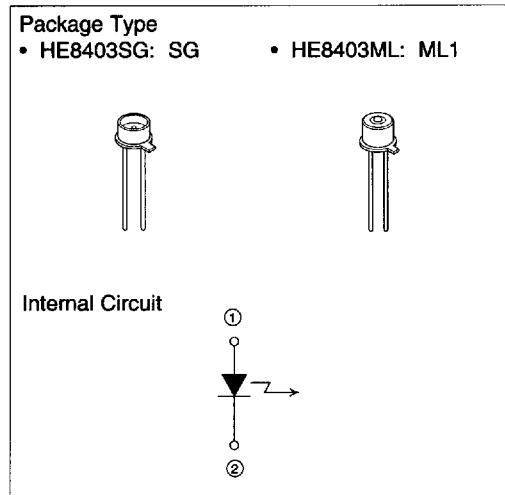


## Description

The HE8403SG/ML are 840 nm band GaAlAs infrared light emitting diodes with a double heterojunction structure. They are suitable as light sources for optical fiber communication systems.

## Features

- High efficiency, high luminance
- High speed pulse output
- Excellent linearity in their optical output power - forward current characteristics



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

Item	Symbol	Rated Value	Units
Forward current	$I_F$	150	mA
Reverse voltage	$V_R$	3	V
Tolerable power dissipation	$P_d$	350	mW
Operating temperature	$T_{opr}$	-20 to +60	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-40 to +90	$^\circ\text{C}$

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Part

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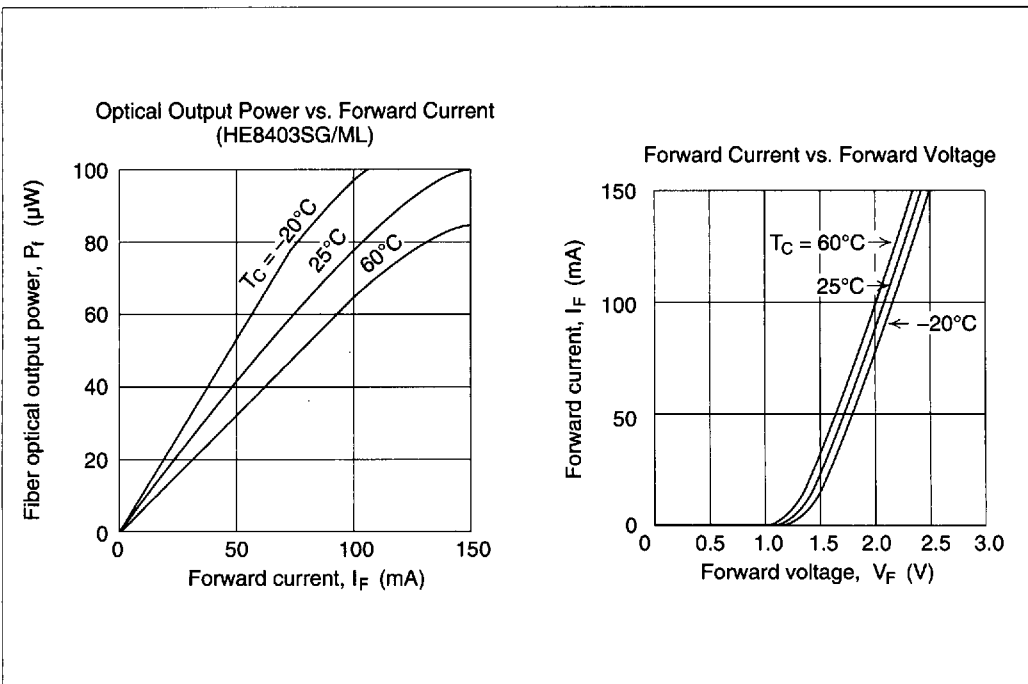
## Optical and Electrical Characteristics ( $T_C = 25^\circ\text{C}$ )

Item	Symbol	Min	Typ	Max	Units	Test Conditions
Fiber optical output power	HE8403SG $P_f^{*1}$	40	80	—	$\mu\text{W}$	$I_F = 100 \text{ mA}$
	HE8403ML	50	80	—		
Peak wavelength	$\lambda_p$	800	840	900	nm	$I_F = 100 \text{ mA}$
Spectral width	$\Delta\lambda$	—	50	—	nm	$I_F = 100 \text{ mA}$
Forward voltage	$V_F$	—	—	2.5	V	$I_F = 100 \text{ mA}$
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	—	ns	$I_F = 50 \text{ mA}$

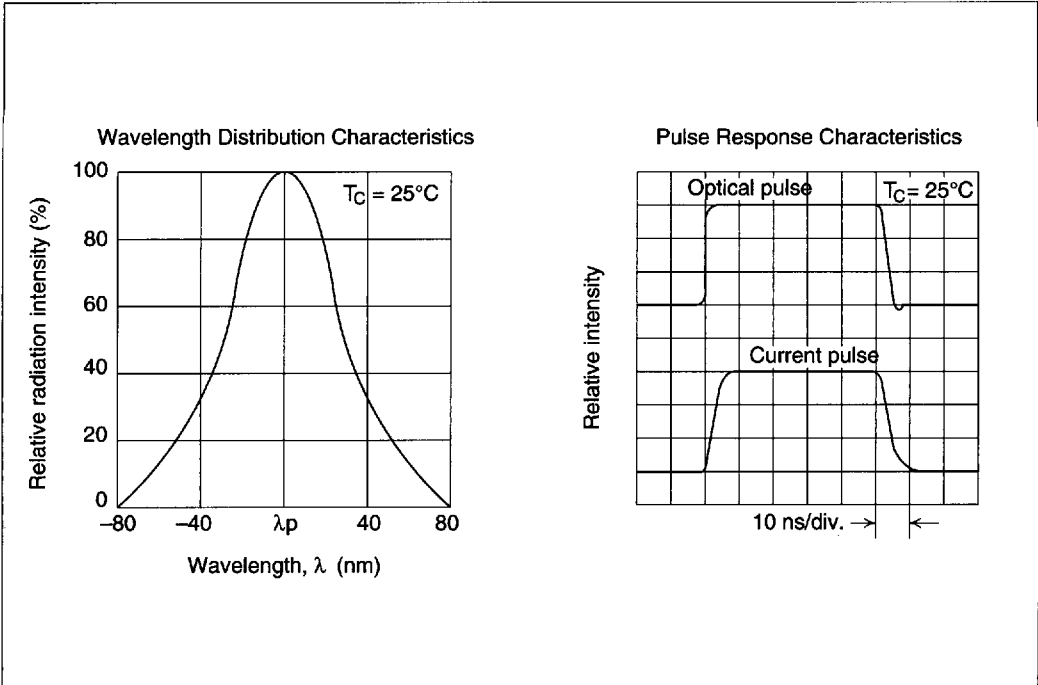
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Note: 1. These outputs are measured at the G150/125 fiber in the HE8403ML and at the G150/125 fiber after passing through a collimating rod lens in the HE8403SG.

## Typical Characteristic Curves



## Typical Characteristic Curves (cont.)



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Typical Characteristic Curves (cont.)

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Coupling Characteristics (HE8403ML)

