

HL1325CF (Preliminary)**InGaAsP LD**

HITACHI/(OPTOELECTRONICS)

54E D

■ 4496205

0012122 680

■ HIT4

Description

The HL1325CF is a 1.3 μm InGaAsP laser diode with a double heterojunction structure suitable for use in fiberoptic communications. Laser output is delivered from the coaxial package through an attached single-mode fiber. A built-in photodiode provides monitor current output.

Features

- Long wavelength output: $\lambda_p = 1280$ to 1340 nm
- Optical output power: 0.3 mW (CW)
- Wide operating temperature range: -20 to 70°C
- Built-in monitor photodiode
- Compact, slim package

Fiber Specifications

Mode field diameter	10.0 \pm 1.0 μm
Cutoff wavelength	1.10 to 1.20 μm
Core diameter	10 μm
Outer diameter	125 μm
Fiber length	More than 500 mm

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

Item	Symbol	Rated Value	Units
Fiber optical output power	P_f	0.3	mW
LD reverse voltage	V_R (LD)	2	V
PD reverse voltage	V_R (PD)	15	V
PD forward current	I_F (PD)	1	mA
Operating temperature	T_{opr}	-20 to $+70$	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to $+80$	$^\circ\text{C}$

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

Item	Symbol	Min	Typ	Max	Units	Test Conditions
Threshold current	I_{th}	—	30	50	mA	
Fiber optical output power	P_f	0.3	—	—	mW	Kink free
Lasing wavelength	λ_p	1280	1310	1340	nm	$P_f = 0.2$ mW, CW
Spectral width	$\Delta\lambda$	—	3	—	nm	$P_f = 0.2$ mW, CW FWHM
PD dark current	I_{DARK}	—	—	350	nA	V_R (PD) = 5 V
Monitor current	I_S	100	—	—	μA	V_R (PD) = 5 V, $P_f = 0.2$ mW
PD capacitance	C_t	—	10	20	pF	V_R (PD) = 5 V, $f = 1$ MHz
Rise time	t_r	—	—	0.5	ns	$I_{bias} = I_{th}$, 10 to 90%
Fall time	t_f	—	—	0.5	ns	$I_{bias} = I_{th}$, 90 to 10%

Note: The above product specifications are preliminary and are subject to change without notice.

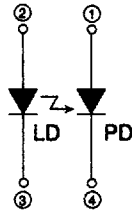
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Internal Circuit

T-41-07

Package Type
• HL1325CF: CF



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