

# LNA4501F

## GaAlAs Red Light Emitting Diode

For optical fiber communications and control systems

### ■ Features

- Red light emission close to monochromatic light :  $\lambda_p = 680 \text{ nm}$
- High-power output, high-efficiency :  $P_O = 3 \text{ mW}$
- High coupling characteristics and suits to a plastic fiber
- High-speed response :  $-3\text{dB}$  modulation of  $10 \text{ MHz}$
- Flat resin package :  $\phi 4.8 \text{ mm}$

### ■ Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Ratings	Unit
Power dissipation	$P_D$	120	mW
Forward current (DC)	$I_F$	40	mA
Pulse forward current	$I_{FP}^*$	200	mA
Reverse voltage (DC)	$V_R$	3	V
Operating ambient temperature	$T_{opr}$	$-25$ to $+85$	$^\circ\text{C}$
Storage temperature	$T_{stg}$	$-30$ to $+100$	$^\circ\text{C}$

\*  $t_w = 10 \mu\text{s}$ , Duty cycle = 10 %

### ■ Electro-Optical Characteristics ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Conditions	min	typ	max	Unit
Radiant power	$P_O$	$I_F = 20\text{mA}$	1	3		mW
Peak emission wavelength	$\lambda_p$	$I_F = 20\text{mA}$		680		nm
Spectral half band width	$\Delta\lambda$	$I_F = 20\text{mA}$		20		nm
Forward voltage (DC)	$V_F$	$I_F = 20\text{mA}$		1.8	2.6	V
Reverse current (DC)	$I_R$	$V_R = 3\text{V}$			100	$\mu\text{A}$
Response time	$t_r, t_f$	$I_{FP} = 100\text{mA}$		30		ns
Half-power angle	$\theta$	The angle in which radiant intensity is 50%		30		deg.

Note : Before using this product, be sure provide and/or receive approvals regarding individual specifications.



