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# HE8811

GaAlAs Infrared Emitting Diode

# HITACHI

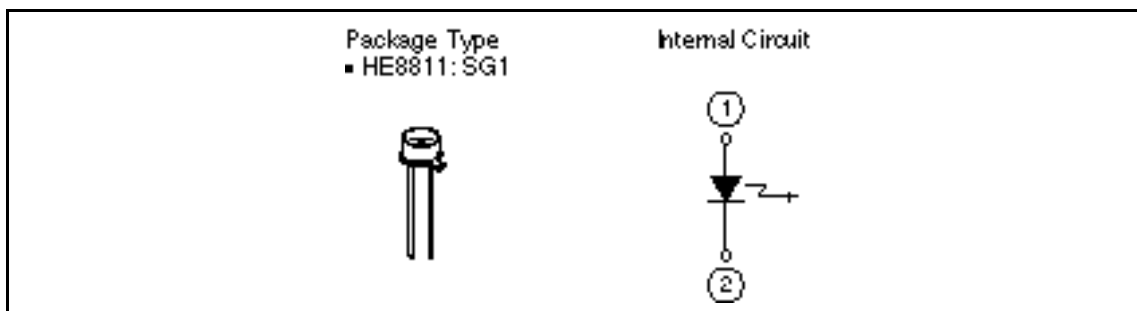
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## Description

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



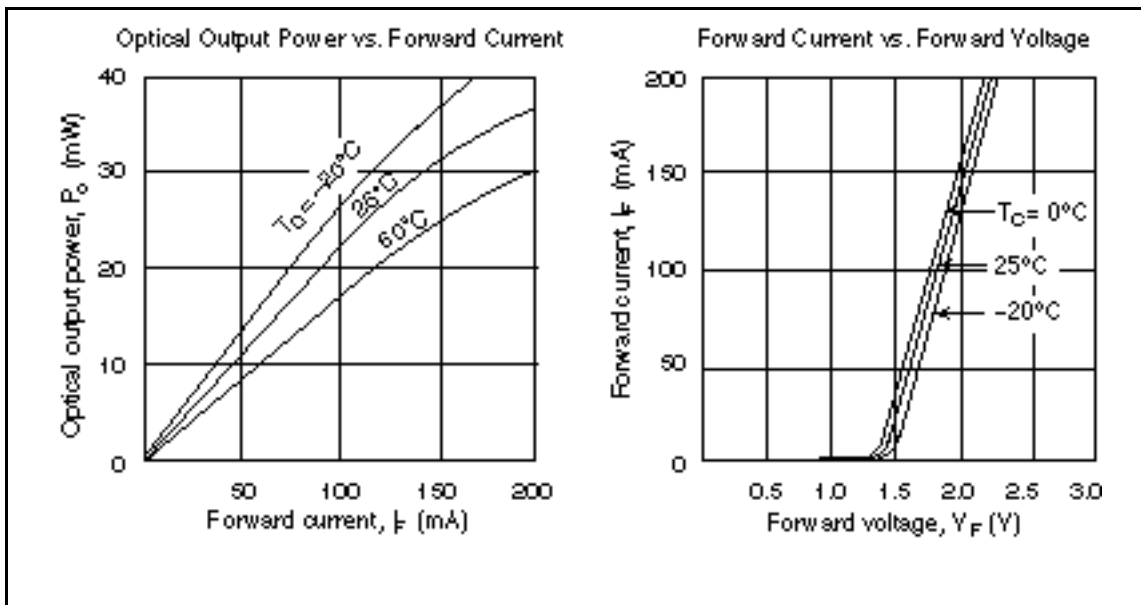
## Absolute Maximum Ratings ( $T_C = 25^\circ\text{C}$ )

Item	Symbol	Rated Value	Units
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	Units	Test Conditions
Optical output power	$P_o$	20	30	—	mW	$I_F = 150\text{ mA}$
Peak wavelength	$\lambda$	780	820	900	nm	$I_F = 150\text{ mA}$
Spectral width		—	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	10	—	ns	$I_F = 50\text{ mA}$

**Typical Characteristic Curves**



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## Typical Characteristic Curves (cont)

