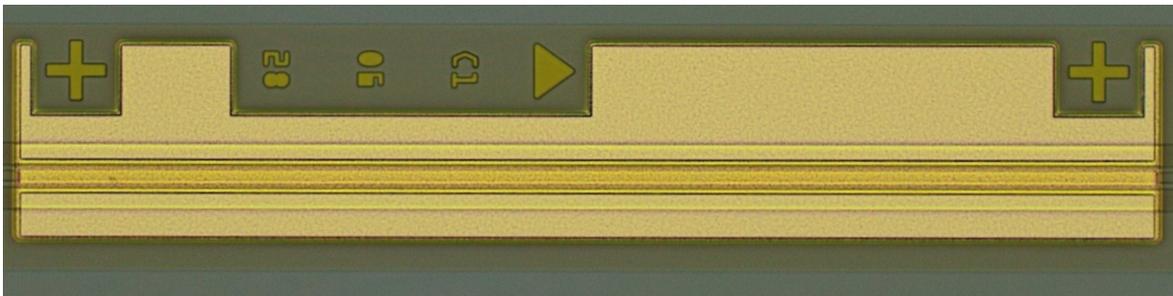


1300 nm 100 mW CW CWDM4 DFB LASER DIODE CHIPS

IND00Dn01D106



FEATURES

- Designed for uncooled O-band CWDM4
- Qualified according to GR-468 for use in non-hermetic packages
- Excellent reliability
- Top anode and backside cathode configuration
- RoHS compliant
- Available wavelengths
 - CWDM4 1270 nm to 1330 nm

APPLICATIONS

- O-band silicon photonic datacom transceivers

SHIPMENT PACKAGING

- Tested and Inspected chips on translucent tape with grip ring Ø 150 mm

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Electro-Optical Characteristics

Operating condition: Tc= 0-75 °C and all values are at BOL unless otherwise specified

Parameter	Symbol	Conditions	Min	Typical	Max	Unit
Bias Current	I _{op}	75C, P _o = 100 mW		400		mA
		75C, P _o = 70 mW		280		mA
		50C, P _o = 100 mW		280		mA
		50C, P _o = 70 mW		220		mA
Threshold current	I _{th}	75C		65		mA
Threshold current		50C		35		mA
Operating Voltage	V _f	I _{op}		1.4	2	V
Power conversion efficiency	PCE	75C, I _{op}		20%		
Power conversion efficiency		50C, I _{op}		30%		
Back Output Power	P _b		1			mW
Side Mode Suppression Ratio ¹	SMSR	I _{op}	35			dB
Center Wavelength	λ	I _{op}	See table below			
Wavelength Temperature Coefficient	dλ/dT			0.09		nm/°C
Beam Divergence (Horizontal)	θ _H	FWHM		20		degree
Beam Divergence (Vertical)	θ _V	FWHM		30		degree
Relative Intensity Noise (RIN)	RIN	I _{op}			-145	dB/Hz ^{1/2}

Note 1: We perform SMSR measurements at chip level under certain pre-defined conditions and with production specs. In applications, the SMSR, like all of other parameters in this table, performance will depend on not only chip performance but also its assembling process. If the chip is assembled in a proper way, the performance described in this table can be expected.

PN	Channel	Symbol	Conditions	Min	Typical	Max	Unit
IND00D001D106	CWDM-L0	λ	0°C to 75°C	1264.5	1271	1277.5	nm
IND00D101D106	CWDM-L1			1284.5	1291	1297.5	nm
IND00D201D106	CWDM-L2			1304.5	1311	1317.5	nm
IND00D301D106	CWDM-L3			1324.5	1331	1337.5	nm

Absolute Maximum Ratings

Parameter	Symbol	Condition	Max Rating	Unit
Laser Bias Current (DC)	I _{max}		1000	mA
Operating Relative Humidity	RH%		85	
Reverse Voltage	VR		2	V

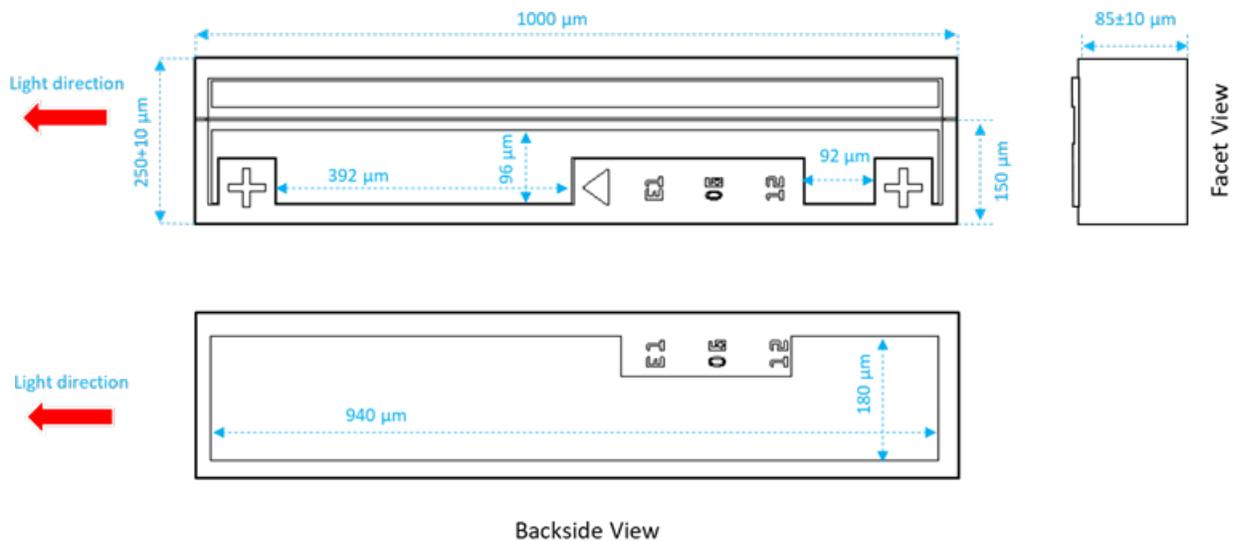
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Environmental Exposure Ratings (Bare dies)

Parameter	Symbol	Condition	Max Rating	Unit
Operating Temperature	Top		0 to 75	°C
Storage Temperature	Tstg		-40 to +100	°C
Storage Relative Humidity	RH%		85	
Die Attach Temperature		Max 10 sec.	320	°C
ESD (HBM)	-		1500	V

Chip Dimensions

Parameter	Min	Typical	Max	Unit
Chip width		250		mm
Chip length		1000		mm
Chip thickness	75	85	95	mm
Bond pad width		96		mm
Bond pad length		392		mm



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RoHS Compliance

Coherent is fully committed to environment protection and sustainable development and has set in place a comprehensive program for removing polluting and hazardous substances from all of its products. The relevant evidence of RoHS compliance is held as part of our controlled documentation for each of our compliant products. RoHS compliance parts are available to order, please refer to the ordering information section for further details.

Ordering Information

Product Code	Wavelength	Description	Shipment Packaging
IND00D001D106	1271 nm	CW DFB Die	Chips on translucent tape with grip ring ⁽¹⁾

⁽¹⁾ UV tape is available

Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Coherent before they become applicable to any particular order or contract. In accordance with Coherent policy of continuous improvement specifications may change without notice. Further details are available from any Coherent sales representative.



Regulatory Compliance and Safety Warnings

- These laser components produce invisible radiation at wavelengths of 1270 nm - 1370 nm.
- Avoid direct eye exposure.
- This laser component is not serviceable.
- Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- This laser component is designated for use solely to be incorporated into a finished laser product. The finished laser product must be evaluated and certified to the relevant laser safety standards. This laser component does not comply with 21CFR1040.10 or IEC 60825-1:2014.