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GL560/GL561

Low Peak Forward Voltage Type ϕ 5 Resin Mold Package Infrared Emitting Diodes

■ Features

1. Low peak forward voltage suitable for battery drive
   (V_{FM} : TYP.1.7V at I_{FM} : 0.5A)
2. ϕ 5 resin mold package

■ Applications

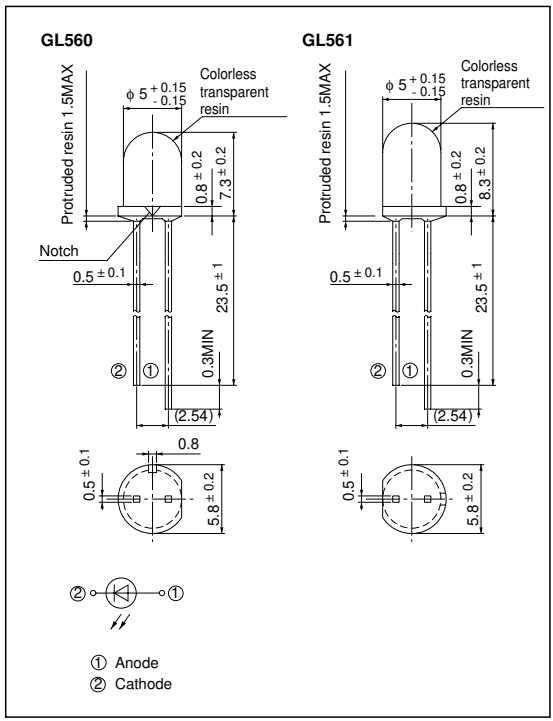
1. Infrared remote controllers for TVs, VCRs, audio equipment and air conditioners

■ Model Lineup

Model	GL560	GL561
Radiant intensity TYP. (mW/sr)	14	25
Half intensity angle TYP. (°)	± 21	± 13

■ Outline Dimensions

(Unit : mm)



■ Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Forward current	I_F	100	mA
*1 Peak forward current	I_{FM}	1	A
Reverse voltage	V_R	6	V
Power dissipation	P	150	mW
Operating temperature	T_{opr}	- 25 to + 85	°C
*2 Storage temperature	T_{stg}	- 40 to + 85	°C
Soldering temperature	T_{sol}	260	°C

*1 Pulse width <=100μ s, Duty ratio=0.01

*2 For 10 seconds at the position of 2.6 mm from the resin edge

■ Electro-optical Characteristics

(Ta=25 °C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage		V_F	I_F = 50mA	-	1.25	1.37	V
Peak forward voltage		V_{FM}	I_{FM} = 0.5A	-	1.7	2.5	V
Reverse current		I_R	V_R = 3V	-	-	10	μ A
*3 Radiant intensity	GL560	I_E	I_F = 50mA	5	14	-	mW/sr
	GL561			12	25	-	
Peak emission wavelength		λ_p	I_F = 5mA	-	940	-	nm
Half intensity wavelength		Δλ	I_F = 5mA	-	45	-	nm
Terminal capacitance		C_t	V_R = 0, f= 1MHz	-	50	-	pF
Response frequency		fc	-	-	300	-	kHz
Half intensity angle	GL560	Δθ	I_F= 20mA	-	± 21	-	°
	GL561			-	± 13	-	°

*3 I_E : Value obtained by converting the value in power of radiant fluxes emitted at the solid angle of 0.01 sr (steradian) in the direction of mechanical axis of the lens portion into 1 sr or all those emitted from the light emitting diode.

Fig. 1 Forward Current vs. Ambient Temperature

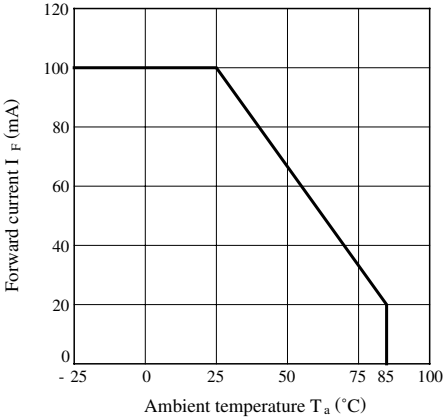


Fig. 2 Peak Forward Current vs. Duty Ratio

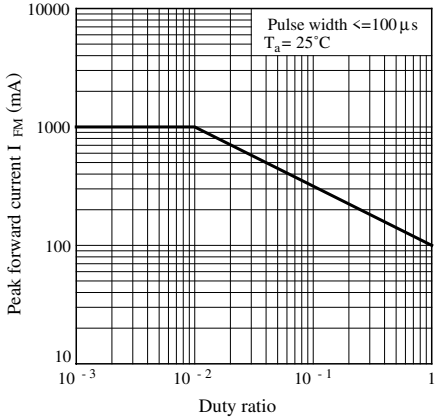


Fig. 3 Spectral Distribution

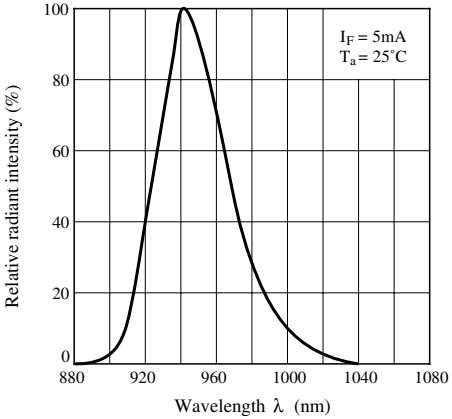


Fig. 4 Peak Emission Wavelength vs. Ambient Temperature

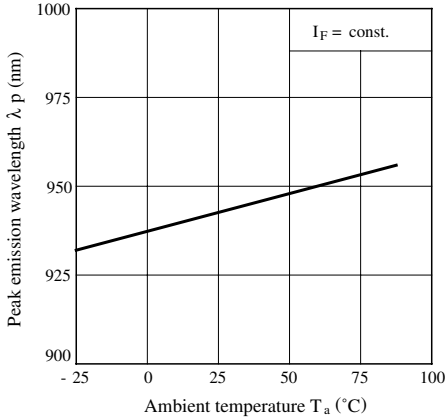


Fig. 5 Forward Current vs. Forward Voltage

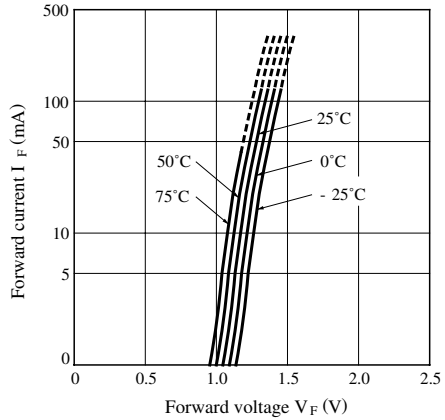


Fig. 6 Relative Forward Voltage vs. Ambient Temperature

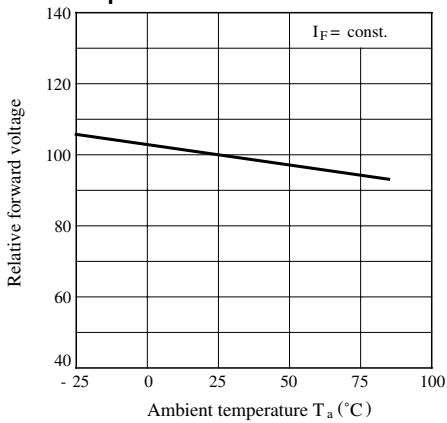


Fig. 7 Relative Radiant Output vs. Ambient Temperature (Detector : PD410PI)

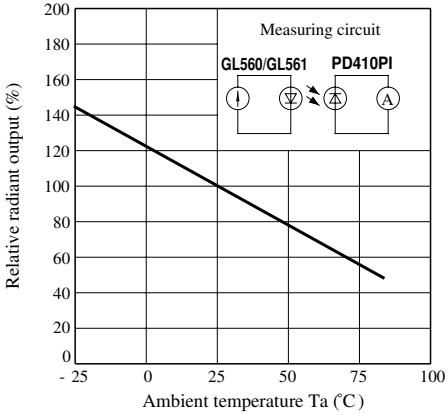


Fig. 8 Radiant Intensity vs. Forward Current

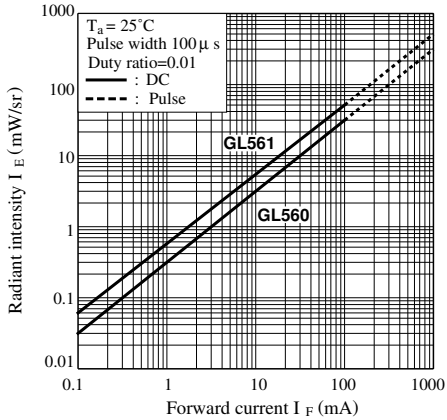


Fig. 9 Relative Output vs. Distance (Detector : PD410PI)

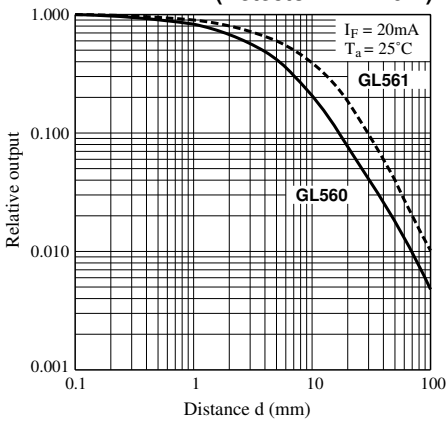


Fig. 10 Relative Output vs. Distance (Detector : PD49PI)

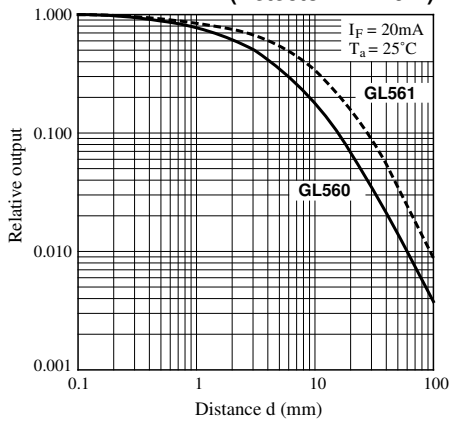


Fig. 11-a Radiation Diagram (GL560)

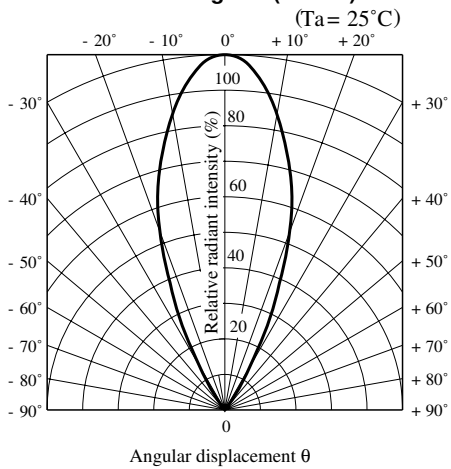
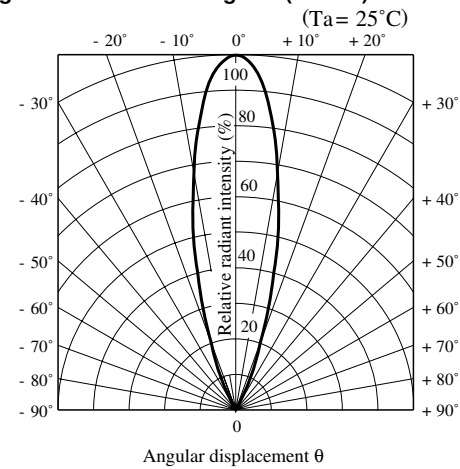


Fig. 11-b Radiation Diagram (GL561)



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

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