

LN183H

GaAlAs Infrared Light Emitting Diode

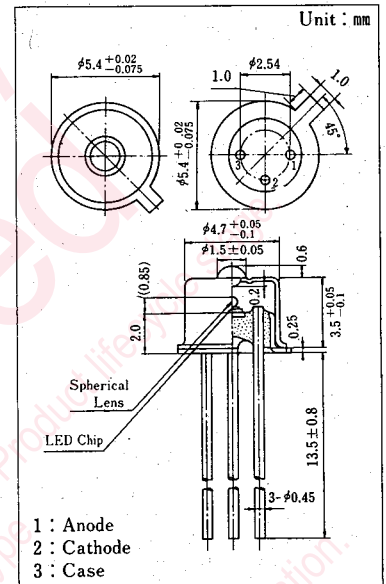
For Optical Fiber Communication

■ Features

- High-frequency response: $f_c=35\text{MHz}$ (typ.)
- High optical fiber power for GI50/125: $P_f=70\mu\text{W}$
- Current-optical output characteristics with good linearity
- High reliability

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

Item	Symbol	Value	Unit
Power Dissipation	P_D	250	mW
Forward Current	I_F	150	mA
Reverse Voltage	V_R	3	V
Operating Ambient Temperature	T_{opr}	$-40 \sim +85$	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-40 \sim +100$	$^\circ\text{C}$



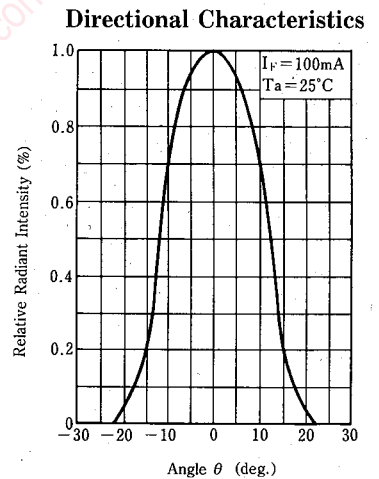
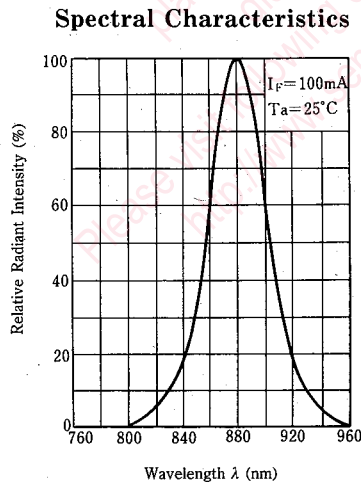
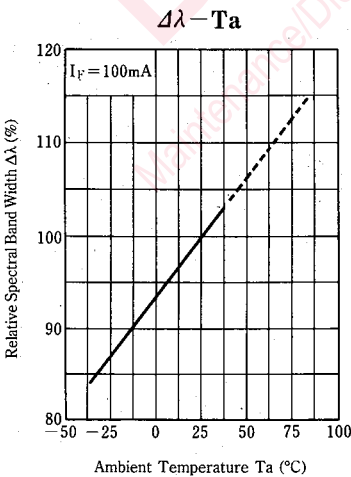
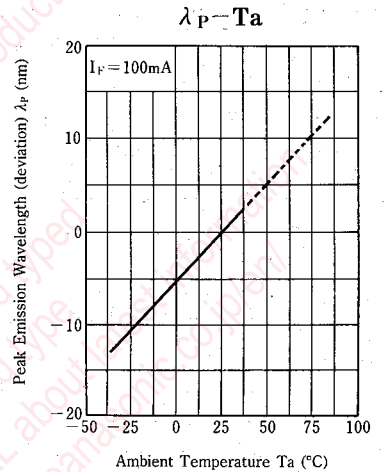
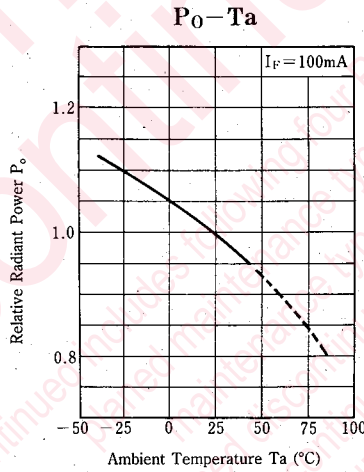
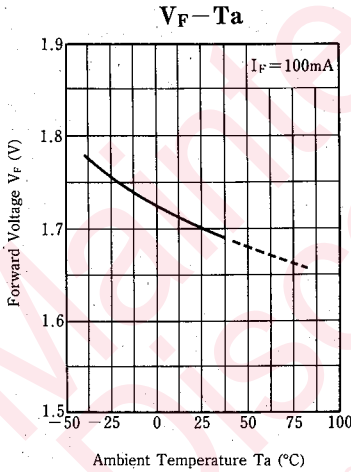
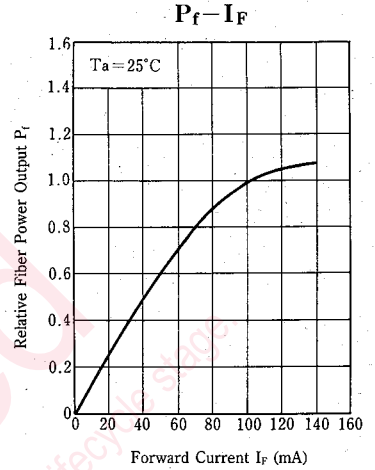
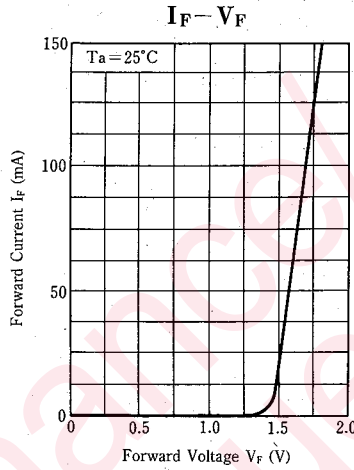
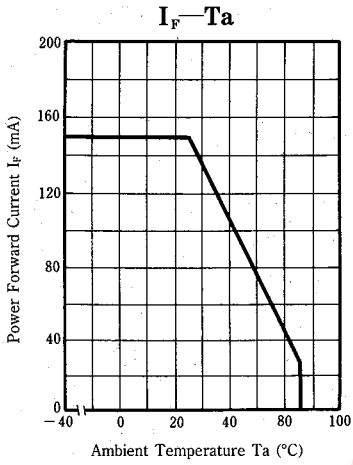
■ Electro-Optical Characteristics ($T_a=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Optical Power Output	P_O	$I_F=100\text{mA}$	2.1	3		mW
Peak Emission Wavelength	λ_P	$I_F=100\text{mA}$		880		nm
Spectral Band Width	$\Delta\lambda$	$I_F=100\text{mA}$		45		nm
Forward Voltage (DC)	V_F	$I_F=100\text{mA}$		1.7	2	V
Reverse Current (DC)	I_R	$V_R=3\text{V}$			10	μA
Beam Half Angle	θ^*	$I_F=100\text{mA}$		25		deg.
Cutoff Frequency	f_c^{**}	$I_F=50\text{mA} + 17.5\text{mA p-p}$		35		MHz
Fiber Power Output	P_f^{***}	$I_F=100\text{mA}$	50	70		μW

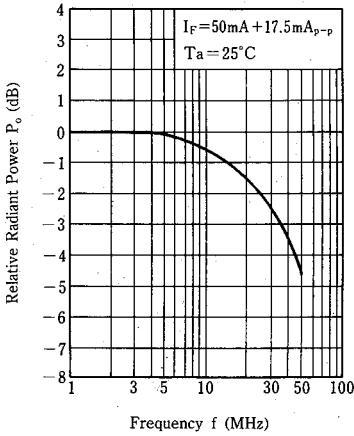
* : Angle measured from the optical axis to the half power point.

** : Frequency when modulation light power decreases by 3dB from 1MHz. $\left(10 \log \frac{P_o(f_c \text{ MHz})}{P_o(1 \text{ MHz})} = -3\right)$

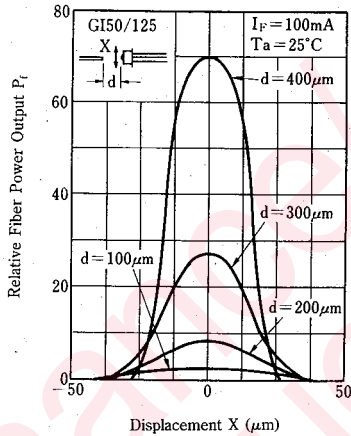
*** : Light power at GI50/125.



Frequency Characteristics



Coupling Loss Characteristics



Maintenance/Discontinued includes following four Product lifecycle stage.
 Discontinued
 planned maintenance type
 maintenance type
 planned discontinued type
 discontinued type
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