

# LNA4501F (LN124W)

## GaAlAs Red Light Emitting Diode

For optical fiber communications and control systems

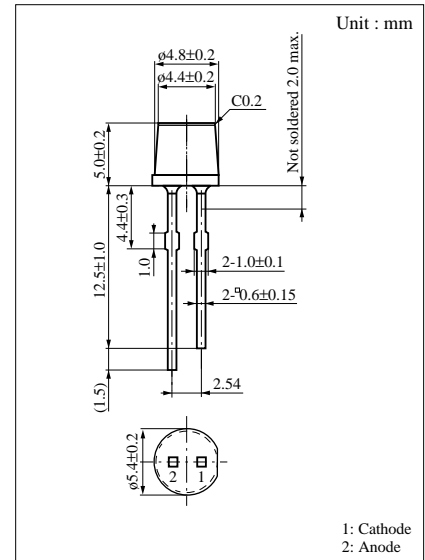
### ■ Features

- 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	Rated	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 %

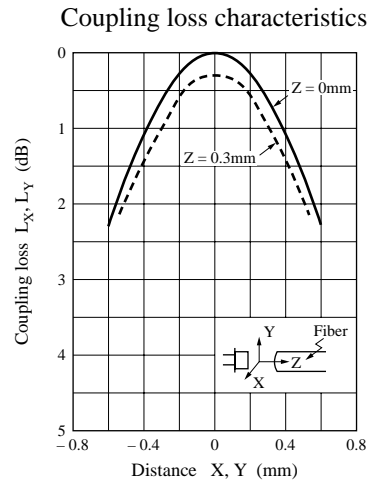
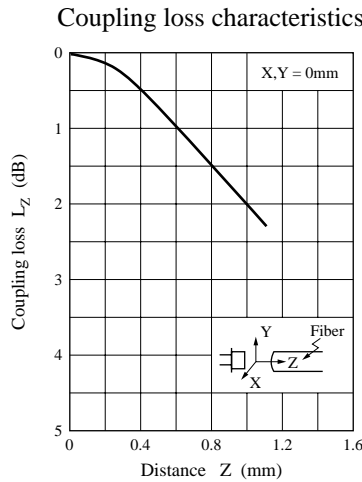
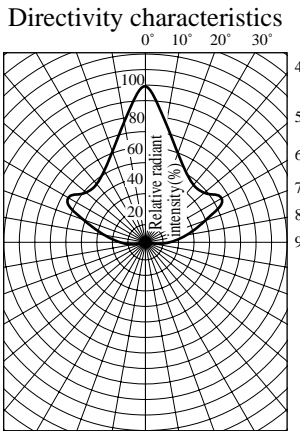
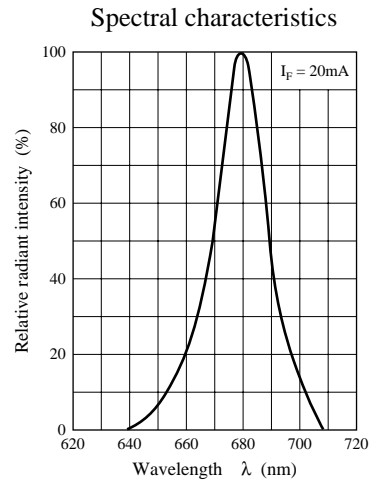
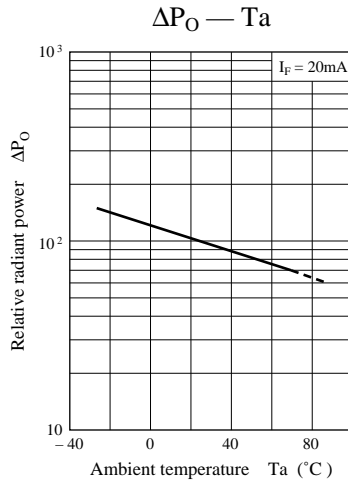
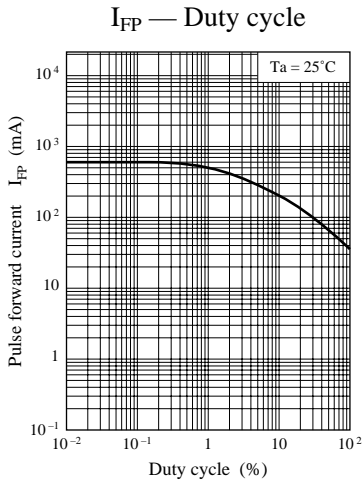
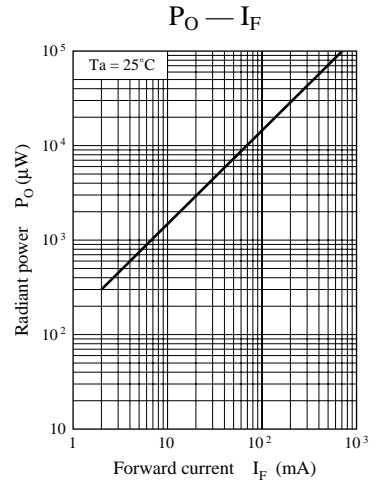
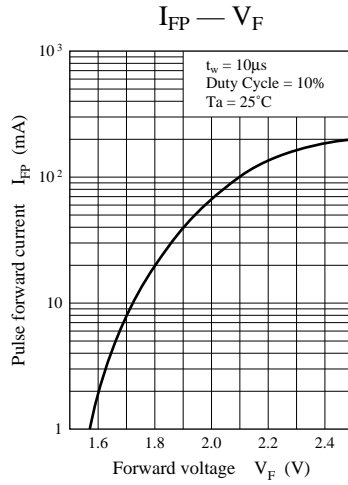
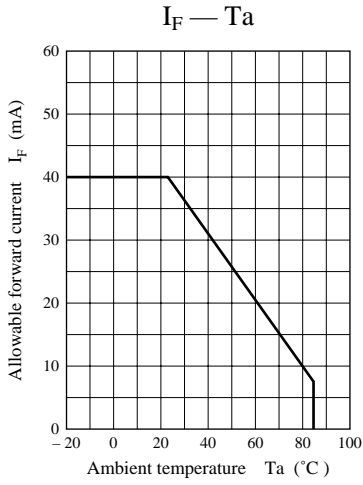


### ■ Electro-Optical Characteristics ( $T_a = 25^\circ\text{C}$ )

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.

Note) The part number in the parenthesis shows conventional part number.



# Caution for Safety

 **DANGER**

Gallium arsenide material (GaAs) is used in this product.

Therefore, do not burn, destroy, cut, crush, or chemically decompose the product, since gallium arsenide material in powder or vapor form is harmful to human health.

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