

# CL - 209

The CL - 209 is a high - power GaAlAs IRED mounted in a TO - 46 metal stem with clear epoxy encapsulation, providing wide beam angle.

**FEATURES**

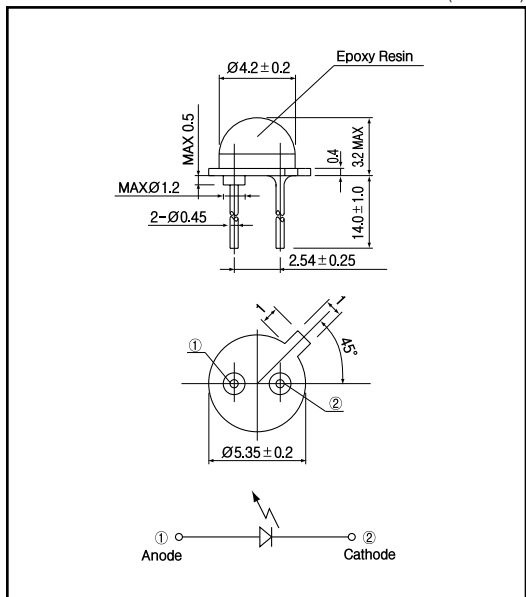
- High output power
- Wide beam angle  $\pm 85$ deg.
- TO - 46 epoxy potting type

**APPLICATIONS**

- Optical switches
- Transportation sensors

**DIMENSIONS**

(Unit : mm)



**MAXIMUM RATINGS**

( $T_a = 25$  )

Item	Symbol	Rating	Unit
Reverse voltage	$V_R$	5	V
Forward current	$I_F$	80	mA
Power dissipation	$P_D$	130	mW
Pulse forward current *1	$I_{FP}$	0.8	A
Operating temp.	$T_{opr.}$	- 20 + 80	
Storage temp.	$T_{stg.}$	- 20 + 80	
Soldering temp. *2	$T_{sol.}$	240	

\*1. pulse width :  $t_w = 100 \mu\text{sec}$ , period :  $T = 10 \text{ msec}$ .

\*2. For MAX.5 seconds at the position of 2 mm from the package

**ELECTRO-OPTICAL CHARACTERISTICS**

( $T_a = 25$  )

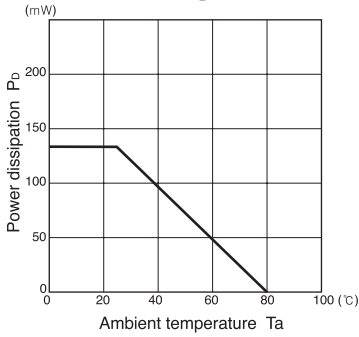
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.
Forward voltage	$V_F$	$I_F = 20 \text{ mA}$		1.3	1.6	V
Reverse current	$I_R$	$V_R = 5 \text{ V}$			10	$\mu\text{A}$
Peak emission wavelength *3	$\lambda_p$	$I_F = 50 \text{ mA}$		880		nm
Spectral bandwidth		$I_F = 50 \text{ mA}$		70		nm
Radiant intensity	$P_D$	$I_F = 20 \text{ mA}$		30		mV
Half angle				$\pm 85$		deg.

\*3. Measured by tester of KODENSHI CORP.

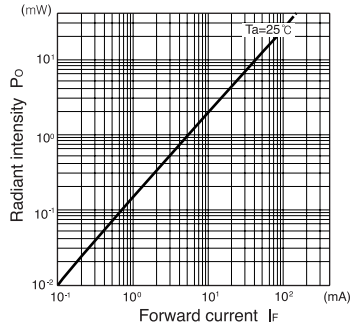
**Infrared Emitting Diodes(GaAlAs)**

**CL - 209**

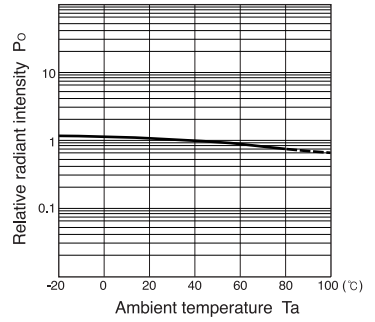
**Power dissipation Vs. Ambient temperature**



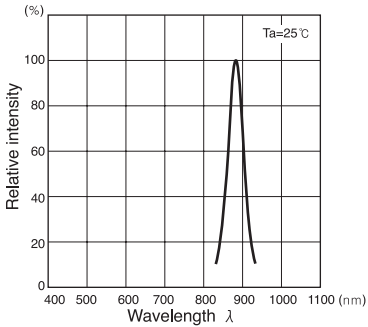
**Radiant intensity Vs. Forward current**



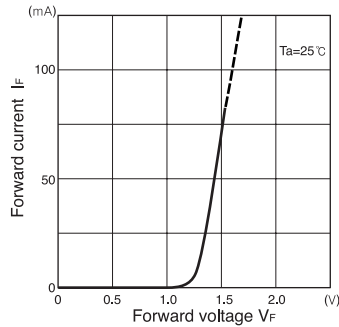
**Relative radiant intensity Vs. Ambient temperature**



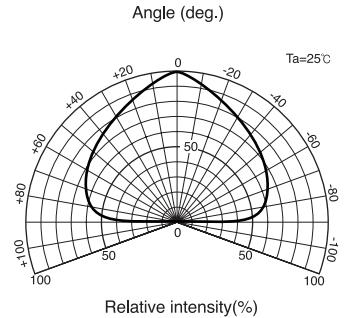
**Relative intensity Vs. Wavelength**



**Forward current Vs. Forward voltage**



**Radiant Pattern**



**Relative radiant intensity Vs. Distance**

