

# HE8811

## GaAlAs Infrared Emitting Diode

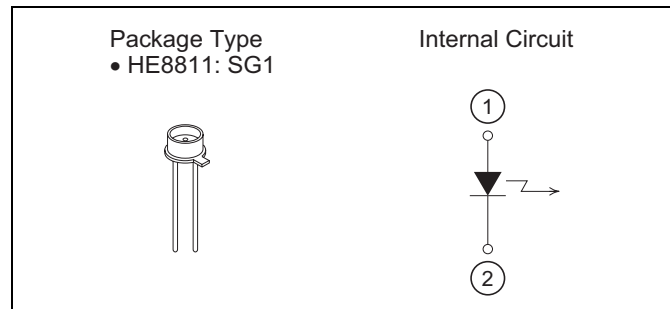
ODE-208-051 (Z)  
Rev.0  
Oct. 30, 2006

### Description

The HE8811 is a GaAlAs infrared emitting diode with a double heterojunction structure. Its high brightness, high output power and fast response make it suitable as a light source in measuring instruments and infrared-beam communication equipment.

### Features

- High-frequency response
- High efficiency and high output power
- Broad radiation pattern



### Absolute Maximum Ratings

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

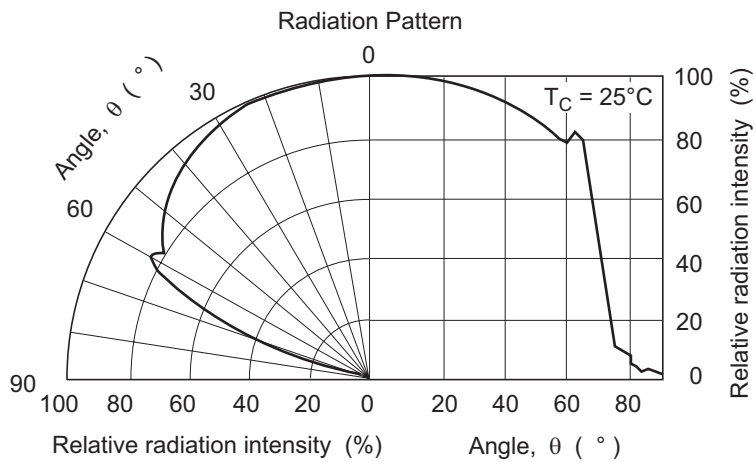
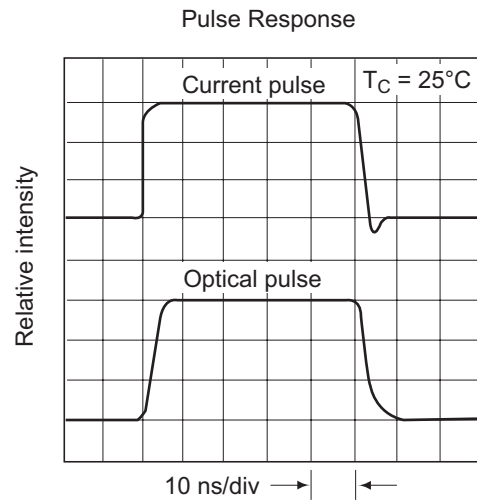
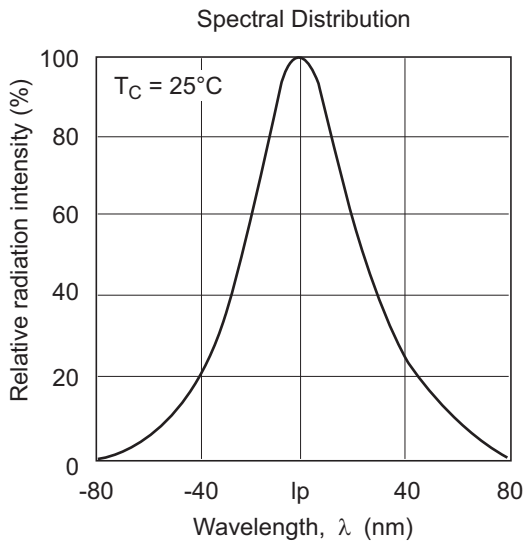
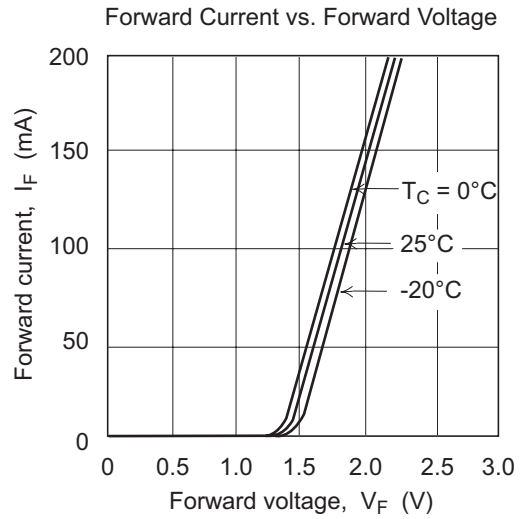
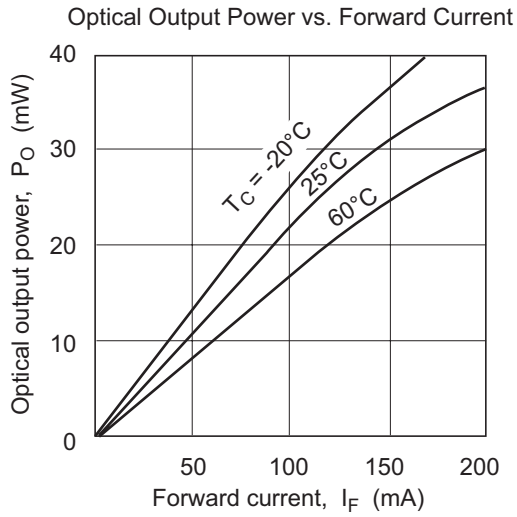
Item	Symbol	Ratings	Unit
Forward current	$I_F$	200	mA
Reverse voltage	$V_R$	3	V
Operating temperature	$T_{opr}$	-20 to +60	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +90	$^\circ\text{C}$

### Optical and Electrical Characteristics

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

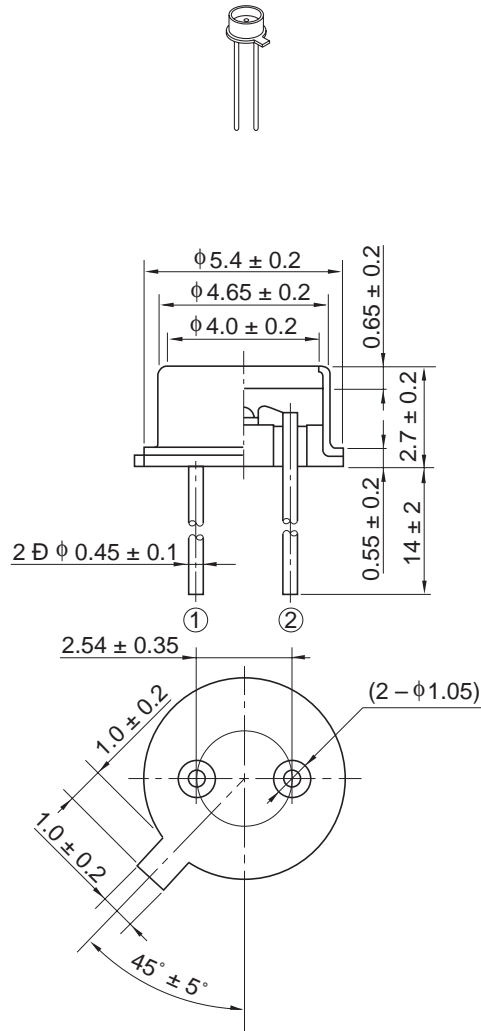
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical output power	$P_O$	20	30	—	mW	$I_F = 150 \text{ mA}$
Peak wavelength	$\lambda_p$	780	820	900	nm	$I_F = 150 \text{ mA}$
Spectral width	$\Delta\lambda$	—	50	—	nm	$I_F = 150 \text{ mA}$
Forward voltage	$V_F$	—	—	2.5	V	$I_F = 150 \text{ mA}$
Reverse current	$I_R$	—	—	100	$\mu\text{A}$	$V_R = 3 \text{ V}$
Capacitance	$C_t$	—	10	—	pF	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$
Rise time	$t_r$	—	5	—	ns	$I_F = 50 \text{ mA}$
Fall time	$t_f$	—	7	—	ns	$I_F = 50 \text{ mA}$

### Typical Characteristic Curves



Package Dimensions

As of July, 2002  
Unit: mm



OPJ Code	IR/SG1
JEDEC	—
JEITA	—
Mass (reference value)	0.25 g

## Cautions

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6. No one is permitted to reproduce or duplicate, in any form, the whole or part of this document without written approval from OPJ.
7. Contact our sales office for any questions regarding this document or OPJ products.

1. The laser light is harmful to human body especially to eye no matter what directly or indirectly. The laser beam shall be observed or adjusted through infrared camera or equivalent.
2. This product contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product.  
When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.
3. Definition of items shown in this CAS is in accordance with that shown in Opto Device Databook issued by OPJ unless otherwise specified.

## Sales Offices



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