

# LN122DF, LN122DL

## GaAlAs Red Light Emitting Diodes

### For Optical Control Systems

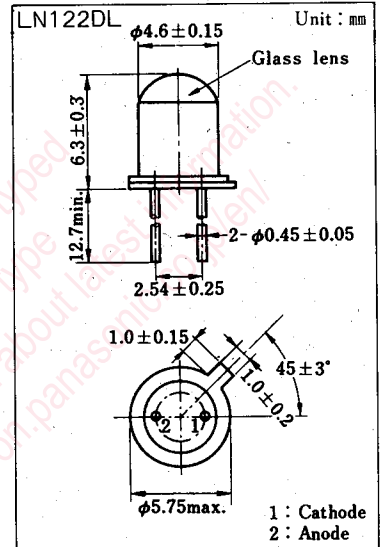
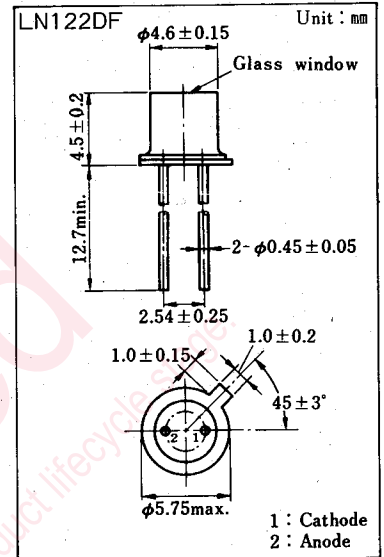
#### ■ Features

- Red radiation ( $\lambda_p=660\text{nm}$ )
- High-power output
- High-speed modulation (10MHz)
- Narrow beam angle (LN122DL)
- Wide beam angle (LN122DF)
- TO-18 standard package

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

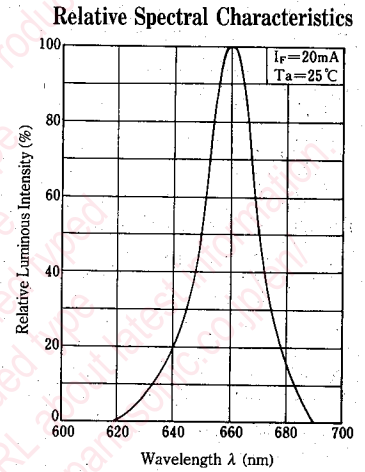
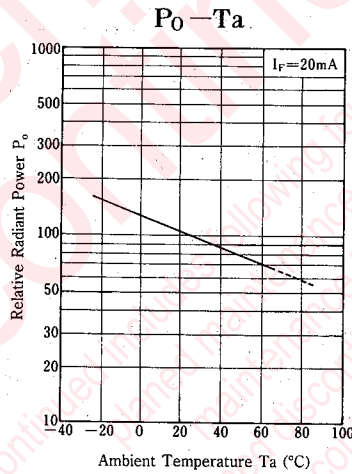
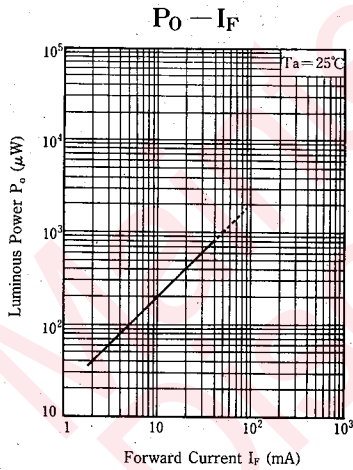
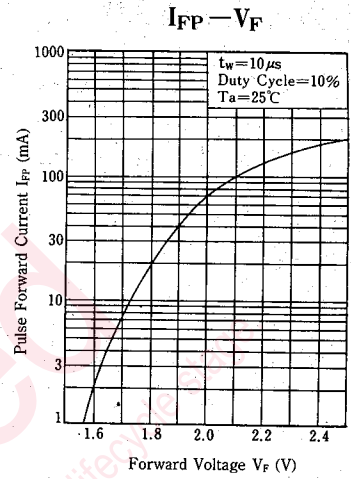
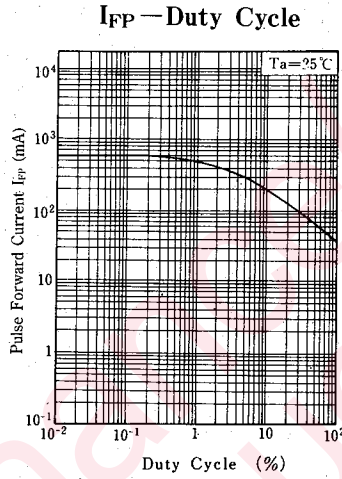
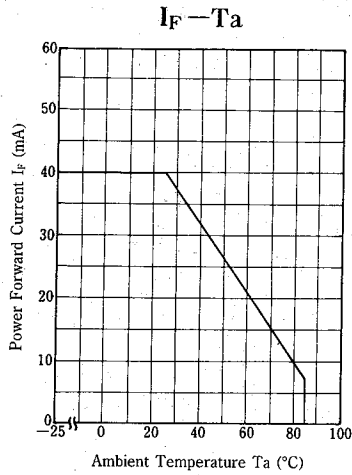
Item	Symbol	Value	Unit
Power Dissipation	$P_D$	120	mW
Forward Current (DC)	$I_F$	40	mA
Pulse Forward Current	$I_{FP}^*$	200	mA
Reverse Voltage (DC)	$V_R$	3	V
Operating Ambient Temperature	$T_{opr}$	$-25 \sim +85$	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	$-30 \sim +100$	$^\circ\text{C}$

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

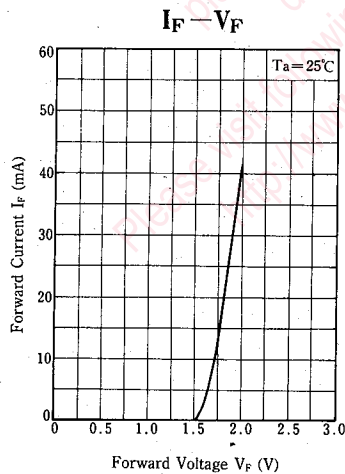
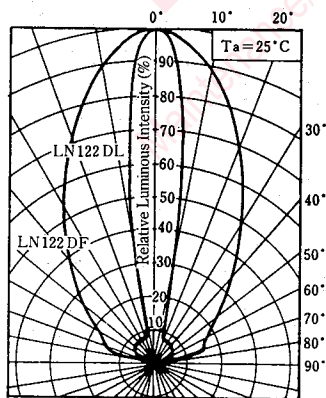


#### ■ Electro-Optical Characteristics ( $T_a=25^\circ\text{C}$ )

Item	Symbol	Condition	min.	typ.	max.	Unit
Optical Power Output	$P_O$	$I_F = 20\text{mA}$	200			$\mu\text{W}$
Peak Emission Wavelength	$\lambda_P$	$I_F = 20\text{mA}$		660		nm
Spectral 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
Beam Half Angle	LN122DF	Measured from the optical axis to the half power point		30		deg.
	LN122DL			8		deg.



### Directional Characteristics



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