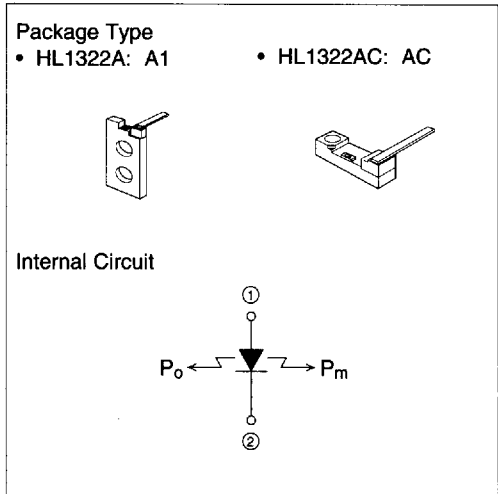


Description

The HL1322A/AC are 1.3 μm band InGaAsP laser diodes with a double heterojunction structure. They are relatively high power output (10 mW) devices as compared to the HLP5400 or the HL1321AC. They are suitable as light sources for high capacity long distance optical fiber communication systems and various types of optical equipment.

Features

- Long wavelength output: $\lambda_p = 1290$ to 1330 nm
- 10 mW CW operation at room temperature
- Fast pulse response: $t_r, t_f \leq 0.5$ ns



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

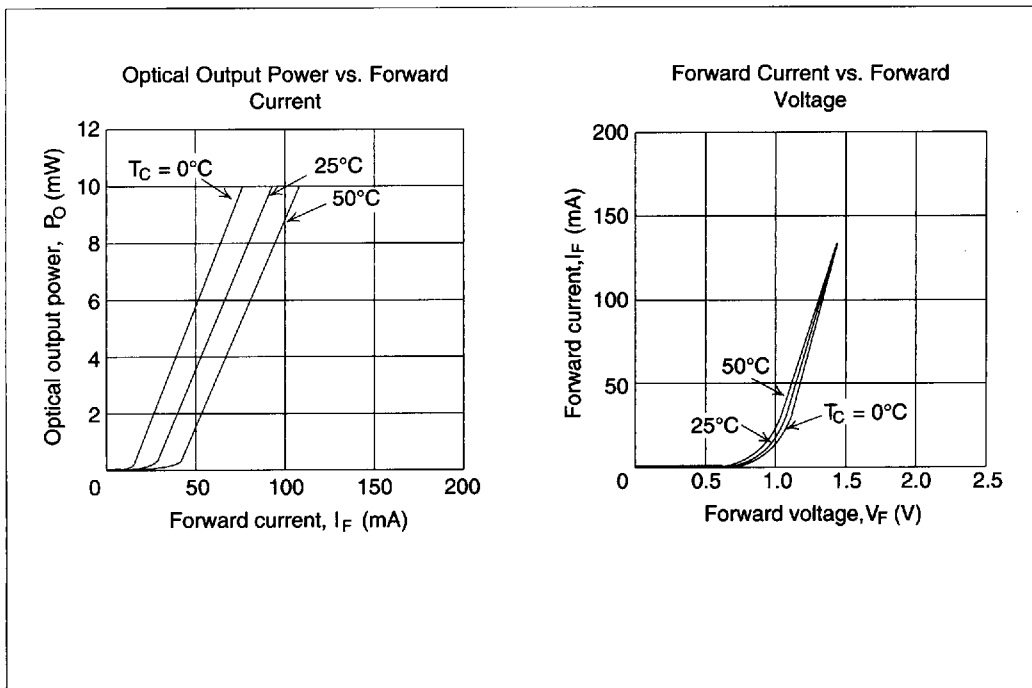
Item	Symbol	Rated Value	Unit
Optical output power	P_O	10	mW
Reverse voltage	V_R	2	V
Operating temperature	T_{opr}	0 to +60	$^\circ\text{C}$
Storage temperature	T_{stg}	0 to +80	$^\circ\text{C}$

HL1322A/AC

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

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	I_{th}	—	30	50	mA	
Optical output power	P_O	10	—	—	mW	Kink free
		4	—	—	mW	$I_F = I_{th} + 40 \text{ mA}$
Monitor output	P_m	2	—	—	mW	$I_F = I_{th} + 40 \text{ mA}$
Lasing wavelength	λ_p	1290	1310	1330	nm	$P_O = 6 \text{ mW}$
Spectral width	$\Delta\lambda$	—	2	—	nm	$P_O = 6 \text{ mW}$
Beam divergence (parallel)	$\theta_{//}$	—	30	—	deg.	$P_O = 6 \text{ mW}$, FWHM
Beam divergence (perpendicular)	$\theta_{\perp}$	—	40	—	deg.	$P_O = 6 \text{ mW}$, FWHM
Rise time	t_r	—	—	0.5	ns	
Fall time	t_f	—	—	0.5	ns	

Typical Characteristic Curves



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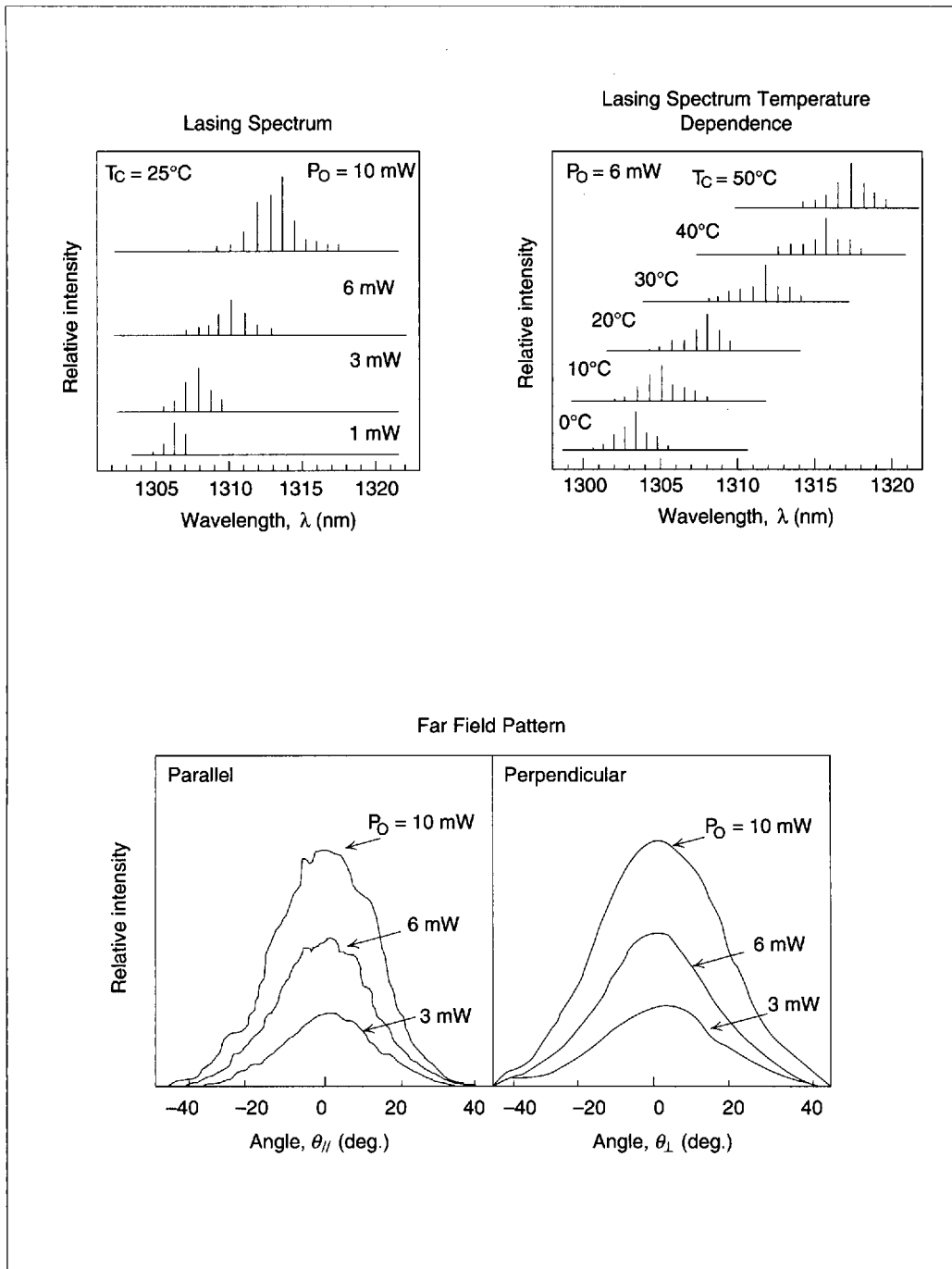
Part

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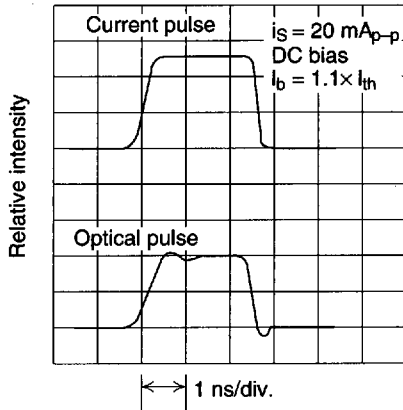
Hitachi America, Ltd. • 2000 Sierra Point Pkwy. • Brisbane, CA 94005-1835 • (415) 589-8300

Typical Characteristic Curves (cont.)

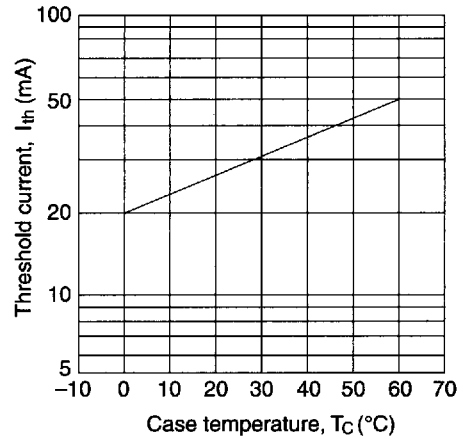


Typical Characteristic Curves (cont.)

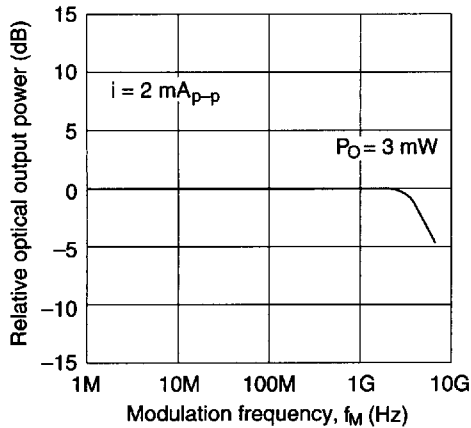
Pulse Response



Threshold Current vs. Case Temperature



Frequency Response Characteristics



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Part

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