GL390/GL390V

Thin Bow Type Resin Mold Package Infrared Emitting Diodes

■ Features

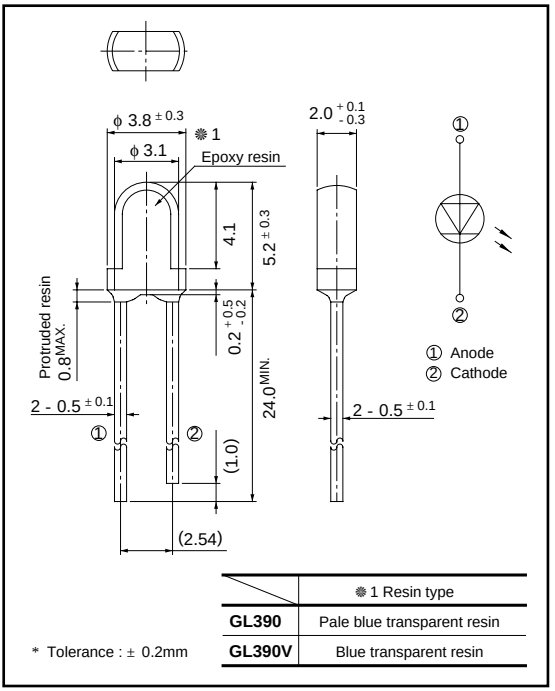
1. Thin bow type resin mold package
   (Resin area : 2.0 x 3.1 x 5.2 mm)
2. Low peak forward voltage (**GL390V**)
   V_{FM} : TYP. 1.9V at I_{FM}=0.5A

■ Applications

1. Cameras
2. Infrared remote controllers

■ Outline Dimensions

(Unit : mm)



	✵1 Resin type
GL390	Pale blue transparent resin
GL390V	Blue transparent resin

* Tolerance : ± 0.2mm

■ Model Lineup

Model	**GL390**	**GL390V**
Radiant intensity (mW/sr)	TYP. 13	TYP. 16
Half intensity angle (˚)	TYP. ± 18	

■ Absolute Maximum Ratings

(Ta=25˚C)

Parameter	Symbol	Rating	Unit
Forward current	I_F	60	mA
*1Peak 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
Storage temperature	T_{stg}	- 40 to 85	˚C
*2Soldering temperature	T_{sol}	260	˚C

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

*2 For 3 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	-	1.3	1.5	V
Peak forward voltage	**GL390**	V_{FM}	I_{FM} = 0.5A	-	2.2	3.5	V
	GL390V			-	1.9	3.0	
Reverse current		I_R	V_R = 3V	-	-	10	μA
*3 Radiant intensity	**GL390**	I_E	I_F = 50mA	7	13	-	mW/sr
	GL390V			9	16	-	
Peak emission wavelength		λ_P	I_F = 5mA	-	950	-	nm
Half intensity wavelength		$\Delta\lambda$	I_F = 5mA	-	45	-	nm
Terminal capacitance	**GL390**	C_t	V_R = 0 f= 1MHz	-	70	-	pF
	GL390V			-	50	-	
Response frequency		f_c		-	300	-	kHz
Half intensity angle		$\Delta\theta$	I_F = 20mA	-	±18	-	˚

*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

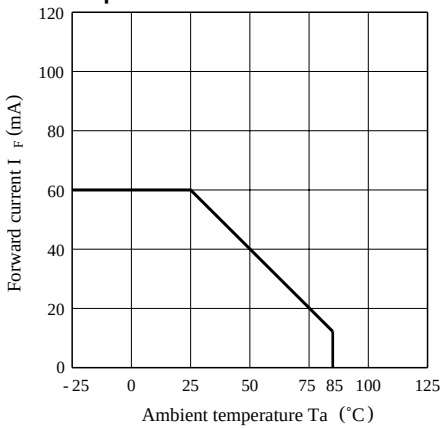


Fig. 2 Peak Forward Current vs. Duty Ratio

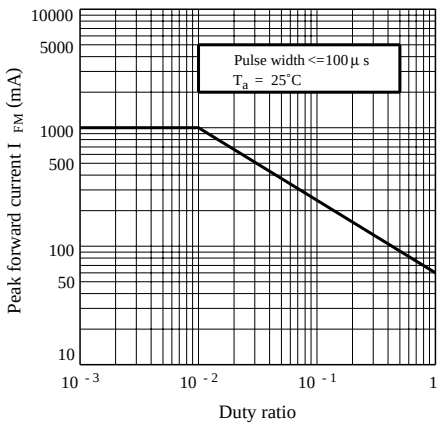


Fig. 3 Spectral Distribution

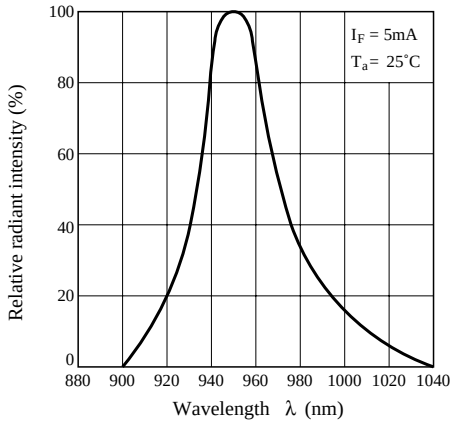


Fig. 4 Peak Emission Wavelength vs. Ambient Temperature

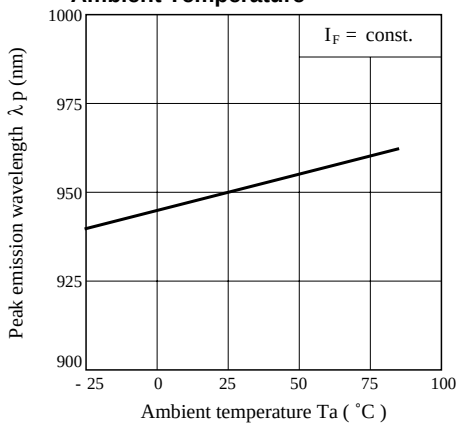


Fig. 5-1 Forward Current vs. Forward Voltage (GL390)

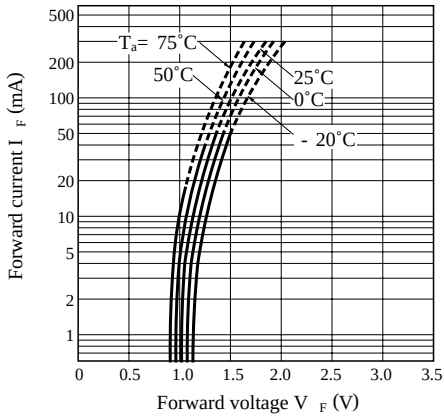


Fig. 5-2 Forward Current vs. Forward Voltage (GL390V)

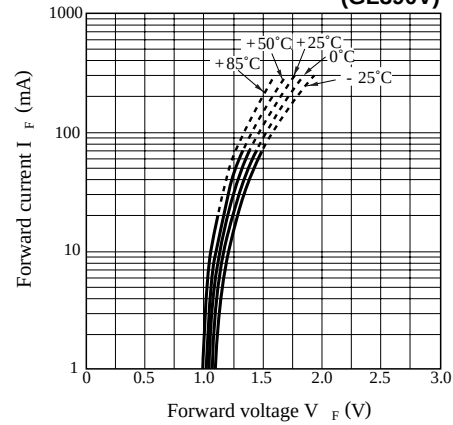


Fig. 6 Relative Radiant Flux vs. Ambient Temperature

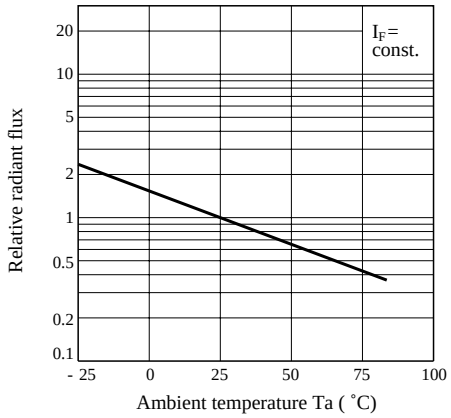


Fig. 7 Radiant Intensity vs. Forward Current

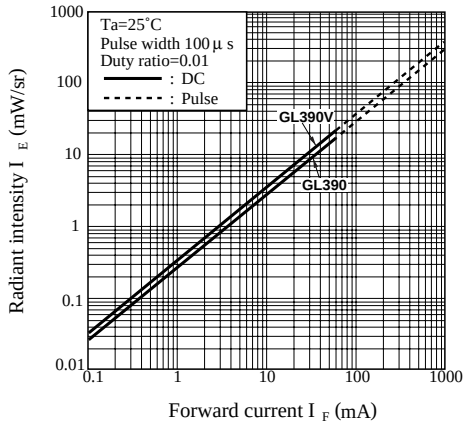


Fig. 8-1 Radiation Diagram (Horizontal Direction)

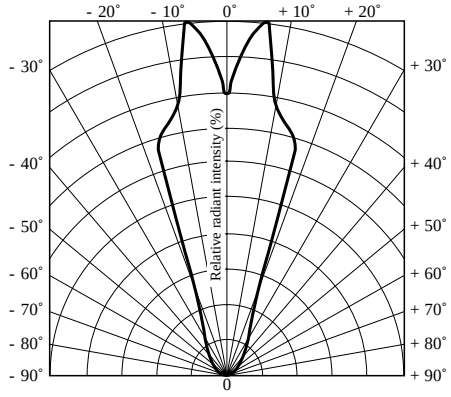
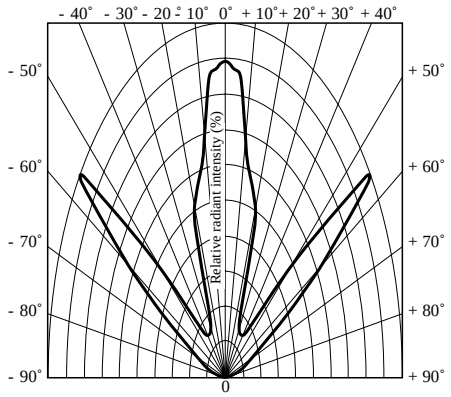


Fig. 8-2 Radiation Diagram (Vertical Direction)



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

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— Alarm equipment
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