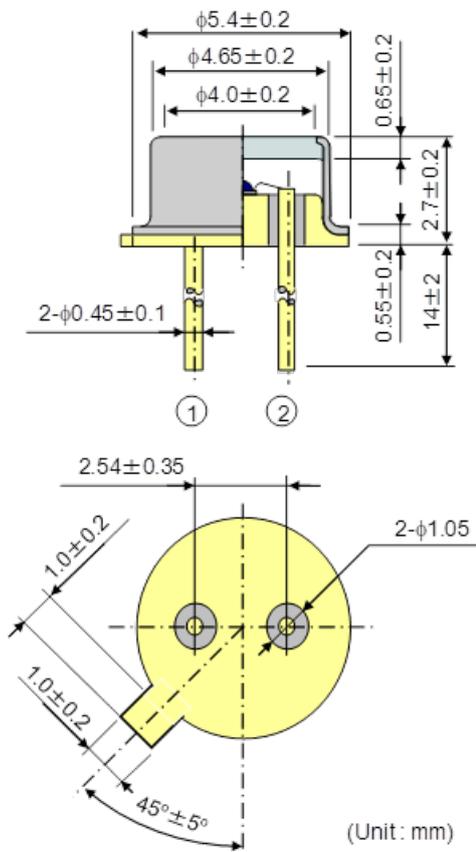


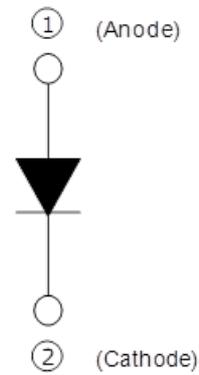
HE8812SG

GaAlAs Infrared Emitting Diodes

Outline



Internal Circuit



Features

- Peak wavelength: 870nm typ
- High output, high efficiency
- Narrow spectral width
- Wide radiation directivity
- High reliability

Application

- Exposure equipment
- Photoelectric sensor
- Medical equipment
- Metering equipment

Absolute Maximum Ratings (Tc=25°C)

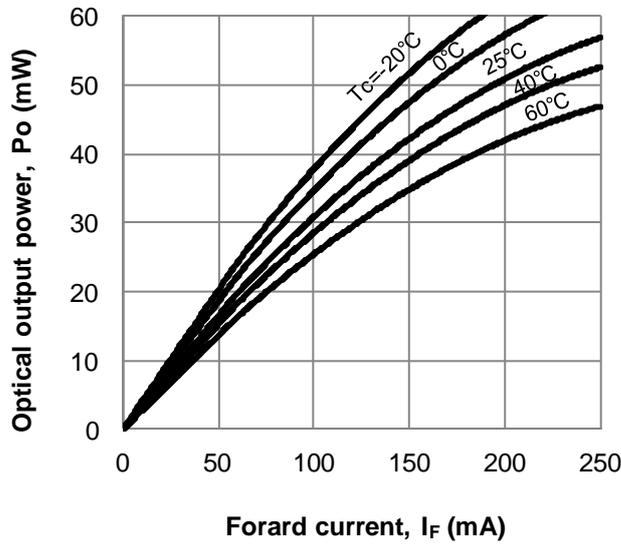
Item	Symbol	Ratings	Unit
Forward current	I_F	250	mA
Reverse voltage	V_R	3	V
Operating temperature	T_{opr}	-20 ~ 60	°C
Storage temperature	T_{stg}	-40 ~ 90	°C

Optical and Electrical Characteristics (Tc=25°C)

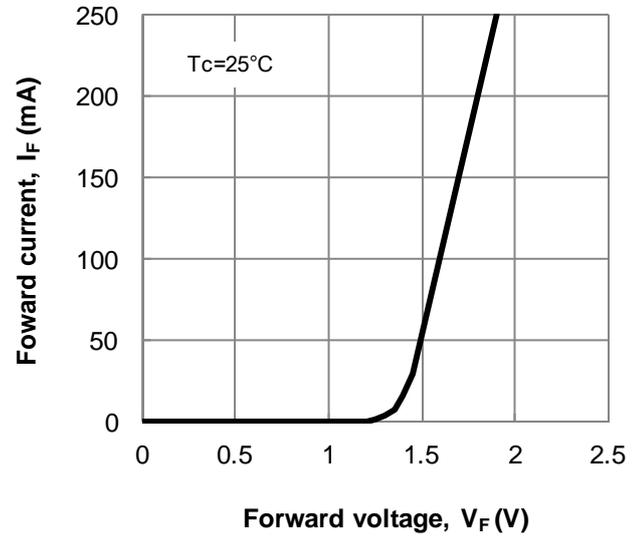
Item	Symbol	Min	Typ	Max	Unit	Test Condition
Optical output power	P_o	40	50	-	mW	$I_F=200\text{mA}$
Peak wavelength	λ_p	840	870	900	nm	$I_F=200\text{mA}$
Spectral width	$\Delta\lambda$	-	50	60	nm	$I_F=200\text{mA}$
Forward voltage	V_F	-	1.8	2.5	V	$I_F=200\text{mA}$
Reverse current	I_R	-	-	100	μA	$V_R=3\text{V}$
Capacitance	C_t	-	30	-	pF	$V_R=0\text{V}$, $f=1\text{MHz}$
Rise time	t_r	-	10	-	ns	$I_F=50\text{mA}$
Fall time	t_f	-	10	-	ns	$I_F=50\text{mA}$

Typical Characteristic Curves

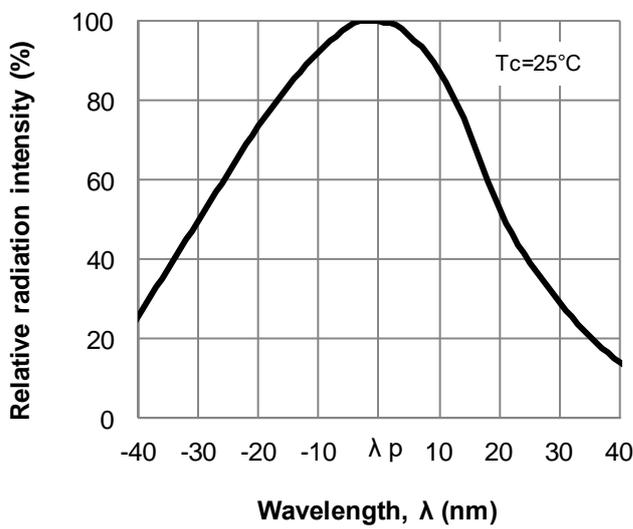
Optical Output Power vs. Forward Current



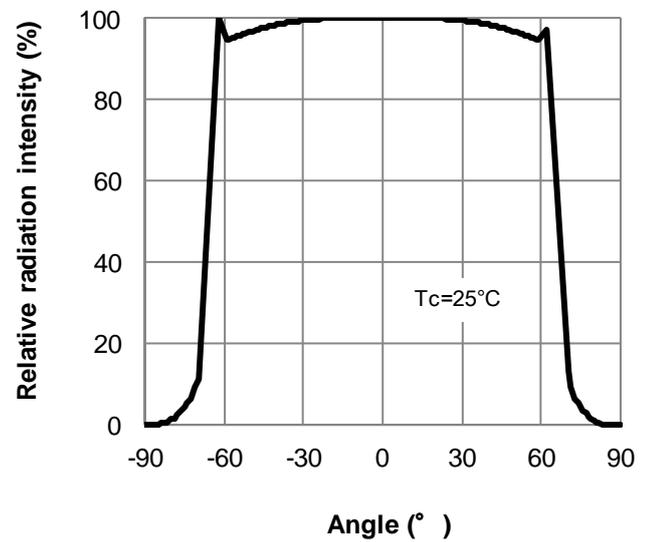
Forward Current vs. Forward Voltage



Wavelength Distribution



Radiation Directional



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