

## NMOP-10025

### 940nm GaAlAs Infrared Emitter

The NMOP-10025 is high speed infrared LED in miniature side-facing device which is molded in a water clear package with spherical top view lens. This device is optimized for efficiency at peak wavelength 940nm and has a high radiant efficiency over a wide range of forward current.

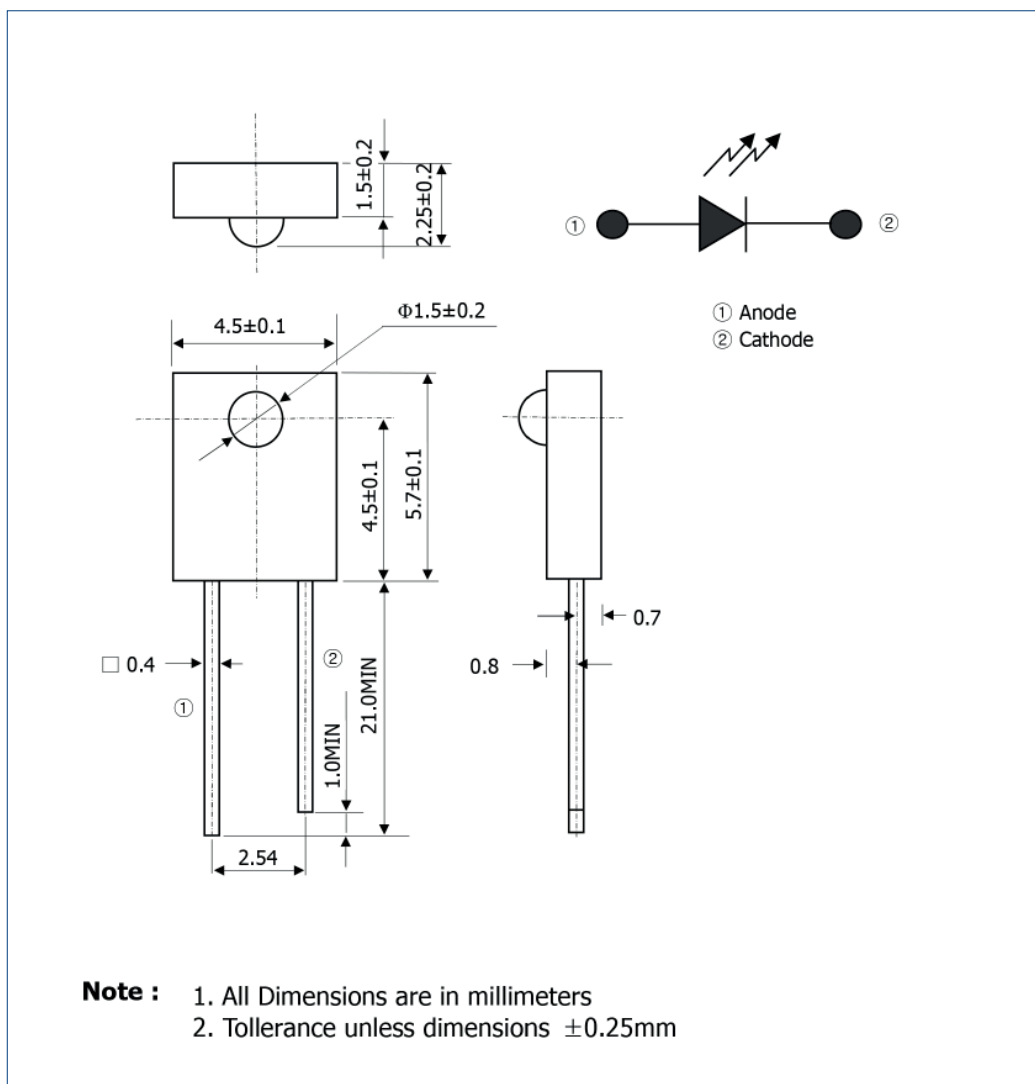
#### FEATURES

- Low forward voltage
- Ultra high-speed : 10ns rise time
- Very highly efficient GaAlAs IR LED
- 940nm peak wavelength
- Good linearity at high current
- Lead (Pb) free product – RoHS compliant

#### APPLICATIONS

- Optoelectronic switch
- Photo interrupter

#### PACKAGE DIMENSIONS



# NMOP-10025

## MAXIMUM RATINGS

(Ta=25°C)

Item	Symbol	Rating	Unit
Power dissipation	$P_D$	100	mW
Forward current	$I_F$	50	mA
Pulse forward current *1	$I_{FP}$	1	A
Reverse voltage	$V_R$	5	V
Operating temperature	$T_{opr}$	-25~ +85	°C
Storage temperature	$T_{stg}$	-40~+85	°C
Soldering temperature*2	$T_{sol}$	260	°C

\*1. IFP conditions—Pulse width≤100us and Duty≤1%

\*2. Lead soldering temperature (2mm from case 5 sec.)

## ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Light current	$I_c(ON)$	$I_F=4mA, V_{CE}=3.5V$	85		1870	$\mu A$
Forward Voltage	$V_F$	$I_F=20mA$		1.3	1.6	V
		$I_F=100mA, tp \leq 100\mu s, Duty \leq 1\%$		1.4	1.8	
		$I_F=1A, tp \leq 100\mu s, Duty \leq 1\%$		2.6	4.0	
Reverse current	$I_R$	$V_R=5V$			10	$\mu A$
Peak emission wavelength	$\lambda_p$	$I_F=20mA$		940		nm
Spectral bandwidth 50%	$\Delta\lambda$	$I_F=20mA$		80		nm
Half angle	$\Delta\theta$	$I_F=20mA$		$\pm 10$		deg.
Optical rise & fall time(10%~90%)	tr/tf	$I_F=20mA$		10/6		ns

### Test Method for $I_c(ON)$

The intensity testing method for infrared emitting diode

