GL514/GL513F

TO-1 8 Type Infrared **Emitting** Diode

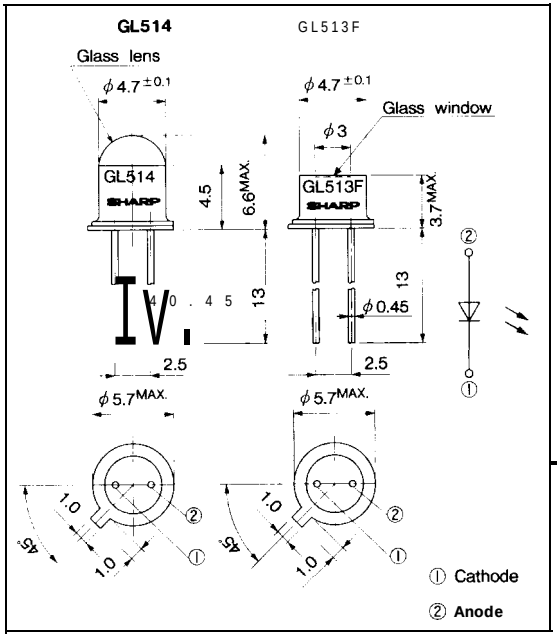
■ Features

1. Output : GL514 Φ_e MIN. 3.31mW at I_F=100mA
   GL513F Φ_e MIN. 1.44mW at I_F=100mA
2. Beam angle : **GL514** $\Delta\theta$: TYP. ±7°
   GL513F $\Delta\theta$: TYP. ±50°
3. To – 18 type standard package
4. High reliability, long operation life

■ Applications

1. Optoelectronic switches
2. Smoke detectors
3. Infrared applied systems

■ Outline Dimensions (Unit : mm)



■ Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Power dissipation	P	250	mW
Forward current	I_F	150	mA
*1Peak forward current	I_{FM}	2	A
Reverse voltage	V_R	6	V
Operating temperature	T_{opr}	-40 to +125	℃
Storage temperature	T_{stg}	-55 to +125	℃
*2Soldering temperature	T_{sol}	260	℃

*1 Pulse width S200 μs
Duty ratio = 0.01
*2 For 10 seconds at the position of 1.3mm from the bottom face of can package.

■ Electro-optical Characteristics (Ta=25℃)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage		V_F	I_F=100mA	–	1.35	1.6	V
Peak forward voltage		V_{FM}	I_{FM}=1.5A		2.75	4.0	v
Reverse current		I_R	V_R=5V	–	–	100	μA
Terminal capacitance		C_t	V=O, f=1MHz	–	70	–	pF
*3Radiant flux	GL514	Φ_e	I_F=100mA	3.31	5.35	10.0	mW
	GL513F			1.44	2.88	–	mW
Peak emission wavelength		λ_p	I_F=100mA	–	950	–	nm
Half intensity wavelength		Δλ	IF= 100mA	–	45	–	nm

*3 Classification Table of Radiant Flux

(Φ_e)

Model No.	Rank Mark	Φ_e (mW)
GL514A	A	5.35 to 10.0
GL514	—	3.31 to 10.0

at I_F=100mA, Ta=25℃

Fig. 1 Forward Current vs. Ambient Temperature

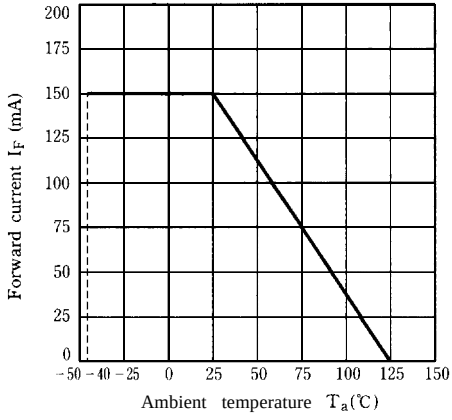


Fig. 2 Peak Forward Current vs. Duty Ratio

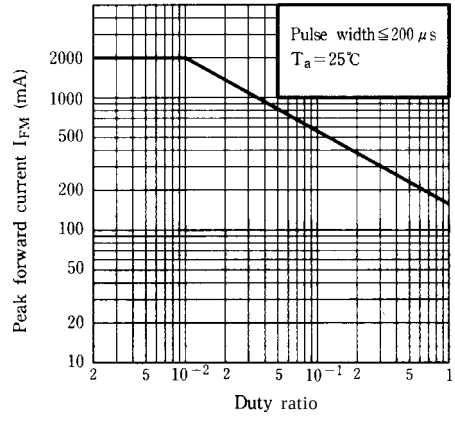


Fig. 3 Spectral Distribution

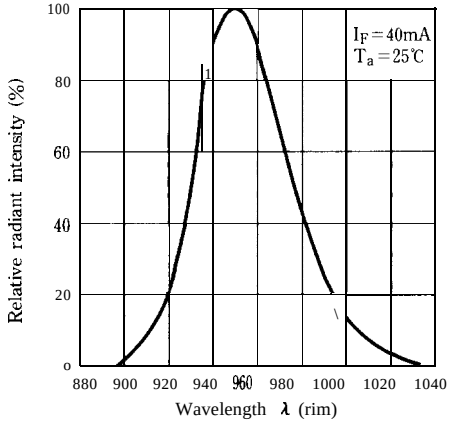


Fig. 4 Peak Emission Wavelength va. Ambient Temperature

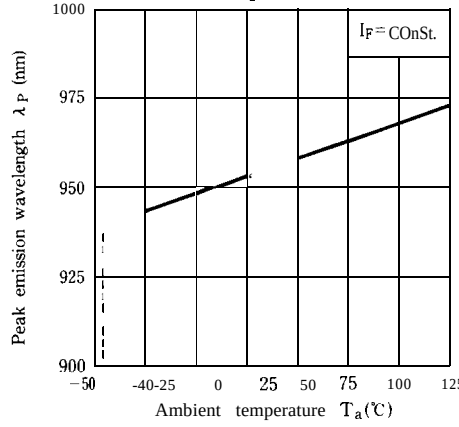


Fig. 5 Forward Current vs. Forward Voltage

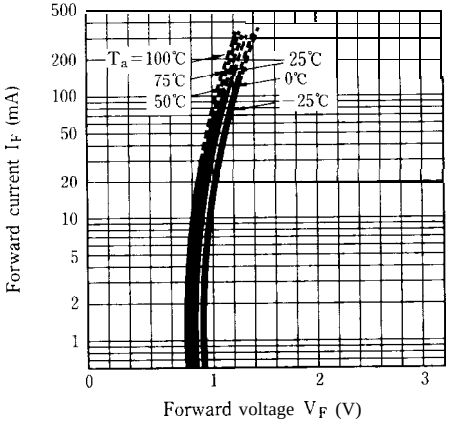


Fig. 6 Relative Radiant Flux vs. Ambient Temperature

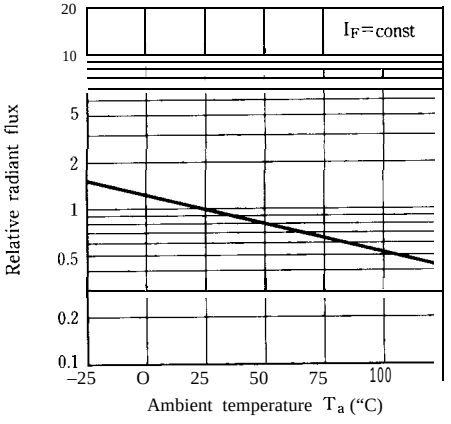


Fig. 7 Radiant Flux vs. Forward Current (GL514)

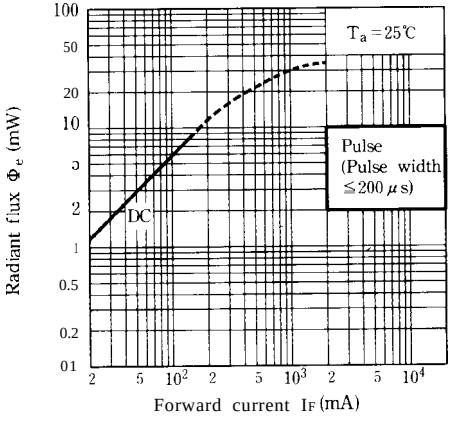


Fig. 8 Radiant Flux vs. Forward Currant (GL513n)

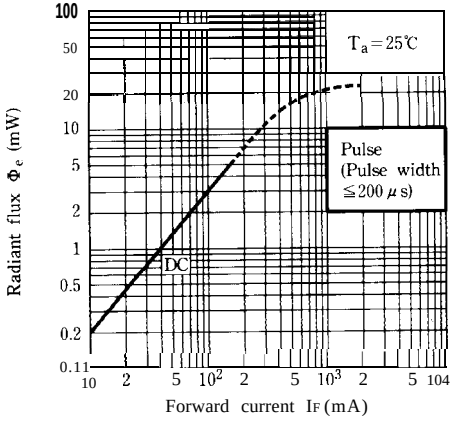


Fig. 9 **Relative Radiant Intensity vs. Distance** (GL514)

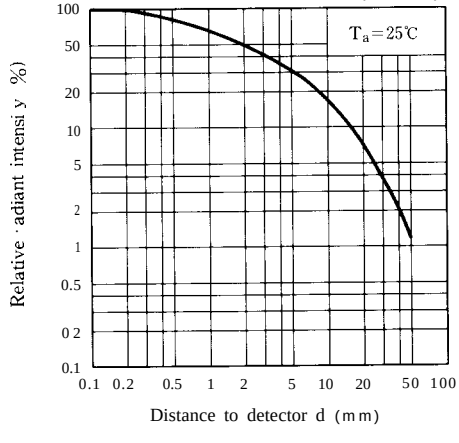


Fig.10 Relative Radiant Intensity vs. Distance (GL513F)

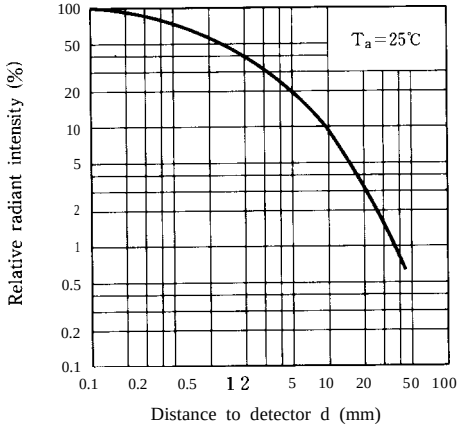


Fig.11 Radiation Diagram (GL514)

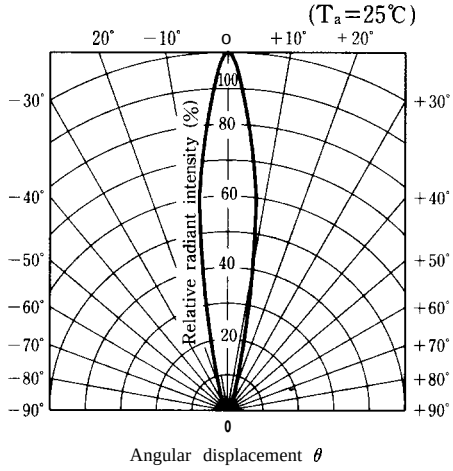
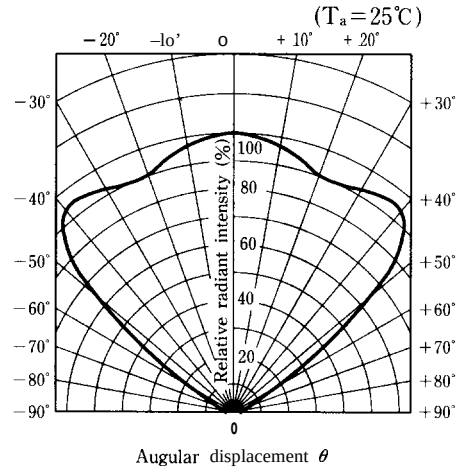


Fig.12 Radiation Diagram (GL513F)



● Please refer to the chapter "Precautions for Use." (Page **78** to **93)**