
■ Dark current vs. reverse voltage



■ Terminal capacitance vs. reverse voltage



■ Dimensional outline (unit: mm, tolerance unless otherwise noted: ±0.15)



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