

# GL480/GL480Q GL483Q

## Infrared Emitting Diode

### ■ Features

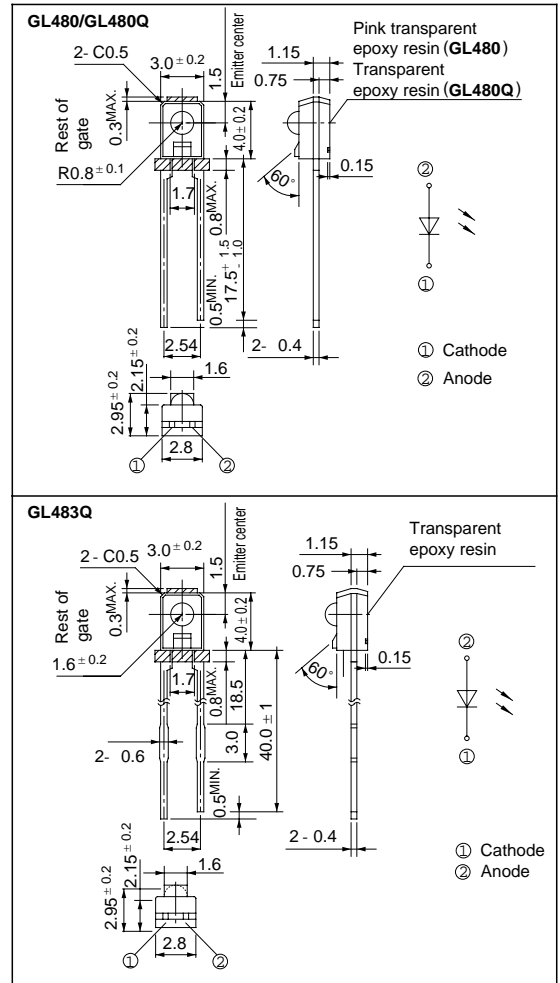
1. Narrow beam angle ( $\Delta\theta$  : TYP.  $\pm 13^\circ$ )
2. Radiant flux ( $\Phi_e$  : MIN. 0.7mW at  $I_F = 20\text{mA}$ )
3. Compact, high reliability by chip coating  
(GL480Q/GL483Q)
4. Long lead type (GL483Q)

### ■ Applications

1. Copiers
2. Floppy disk drives
3. Optoelectronic switches

### ■ 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 to + 85	°C
Storage temperature	$T_{stg}$	- 40 to + 85	°C
*2 Soldering temperature	$T_{sol}$	260	°C

\*1 Pulse width  $\leq 100 \mu\text{s}$ , Duty ratio = 0.01

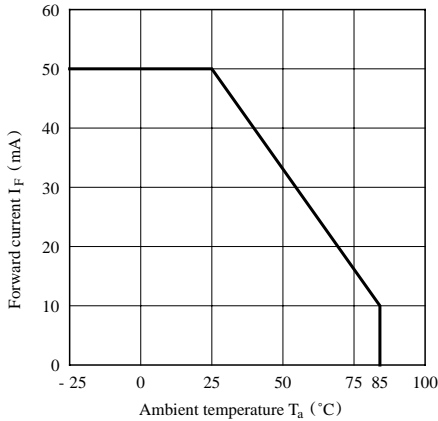
\*2 For 3 seconds at the position of 1.4mm from the bottom face of resin package.

**■ Electro-optical Characteristics**

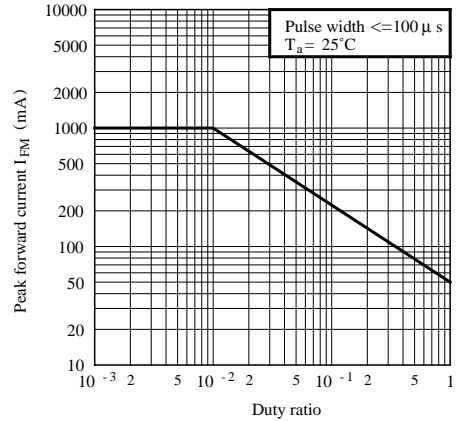
( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	$V_F$	$I_F = 20\text{mA}$	-	1.2	1.4	V
Peak forward voltage	$V_{FM}$	$I_{FM} = 0.5\text{A}$	-	3.0	4.0	V
Reverse current	$I_R$	$V_R = 3\text{V}$	-	-	10	$\mu\text{A}$
Terminal capacitance	$C_t$	$V_R = 0, f = 1\text{MHz}$	-	50	-	pF
Response frequency	$f_c$	-	-	300	-	kHz
Radiant flux	$\Phi_e$	$I_F = 20\text{mA}$	0.7	-	3.0	mW
Peak emission wavelength	$\lambda_p$	$I_F = 5\text{mA}$	-	950	-	nm
Half intensity wavelength	$\Delta\lambda$	$I_F = 5\text{mA}$	-	45	-	nm
Half intensity angle	$\Delta\theta$	$I_F = 20\text{mA}$	-	$\pm 13$	-	$^\circ$

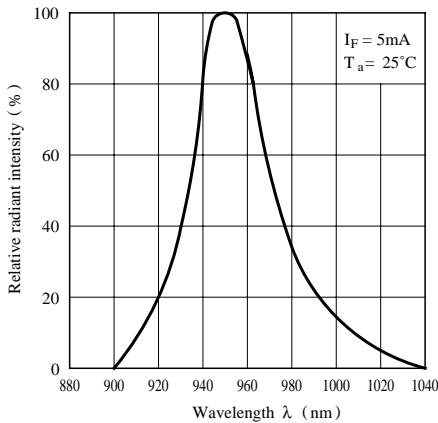
**Fig. 1 Forward Current vs. Ambient Temperature**



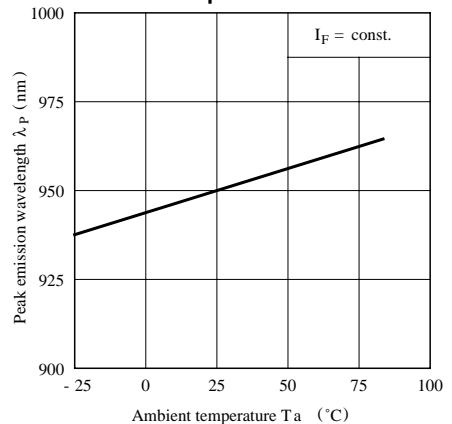
**Fig. 2 Peak Forward Current vs. Duty Ratio**



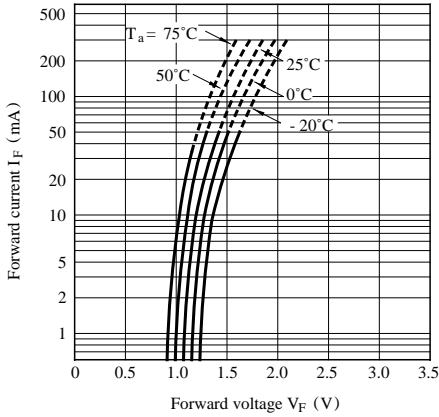
**Fig. 3 Spectral Distribution**



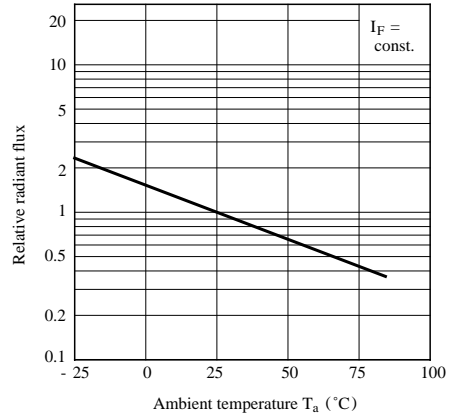
**Fig. 4 Peak Emission Wavelength vs. Ambient Temperature**



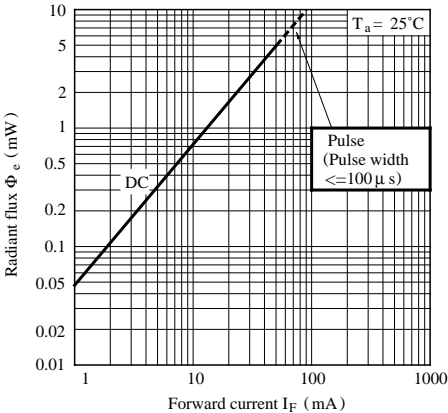
**Fig. 5 Forward Current vs. Forward Voltage**



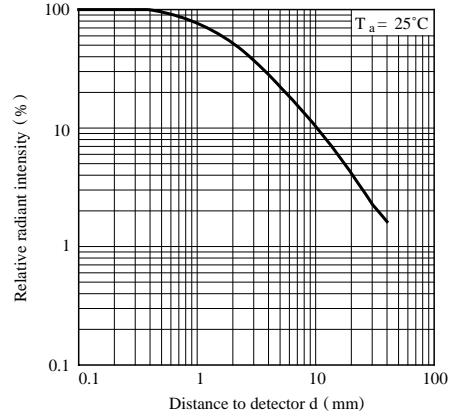
**Fig. 6 Relative Radiant Flux vs. Ambient Temperature**



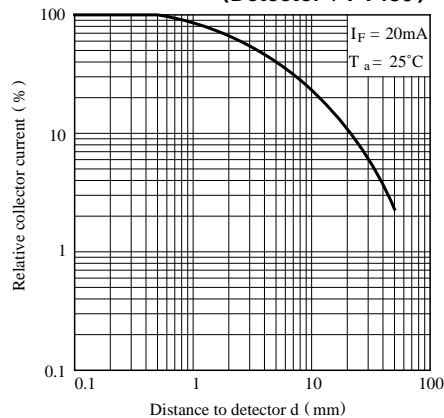
**Fig. 7 Radiant Flux vs. Forward Current**



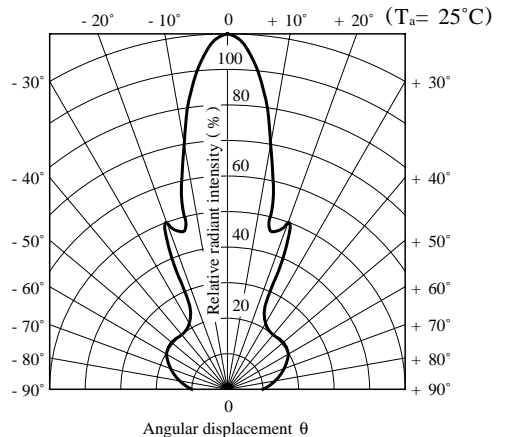
**Fig. 8 Relative Radiant Intensity vs. Distance**

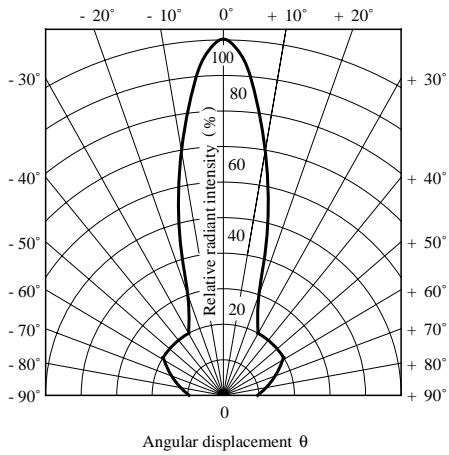


**Fig. 9 Relative Collector Current vs. Distance (Detector : PT480)**



**Fig.10 Radiation Diagram (GL480Q/GL483Q)**



**Fig.11 Radiation Diagram (GL480) ( $T_a = 25^\circ\text{C}$ )**

● Please refer to the chapter “Precautions for Use.”