

SPECIFICATION

Non-Hermetic 25G LWDM Laser

DL-DFB_{xxy}06D-25-TL-NH

DL-DFB29506D-25-TL-NH

DL-DFB30006D-25-TL-NH

DL-DFB30406D-25-TL-NH

DL-DFB30906D-25-TL-NH

DL-DFB27306D-25-TL-NH

DL-DFB27706D-25-TL-NH

DL-DFB28206D-25-TL-NH

DL-DFB28606D-25-TL-NH

DL-DFB29106D-25-TL-NH

DL-DFB31306D-25-TL-NH

DL-DFB31806D-25-TL-NH

DL-DFB26906D-25-TL-NH

DL-DFBxxy06D-25-TL-NH

Non-Hermetic 25G LWDM Laser

A. Description

DenseLight DL-DFBxxy06D-25-TL-NH is a Non-Hermetic DFB laser diode operating at 25 Gbps designed for LWDM wavelength. The DL-DFBxxy06D-25-TL-NH laser supports 50°C with minimum output power of 6mW.

The following product codes denote the respective wavelengths:

1. DL-DFB29506D-25-TL-NH: 1295.56nm
2. DL-DFB30006D-25-TL-NH: 1300.05nm
3. DL-DFB30406D-25-TL-NH: 1304.58nm
4. DL-DFB30906D-25-TL-NH: 1309.14nm
5. DL-DFB27306D-25-TL-NH: 1273.54nm
6. DL-DFB27706D-25-TL-NH: 1277.89nm
7. DL-DFB28206D-25-TL-NH: 1282.26nm
8. DL-DFB28606D-25-TL-NH: 1286.66nm
9. DL-DFB29106D-25-TL-NH: 1291.11nm
10. DL-DFB31306D-25-TL-NH: 1313.73nm
11. DL-DFB31806D-25-TL-NH: 1318.35nm
12. DL-DFB26906D-25-TL-NH: 1269.23nm

B. Absolute Maximum Ratings

Operation beyond the absolute maximum ratings can cause degradation in device performance leading to permanent damage to the device.

Parameter	Symbol	Condition	Min	Max	Unit
Reverse voltage	V_R	–	–	1	V
Forward current	I_F	–	–	100	mA
Operating temperature	T_{op}	TEC at 50C			
Storage temperature	T_{stg}	Unbiased	-40	85	°C
Electro-static discharge (ESD)	V_{ESD}	Human body model	–	500	V

Note :

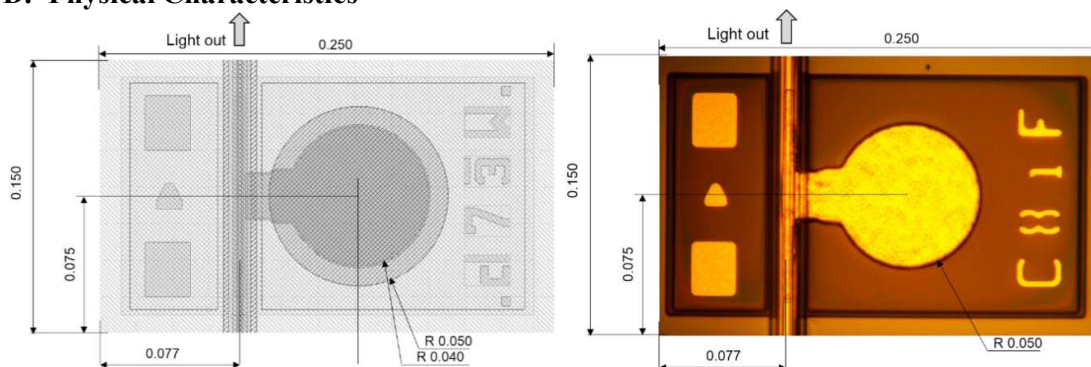
- 1.Stresses in excess of the absolute maximum ratings can cause permanent damage to the device.
- 2.These are absolute stress ratings only. Functional operation of the device is not implied at these or any other conditions in excess of those given in the operational sections of the data sheet.
- 3.Exposure to absolute maximum ratings for extended periods can adversely affect device reliability

C. Specifications

Performance is based on laser diode chip singulated from bar and mounted onto heat-dissipating high-speed sub-mount.

Test paramter	Symbol	Test condition	Min	Typ	Max	Unit
Threshold current	I _{th}	25°C		9	15	mA
		75°C			25	
Optical output power	P _o	25°C, I _{th} +30mA	6	7		mW
Forward voltage	V _f	25°C, I _{th} +30mA			2	V
Slope Efficiency	η _s	25°C, I _{th} +30mA	0.25			mW/mA
Operating Current	I _{op}	50°C			60	mA
Center wavelength	λ _c	50°C/50mA	1294.53	1295.56	1296.59	nm
			1299.02	1300.05	1301.08	nm
			1303.55	1304.58	1305.61	nm
			1308.11	1309.14	1310.17	nm
			1272.51	1273.54	1274.57	nm
			1276.86	1277.89	1278.92	nm
			1281.23	1282.26	1283.29	nm
			1285.63	1286.66	1287.69	nm
			1290.08	1291.11	1292.14	nm
			1312.70	1313.73	1314.76	nm
			1317.32	1318.35	1319.38	nm
1268.20	1269.23	1270.26	nm			
Side-Mode Suppression Ratio	SMSR	50°C/50mA	30	35		dB
Temperature dependence of center wavelength	Δλ/ΔT	CW		0.1		nm/°C
Resistance	R	I _{th} +30mA		10		Ω
Small signal modulation Bandwidth(3dB)	BW	25°C, 50mA	20			GHz
		75°C, 60mA	15.5			
Relaxation oscillation frequency	f _r	75°C, 60mA		10		GHz

D. Physical Characteristics



E. Device Handling

1. DFB laser chips are inherently fragile & easily damaged. Special handling precautions must be taken – avoid using tweezers or any form of contact with facets and a vacuum tip with flat surface is recommended
2. This device has ESD withstand voltage of 500V. EOS may result from improper ESD handling

F. ORDER INFORMATION

