

HLP 1400

Bulk active zone

HLP1400

Maintenance only

GaAlAs Laser Diode

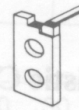
Description

The HLP1400 is a double heterojunction 0.8 μm band GaAlAs laser diode. It is appropriate for use in a wide variety of optical application equipment, including optical fiber communications and optical disk memory systems.

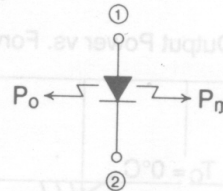
Features

- Infrared wavelength output: $\lambda_p = 800$ to 850 nm
- Standard continuous output: 15 mW (CW)
- Single longitudinal mode lasing

Package Type
• HLP1400: A2



Internal Circuit



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

Item	Symbol	Rated Value	Unit
Optical output power	P_O	15	mW
Pulse optical output power	P_O (pulse)	18^*1	mW
Reverse voltage	V_R	2	V
Operating temperature	T_{opr}	0 to +60	$^\circ\text{C}$
Storage temperature	T_{stg}	0 to +80	$^\circ\text{C}$

Note: 1. At a duty cycle under 50% and pulse widths under $1\mu\text{s}$

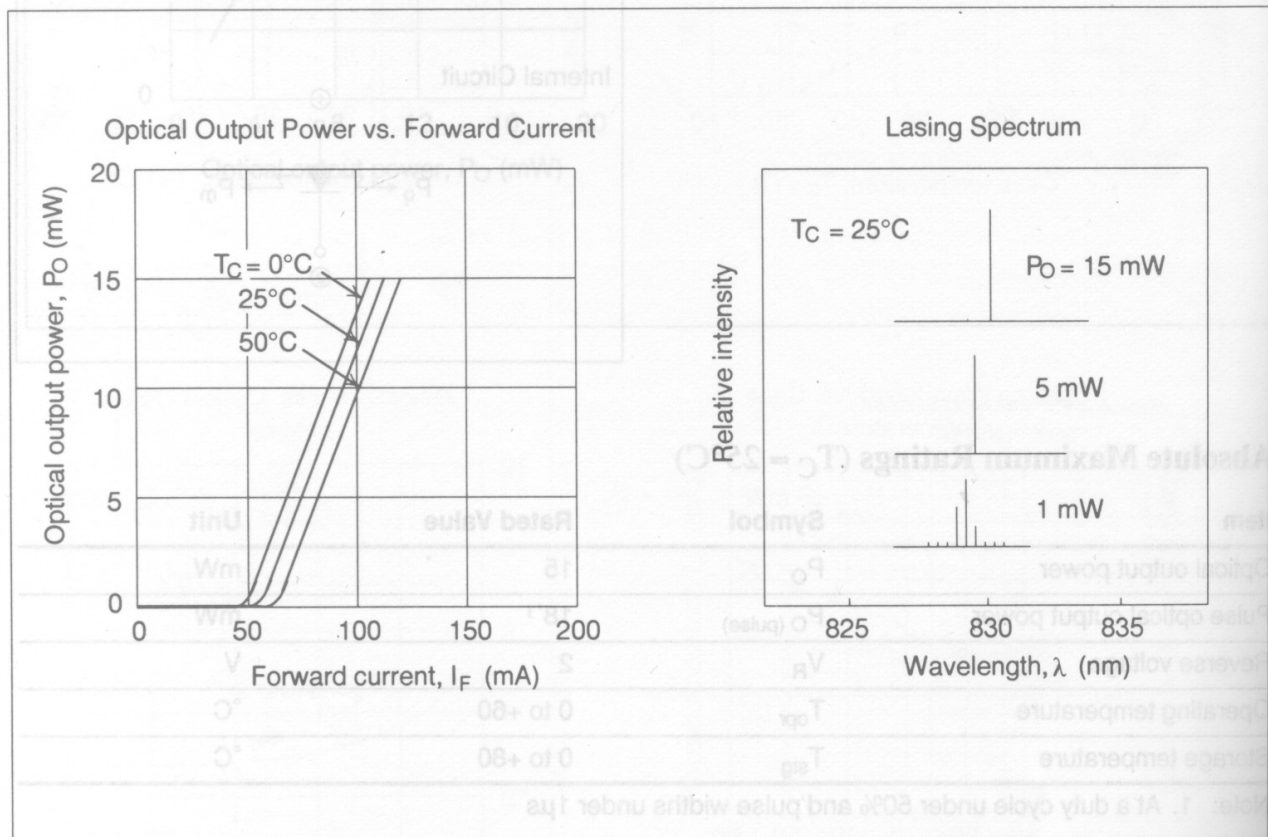
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Optical and Electrical Characteristics ($T_C = 25 \pm 3^\circ\text{C}$)

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Threshold current	I_{th}	—	60	90	mA	
Optical output power	P_O	15	—	—	mW	Kink free
		4	5	—	mW	$I_F = I_{th} + 25 \text{ mA}$
Monitor output	P_m	2	—	—	mW	$I_F = I_{th} + 25 \text{ mA}$
Lasing wavelength	λ_p	800	830	850	nm	$P_O = 10 \text{ mW}$
Beam divergence (parallel)	$\theta_{//}$	—	11	—	deg.	$P_O = 10 \text{ mW}$
Beam divergence (perpendicular)	θ_{\perp}	—	25	—	deg.	$P_O = 10 \text{ mW}$

Typical Characteristic Curves



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Typical Characteristic Curves (cont)

