HE8404SG

GaAlAs Infrared Emitting Diode

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ODE-208-997B (Z)

Rev.2
Mar. 2005

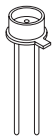
Description

The HE8404SG is a GaAlAs double heterojunction structure 820 nm band light emitting diode. It is suitable for use as the light source in a wide range of optical control and sensing equipment.

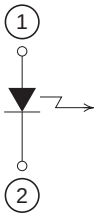
Features

- High efficiency and high output power

Package Type
• HE8404SG: SG1



Internal Circuit



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Absolute Maximum Ratings

(T_C = 25°C)

Item	Symbol	Value	Unit
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

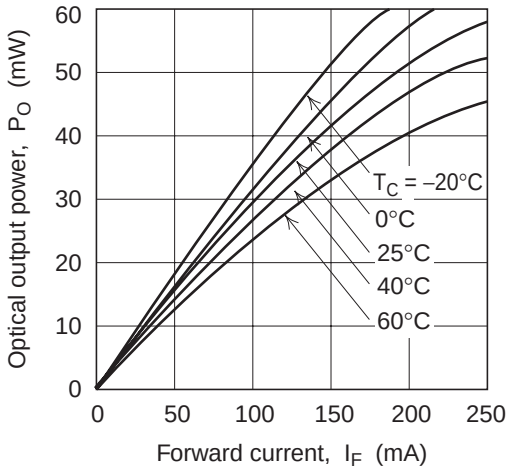
Optical and Electrical Characteristics

(T_C = 25°C)

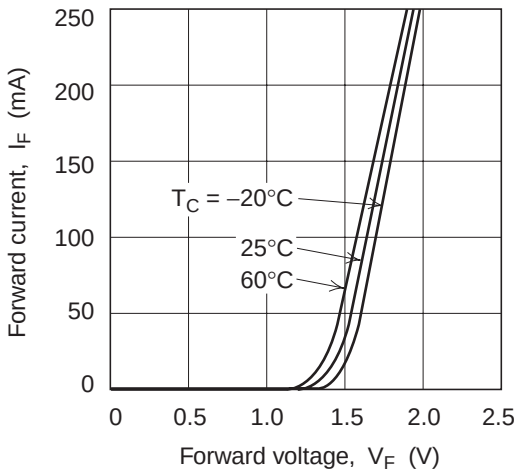
Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Optical output power	P_O	40	—	—	mW	I_F = 200 mA
Peak wavelength	λp	790	820	850	nm	I_F = 200 mA
Spectral width	$\Delta\lambda$	—	50	60	nm	I_F = 200 mA
Forward voltage	V_F	—	—	2.5	V	I_F = 200 mA
Reverse current	I_R	—	—	100	µA	V_R = 3 V
Capacitance	Ct	—	30	—	pF	V_R = 0 V, f = 1 MHz
Rise time	t_r	—	10	—	ns	I_F = 50 mA
Fall time	t_f	—	10	—	ns	I_F = 50 mA

Typical Characteristic Curves

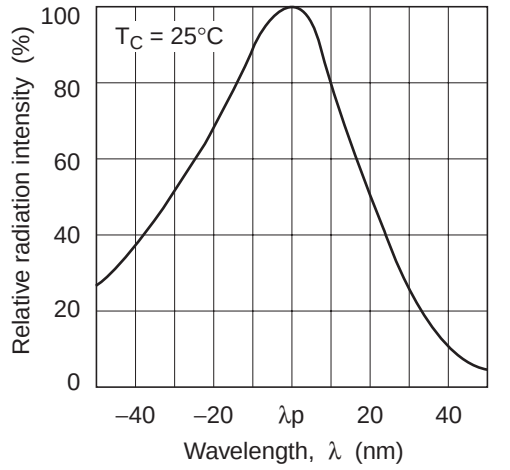
Optical Output Power vs. Forward Current



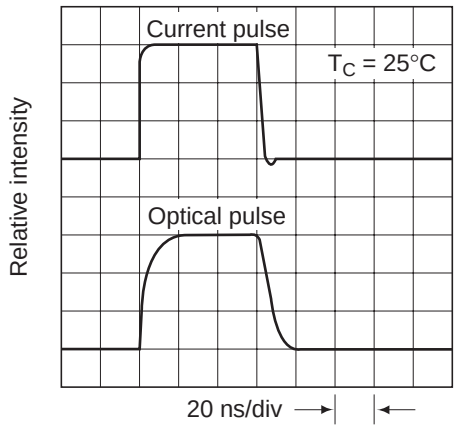
Forward Current vs. Forward Voltage



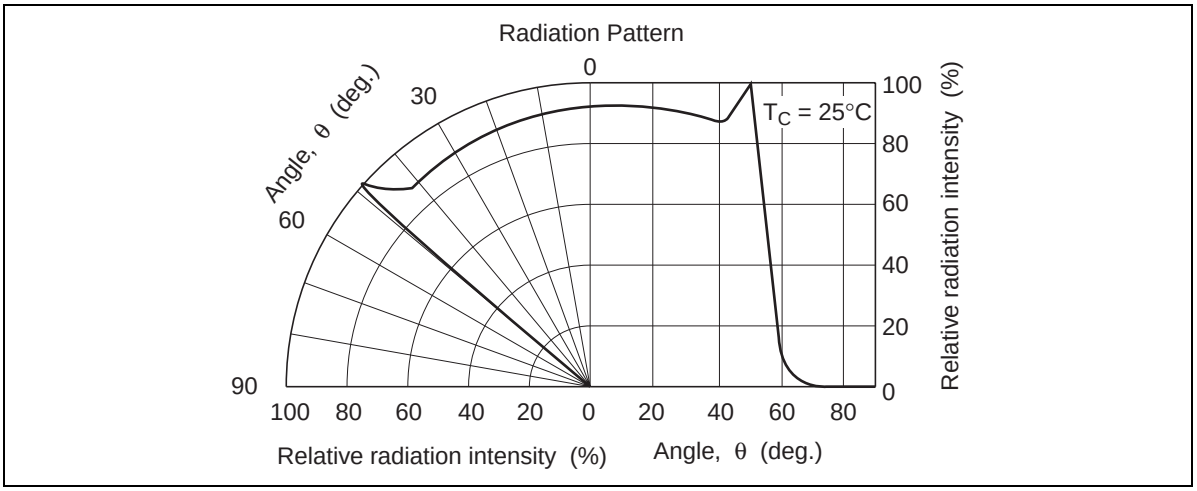
Wavelength Distribution



Pulse Response



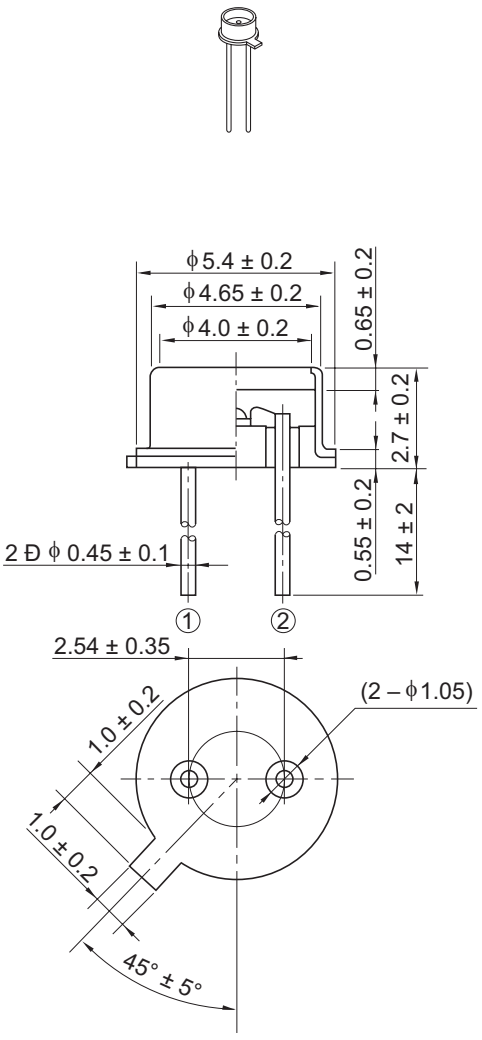
Typical Characteristic Curves (cont)



Package Dimensions

As of July, 2002

Unit: mm



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

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Sales Offices

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