HE8812SG

GaAlAs Infrared Emitting Diode

HITACHI

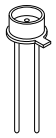
Description

The HE8812SG is a GaAlAs double heterojunction structure 870 nm band light emitting diode. It is suitable for use as the light source in a wide range of optical control and sensing equipment.

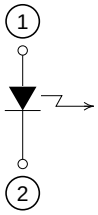
Features

- High efficiency, high output

Package Type
• HE8812: SG1



Internal Circuit



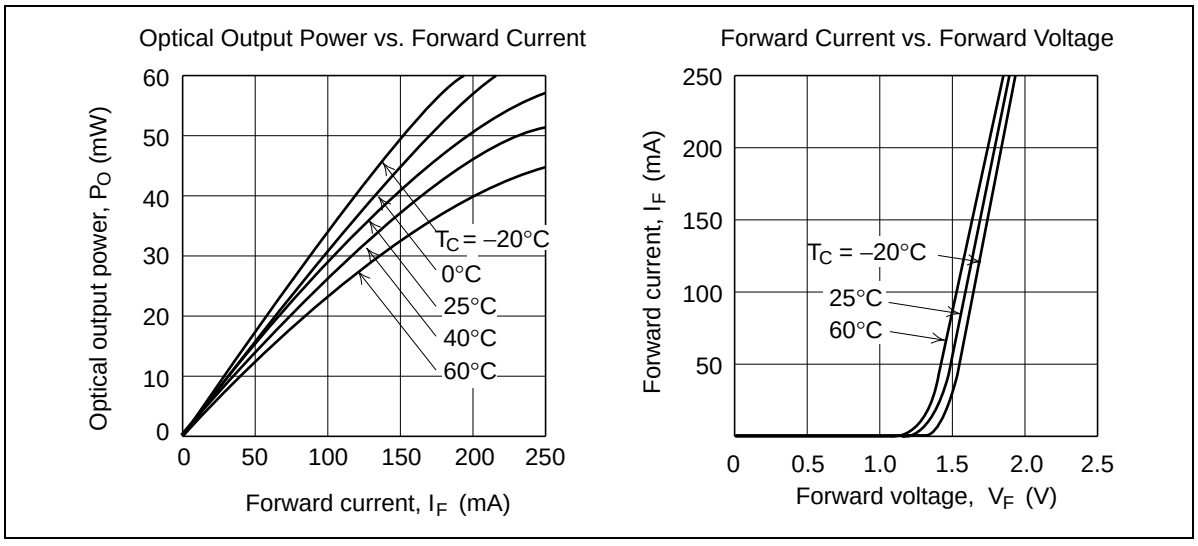
Absolute Maximum Ratings (T_C = 25°C)

Item	Symbol	Rated Value	Units
Forward current	I_F	250	mA
Reverse voltage	V_R	3	V
Operating temperature	Topr	–20 to +60	°C
Storage temperature	Tstg	–40 to +90	°C

Optical and Electrical Characteristics (T_C = 25°C)

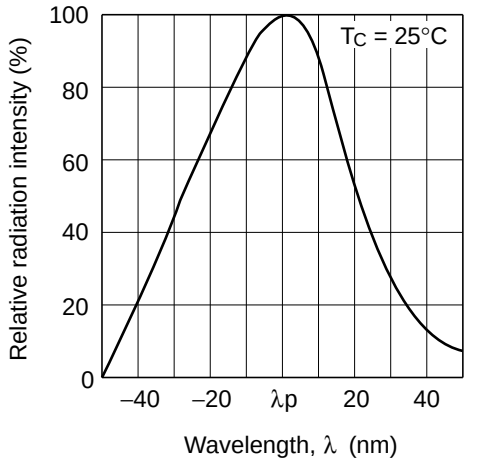
Item	Symbol	Min	Typ	Max	Units	Test Conditions
Optical output power	P_O	40	—	—	mW	I_F = 200 mA
Peak wavelength	λp	840	870	900	nm	I_F = 200 mA
Spectral width	Δλ	—	50	60	nm	I_F = 200 mA
Forward voltage	V_F	—	—	2.5	V	I_F = 200 mA
Reverse current	I_R	—	—	100	μA	V_R = 3 V
Capacitance	Ct	—	30	—	pF	V_R = 0 V, f = 1 MHz
Rise and fall times	tf, tf	—	10	—	ns	I_F = 50 mA

Typical Characteristic Curves

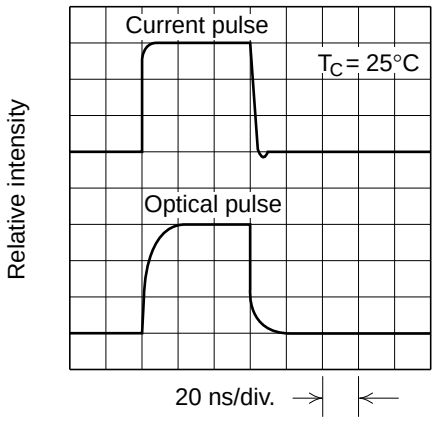


Typical Characteristic Curves (cont)

Wavelength Distribution Characteristics



Pulse Response Characteristics



Radiation Directional Characteristics