

NMOP-213FA-T/B

Silicon Planar PIN Photodiode

The NMOP-213FA-T/B is a silicon PIN photodiode in T1 3/4 plastic package which is designed for high sensitivity, fast switching time and narrow sensing angle. This device is suitable for diverse applications such as remote controls of various equipment.

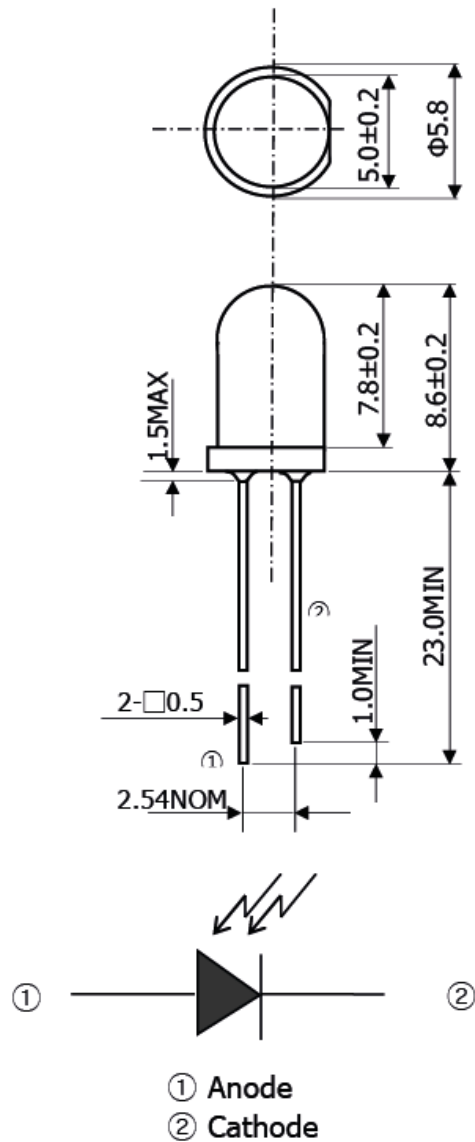
FEATURES

- Short switching time
- High sensitivity
- Daylight filter

APPLICATIONS

- High speed IR communication
- Copier
- Elevator

Package Dimensions



- Note :**
1. All Dimensions are in millimeters
 2. Tolerance unless dimensions ± 0.2 mm

NMOP-213FA-T/B
Absolute Maximum Ratings

Item	Symbol	Rating	Unit
Reverse voltage	V_D	30	V
Power Dissipation	P_D	150	mW
Operating temperature	$T_{opr.}$	-40 ~ +85	°C
Storage temperature	T_{stg}	-40 ~ +100	°C
Soldering temperature *2	T_{sol}	260	°C

*1.Soldering time ≤ 5 seconds.

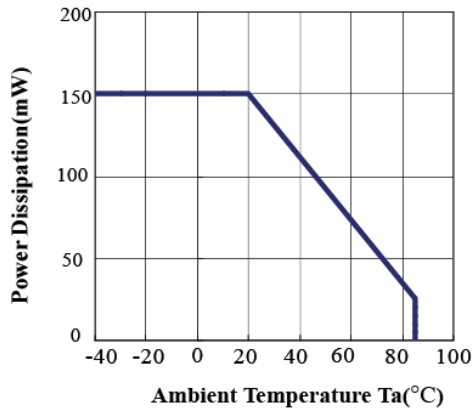
Electro-Optical Characteristics

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

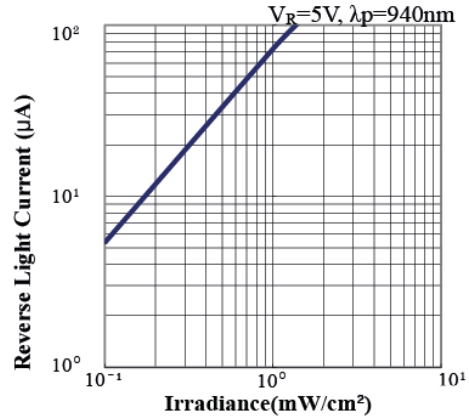
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Open circuit voltage	V_{oc}	$E_e=5\text{mW/cm}^2$ $\lambda_p=940\text{nm}$		0.4		V
Short circuit current	I_{sc}	$E_e=1\text{mW/cm}^2$ $\lambda_p=940\text{nm}$		68		μA
Reverse light current	I_L	$E_e=1\text{mW/cm}^2$ $\lambda_p=940\text{nm}$, $V_R=5\text{V}$	48	70		μA
Dark current	I_D	$E_e=0\text{mW/cm}^2$ $V_R=10\text{V}$			100	nA
Capacitance	C_T	$E_e=0\text{mW/cm}^2$ $V_R=10\text{V}$, $f=1\text{MHz}$		18		pF
Range of spectral bandwidth	λ		800~1,050			nm
Wavelength of peak sensitivity	λ_p			940		nm
Half sensing angle	$\Delta\theta$			± 10		Deg

Typical Electro-Optical Characteristics Curve

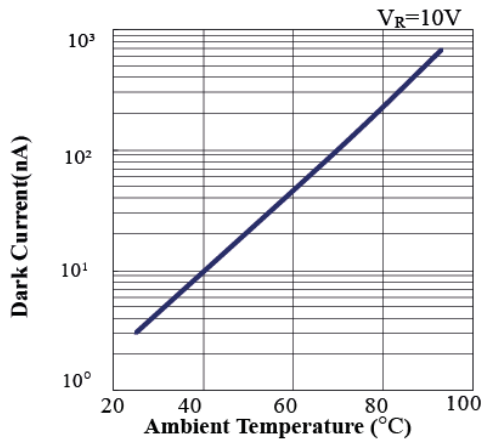
● Power Dissipation vs Ambient Temperature



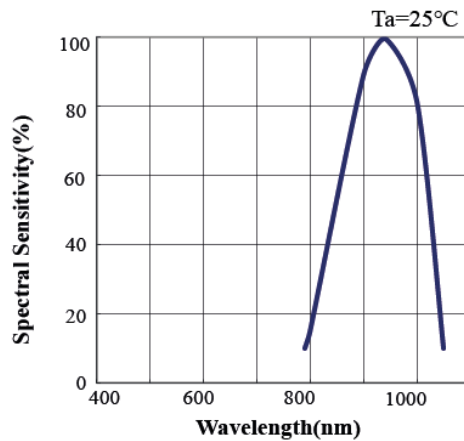
● Reverse Light Current vs Irradiance



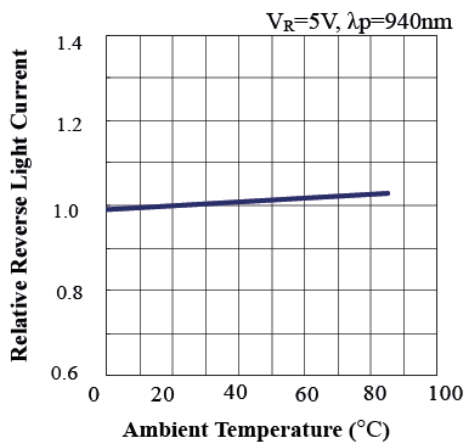
● Dark Current vs Ambient Temperature



● Relative Spectral Sensitivity vs Wavelength



● Relative Reverse Light Current vs Ambient Temperature



● Directional Characteristics

