

HE8811

GaAlAs Infrared Emitting Diode

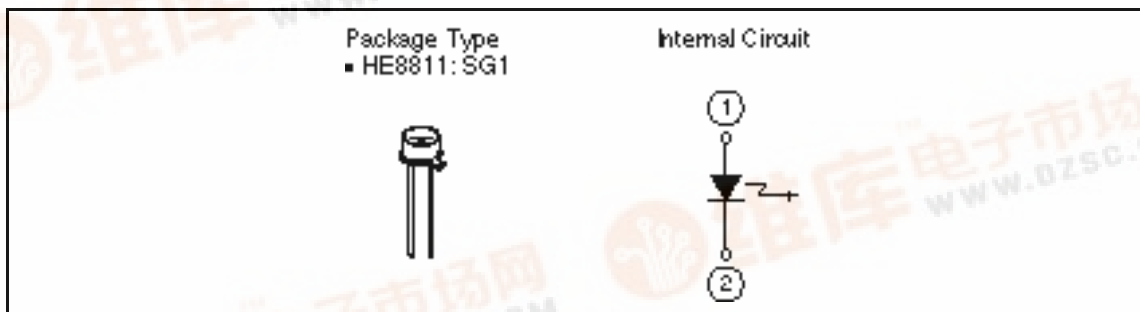
HITACHI

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

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



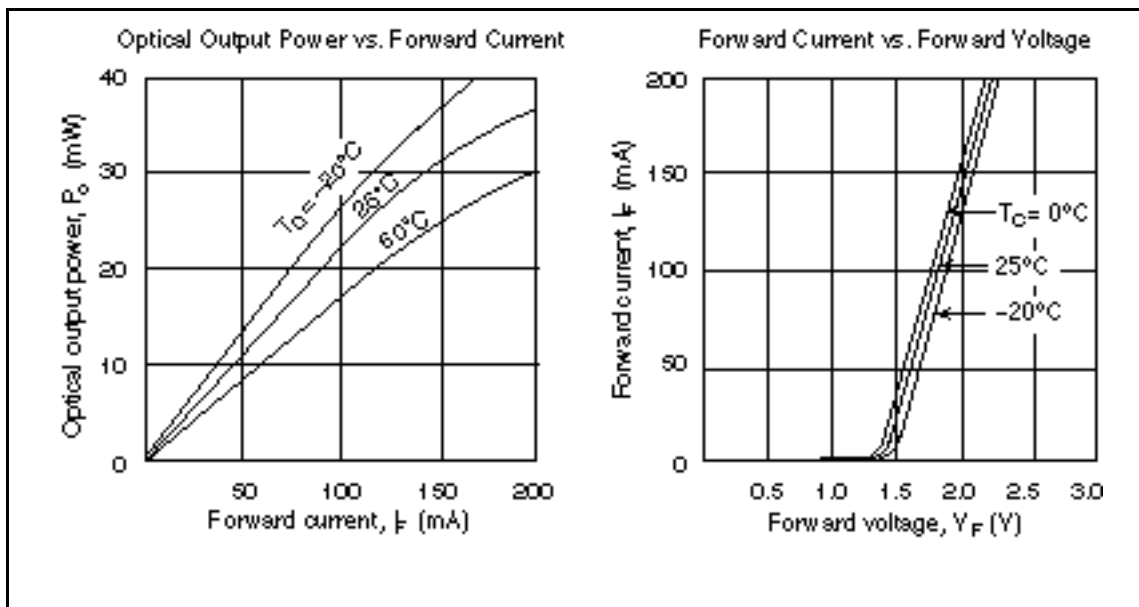
Absolute Maximum Ratings ($T_C = 25^\circ\text{C}$)

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	λ_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	μA	$V_R = 3\text{ V}$
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)

