

T-41-II

# GL420 Resin Mold Type Infrared Light Emitting Diode

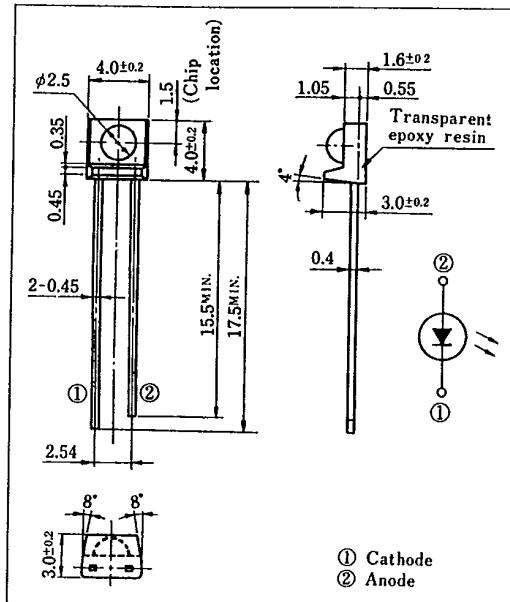
## ■ Features

1. Intermediate beam angle ( $\Delta\theta$ : TYP.  $\pm 30^\circ$ )
2. High output  
( $\Phi_e$  : MIN. 0.75mW at  $I_F=20mA$ )
3. Epoxy resin package

## ■ Applications

1. Infrared remote controllers
2. Floppy disk drives
3. Optoelectronic switches, optoelectronic counters

## ■ Outline Dimensions (Unit : mm)



## ■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Power dissipation	P	75	mW
Forward current	$I_F$	50	mA
*1 Peak forward current	$I_{FM}$	1	A
Reverse voltage	$V_R$	6	V
Operating temperature	$T_{opr}$	-25 ~ +85	°C
Storage temperature	$T_{sig}$	-40 ~ +85	°C
*2 Soldering temperature	$T_{sol}$	260	°C

\*1 Pulse width  $\leq 100\mu s$   
Duty ratio = 0.01

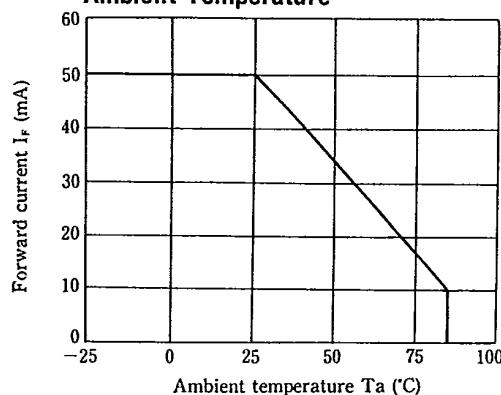
\*2 For 3 seconds at the position of 2.5mm from the bottom face of resin package

## ■ Electro-optical Characteristics (Ta=25°C)

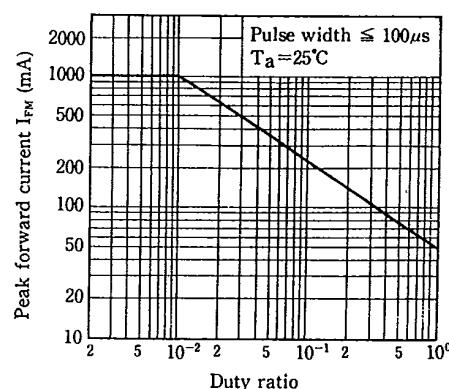
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	$V_F$	$I_F=20mA$	—	1.2	1.4	V
Peak forward voltage	$V_{FM}$	$I_{FM}=0.5A$	—	3	4	V
Reverse current	$I_R$	$V_R=3V$	—	—	10	$\mu A$
Terminal capacitance	$C_t$	$V=0, f=1MHz$	—	50	100	pF
Radiant flux	$\Phi_e$	$I_F=20mA$	0.75	—	3	mW
Peak emission wavelength	$\lambda_p$	$I_F=5mA$	900	950	980	nm
Half intensity wavelength	$\Delta\lambda$	$I_F=5mA$	—	45	80	nm

SHARP

**Fig. 1 Forward Current vs.  
Ambient Temperature**

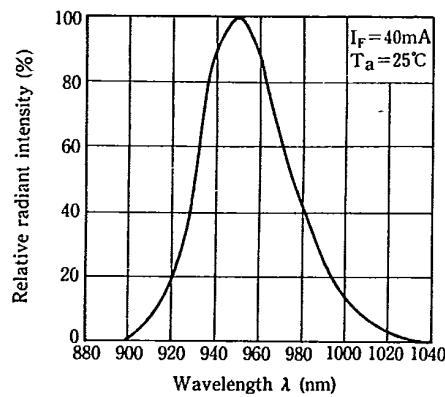


**Fig. 2 Peak Forward Current vs. Duty Ratio**

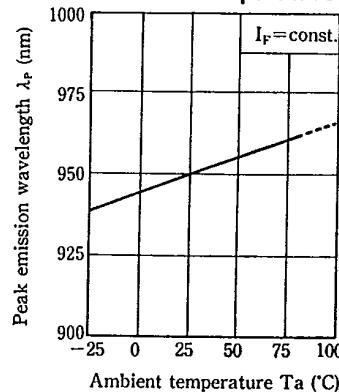


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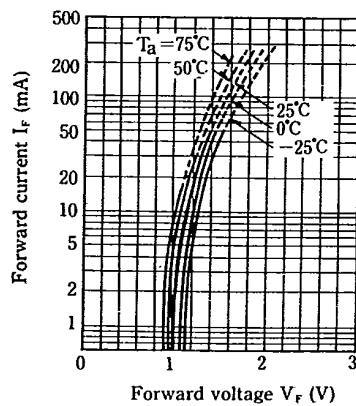
**Fig. 3 Spectral Distribution**



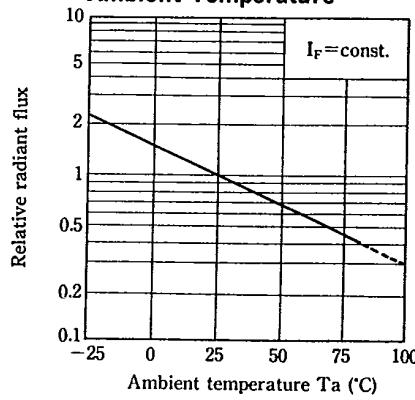
**Fig. 4 Peak Emission Wavelength vs.  
Ambient Temperature**



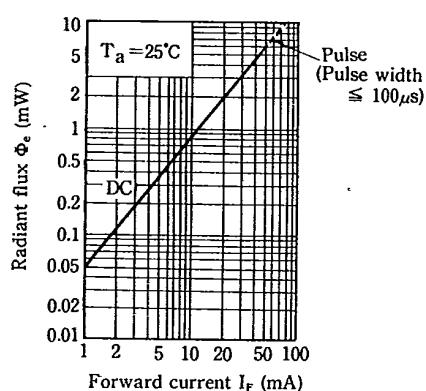
**Fig. 5 Forward Current vs. Forward Voltage**



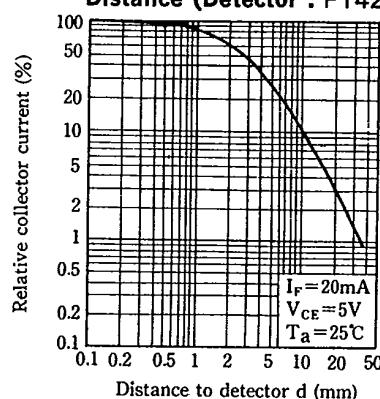
**Fig. 6 Relative Radiant Flux vs.  
Ambient Temperature**



**Fig. 7 Radiant Flux vs. Forward Current**



**Fig. 8 Relative Collector Current vs. Distance (Detector : PT420F)**



**Fig. 9 Radiation Diagram**

