

HE8807SG/FL

GaAlAs Infrared Emitting Diodes

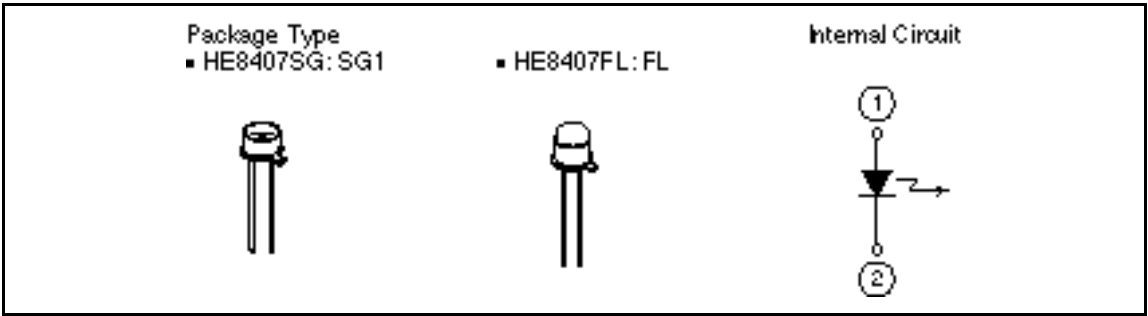
HITACHI

Description

The HE8807SG/FL are single heterojunction structure GaAlAs light emitting diodes with a wavelength of 880 nm.

Features

- Σ High output, high efficiency
- Σ Narrow spectral width
- Σ Sharp radiation directivity (HE8807FL)
- Σ Wide radiation directivity (HE8807SG)
- Σ High reliability



Absolute Maximum Ratings (T_C = 25°C)

Item	Symbol	Rated Value	Units
Forward current	I _F	200	mA
Reverse voltage	V _R	3	V
Operating temperature	T _{opr}	−20 to +85	°C
Storage temperature	T _{stg}	−40 to +100	°C

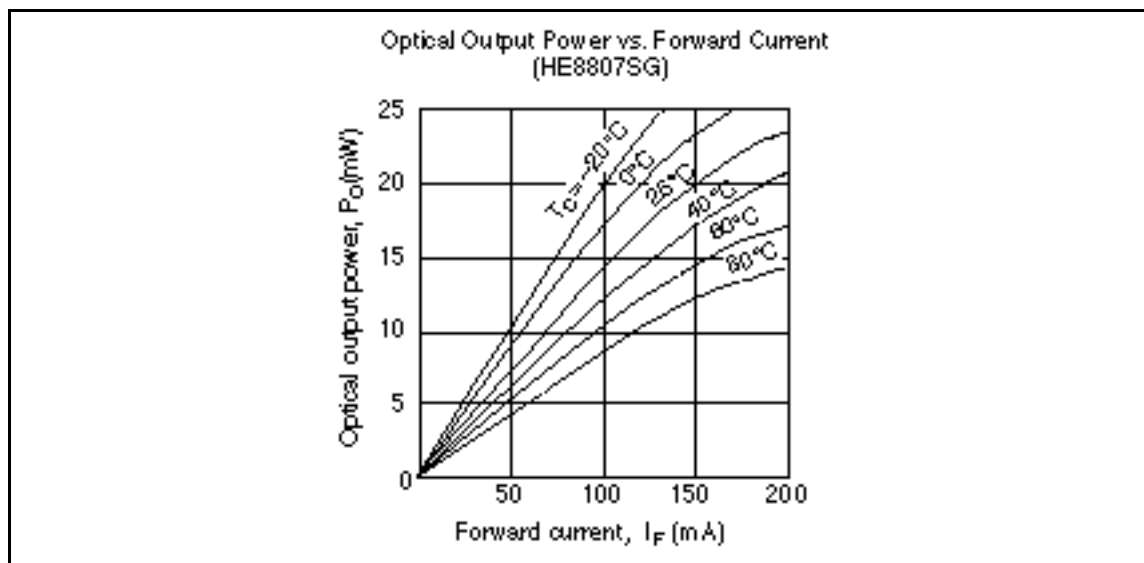
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Optical and Electrical Characteristics ($T_C = 25^\circ\text{C}$)

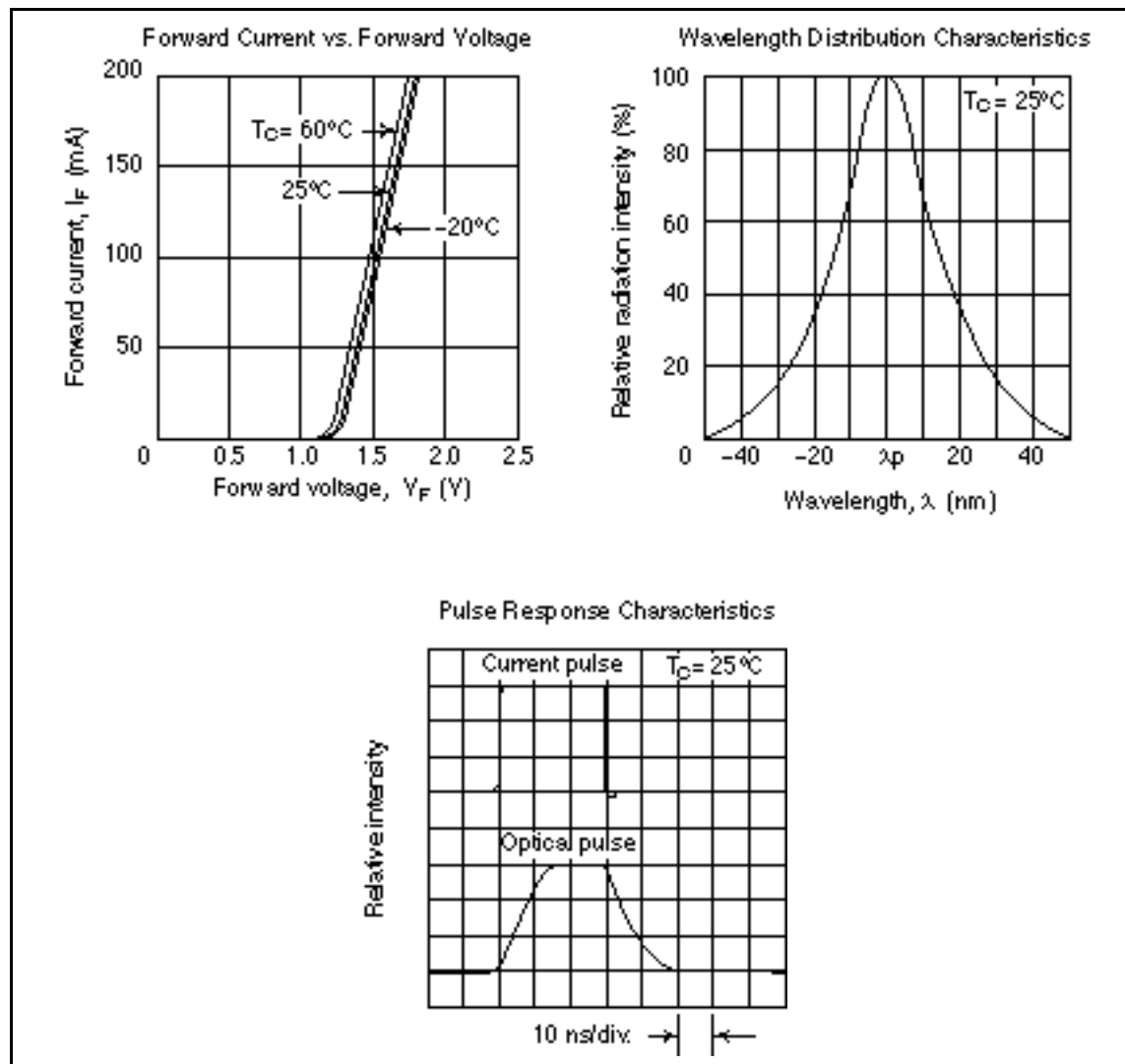
Item		Symbol	Min	Typ	Max	Units	Test Conditions
Optical output power	HE8807SG	P_O	10	20	—	mW	$I_F = 150\text{ mA}$
	HE8807FL	P_F^{*1}	0.5	1.0	—		$I_F = 20\text{ mA}$
Peak wavelength		λ_p	800	880	900	nm	$I_F = 150\text{ mA}$
Spectral width		$\Delta\lambda$	—	30	—	nm	$I_F = 150\text{ mA}$
Forward voltage		V_F	—	1.7	2.3	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	—	20	—	ns	$I_F = 50\text{ mA}$
Fall time		t_f	—	20	—	ns	$I_F = 50\text{ mA}$

Note: 1. P_F specification: The optical output within 9 degrees of the acceptance angle.

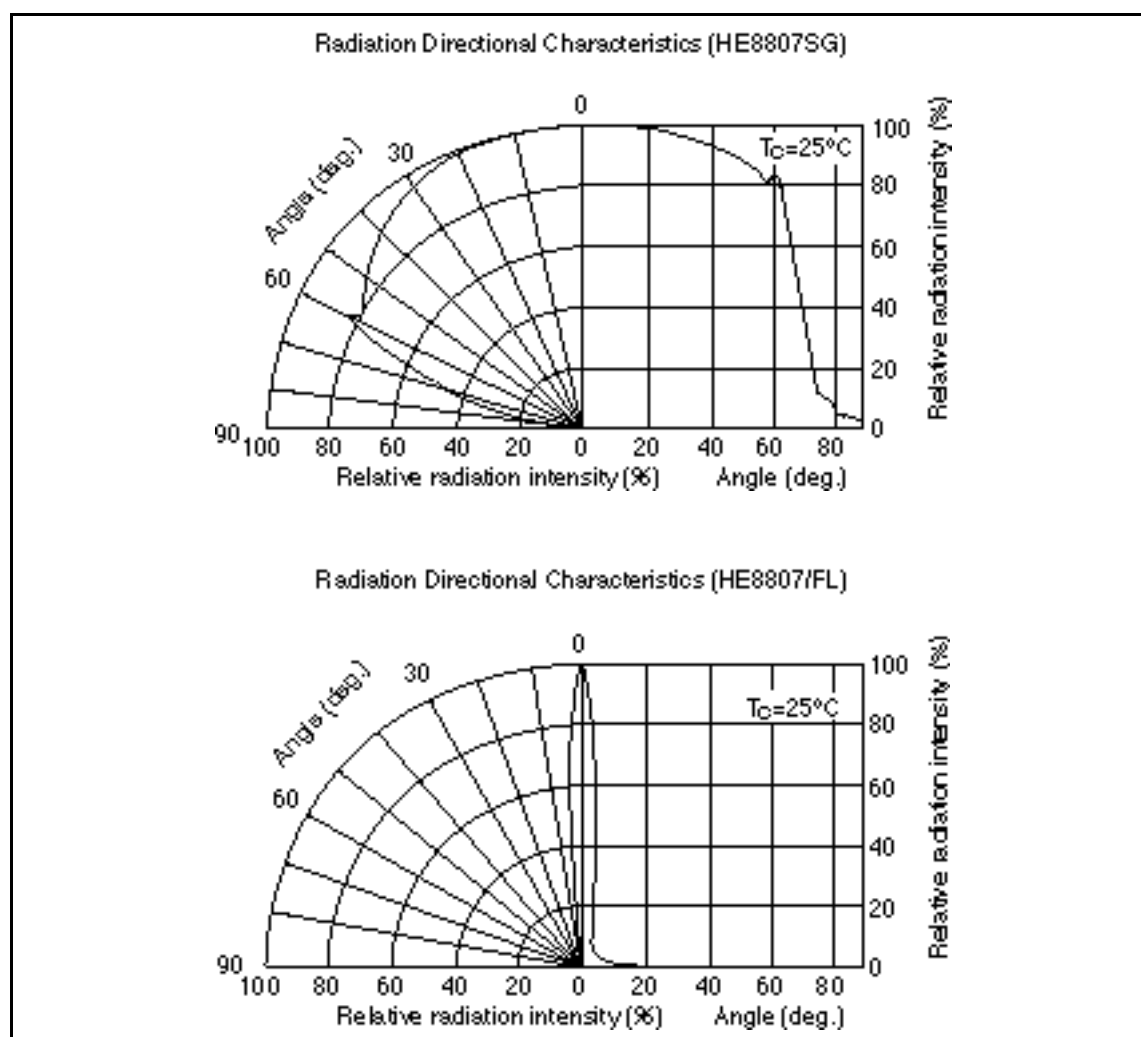
Typical Characteristic Curves



Typical Characteristic Curves (cont)



Typical Characteristic Curves (cont)



Typical Characteristic Curves (cont)

