

# NMOP-10054

## Photo-diode

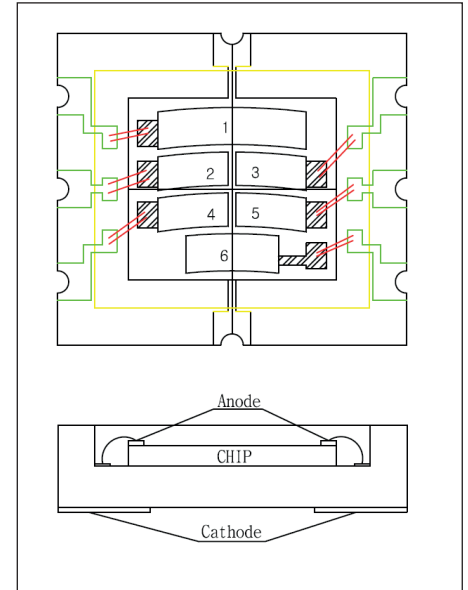
The NMOP-10054 is high-output, high-speed compact silicon PIN Photo-diode chip mounted on PCB.

### FEATURES

- Especially suitable for applications of 880nm short switching time applications
- Silicon version

### APPLICATIONS

- Encoder module



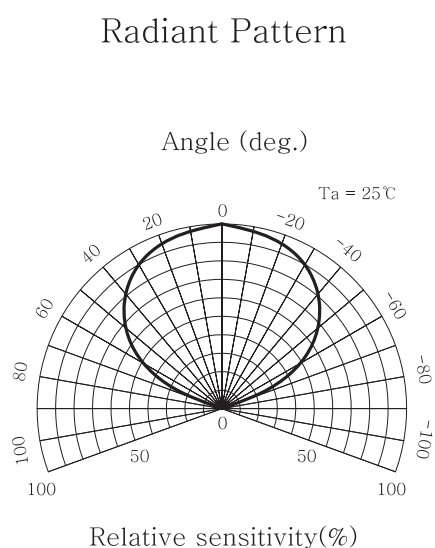
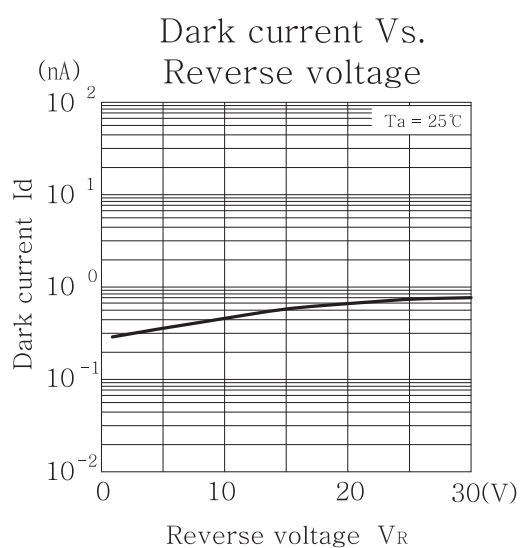
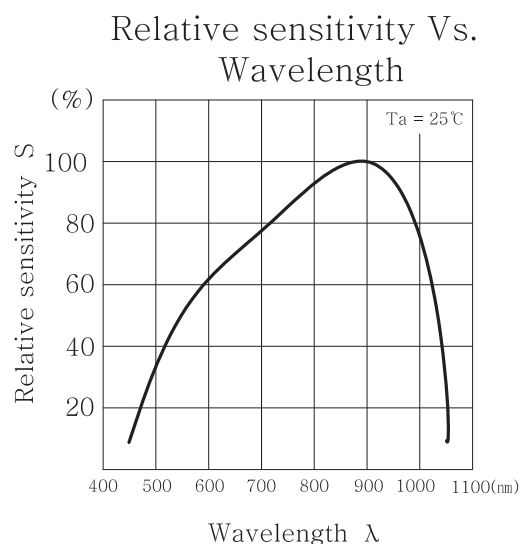
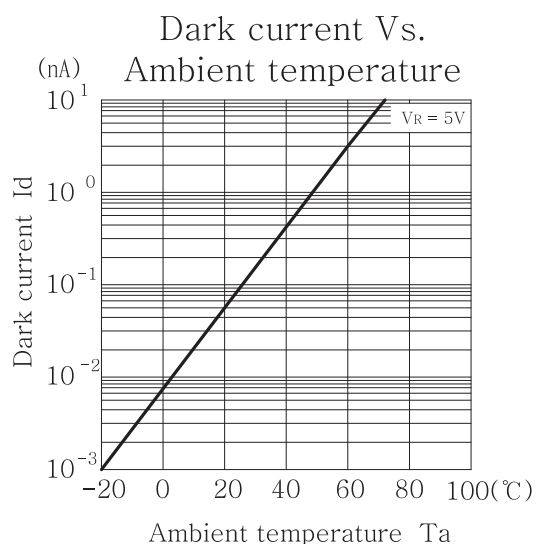
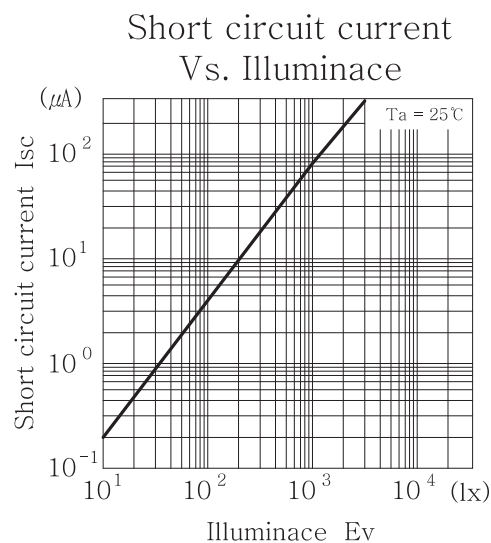
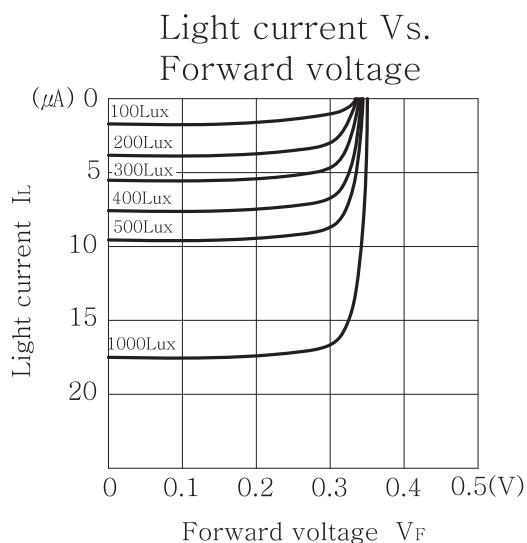
### MAXIMUM RATINGS

Item	Symbol	Rating	Unit
Reverse voltage	$V_R$	30	V
Junction temperature	$T_J$	195	°C
Operating temperature	$T_{opr.}$	-40 ~ +125	°C
Storage temperature	$T_{stg}$	-40 ~ +125	°C

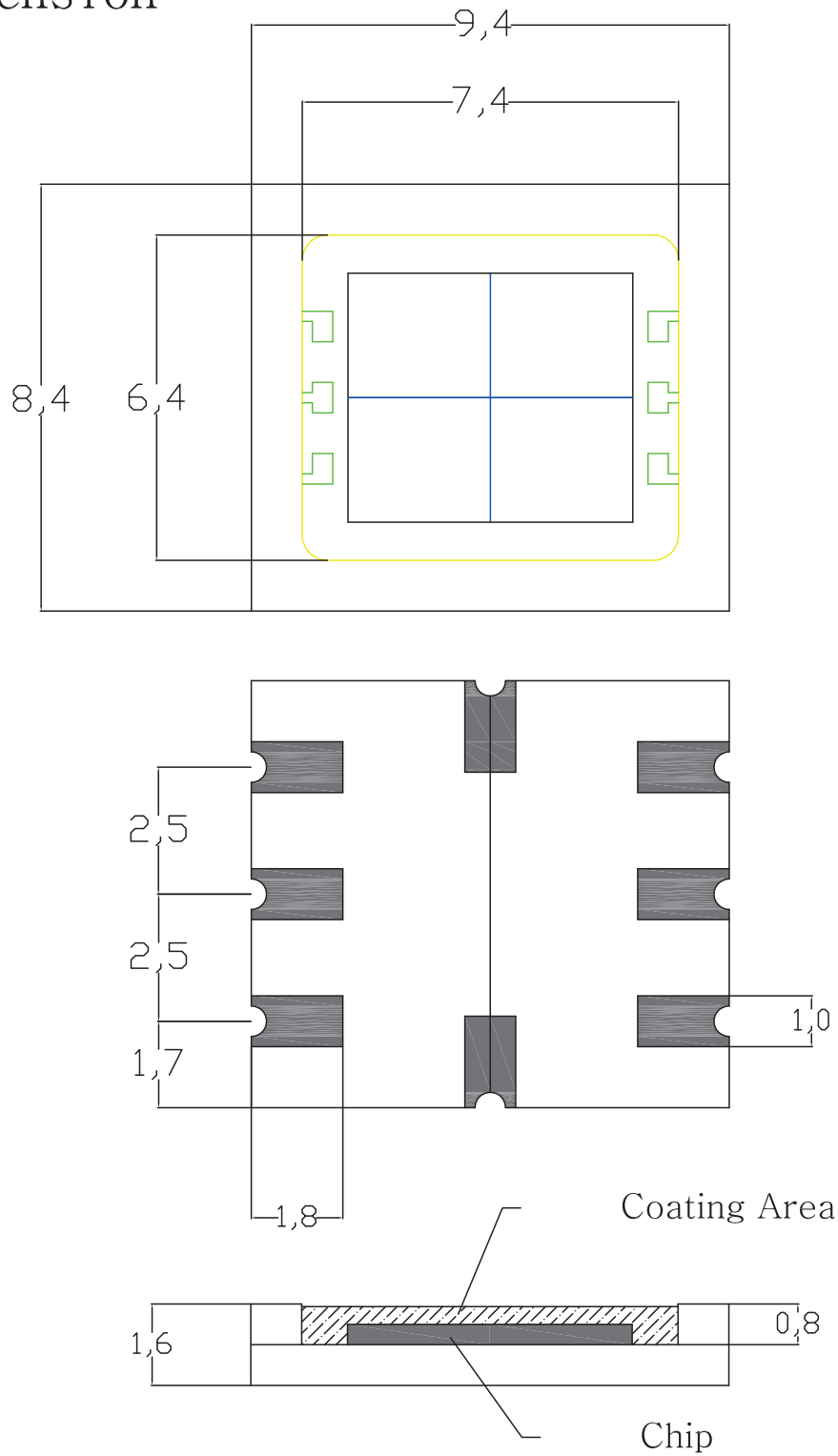
### ELECTRO-OPTICAL CHARACTERISTICS

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

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	$V_F$	$I_F = 20\text{mA}$		1.5		V
Open circuit voltage	$V_{oc}$	$E_v = 1,000 \text{ Lux}$		0.35		V
Short circuit voltage	$I_{sc}$		15			$\mu\text{A}$
Light current	$I_{sh}(1)$	$E_v = 1,000 \text{ Lux}$	50			$\mu\text{A}$
	$I_{sh}(2)$		30			
	$I_{sh}(3)$		25			
Sensitivity	$S$	$\lambda_p = 880\text{nm}$		0.5		A/W
Dark current	$I_d$	$V_R = 10\text{V}$			0.5	nA
Curve factor	C.F.		0.55			-
Capacitance	$C_t$	$V_{00V}, f=1\text{MHz}$		2		pF
Temp. coefficient of $V_{oc}$	$\alpha_t$			-2.2		mV/°C
Temp. coefficient of $I_{sc}$	$\beta_t$			0.18		%/°C
Spectral sensitivity	$\lambda$			450 ~ 1,050		nm
Peak wavelength	$\lambda_p$			880		nm
Half angle	$\Delta\theta$			$\pm 60$		deg.
Turn on	$T_r$	$V_R=10\text{V}, R_L=1\text{K}\Omega$ $\lambda_p=880\text{nm}$		10		ns
Turn off	$T_f$			10		ns



## Dimension



Dimension

(Unit : mm)

