

OHD-C310-BD

70mW High Power CWDM DFB-LD Chip, 1310nm

OHD-C310-BD is a distributed feedback (DFB) laser diode with CWDM wavelength 1310nm; it is designed for high power operation at commercial temperature range.

KEY FEATURES

- ✧ Reliable buried heterostructure DFB laser diode
- ✧ Over 70mW high power operation at commercial temperature (from -5°C to +75°C) range

APPLICATION

- ✧ Silicon photonics

ELECTRICAL AND OPTICAL CHARACTERISTICS

Below parameter performance is expected when laser diode chip is eutectic- bonded on carrier or TO.

Assembly process may impact the parameter values.

ELECTRICAL AND OPTICAL CHARACTERISTICS (Test temperature= 25°C, unless otherwise specified)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
P _o	Output power	CW, I _f =300mA, T _{LD} =75°C	70			mW
I _{th}	Threshold Current	CW, T _{LD} =75°C		35		mA
V _{op}	Operating Voltage	CW, P _o =70mW, T _{LD} = 75°C		2.0		V
λ _p	Peak Wavelength	CW, P _o =70mW	1304.5	1311.0	1317.5	nm
SMSR	Side Mode Suppression Ratio	CW, P _o =70mW	35			dB
F _v	Far-field Angle, Vertical	FWHM		21		deg
F _h	Far-field Angle, Horizontal	FWHM		19		deg
RIN	Relative Intensity Noise	P _o =70mW			-135	dB / Hz

ABSOLUTE MAXIMUM RATINGS

Values should not be exceeded in any conditions to avoid permanent device damage.

ABSOLUTE MAXIMUM RATINGS				
Symbol	Parameter	Min	Max	Unit
V _{RL}	LD Reverse Voltage		2	V
I _f	LD Forward Current		500	mA
P _o	Optical Output Power		100	mW
T _c	Operating temperature	-5	75	°C
T _{stg}	Storage Temperature	-40	85	°C

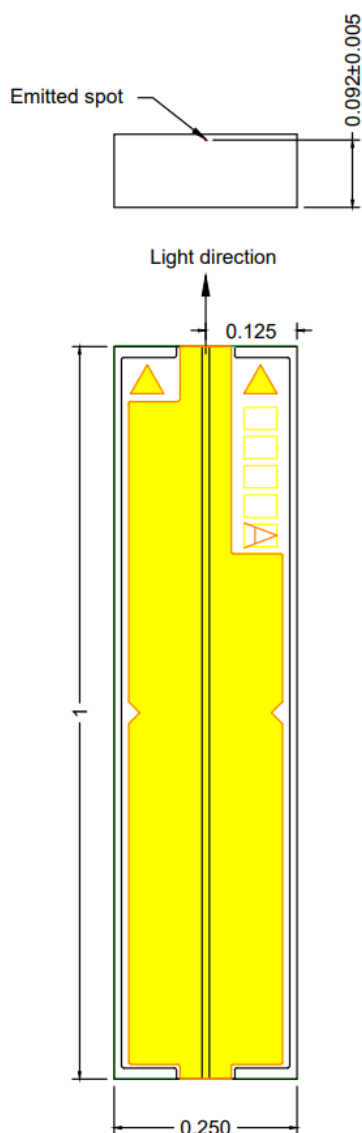
BURN-IN CONDITIONS

Optoway will provide recommended burn-in condition. Optoway will further help customers define new burn-in conditions depending on different TOSA structures or materials.

WAFER QUALIFICATION

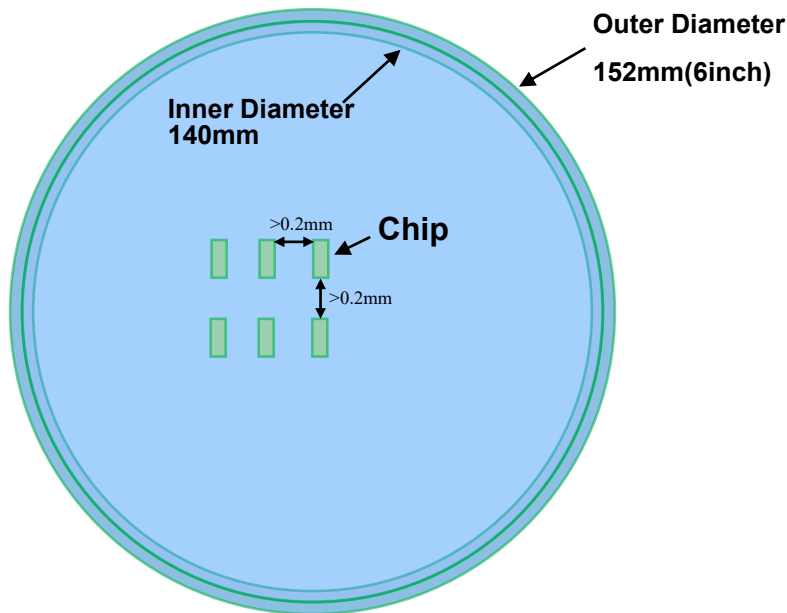
Optoway performs the wafer qualification test which includes die bonding / wire bonding test, burn-in test, and O/E characteristics test. Only the chips from qualified wafers will be shipped. All tests are carried out on chip carrier and TO CAN.

MECHANICAL DIMENSIONS (mm)



PACKAGE INFORMATION

- ✧ Chips will be put on the blue tape, as below figure shown.
- ✧ Distance between chips >0.2mm



DEVICE HANDLING

- ✧ The chip is sensitive and should be handled with care. Both waveguide section and cavity facets should not be touched to avoid any damage.
- ✧ Electrostatic discharge may cause direct or latent damage to laser diodes. During laser chip assembly, precautions for handling electrostatically sensitive devices must be observed.

REVISION HISTORY

Version	Subject	Release Date
1.0	Initial release	2023/7/28
2.0	Modify Iop condition	2024/12/1
3.0	Modify FFP value	2025/09/30
