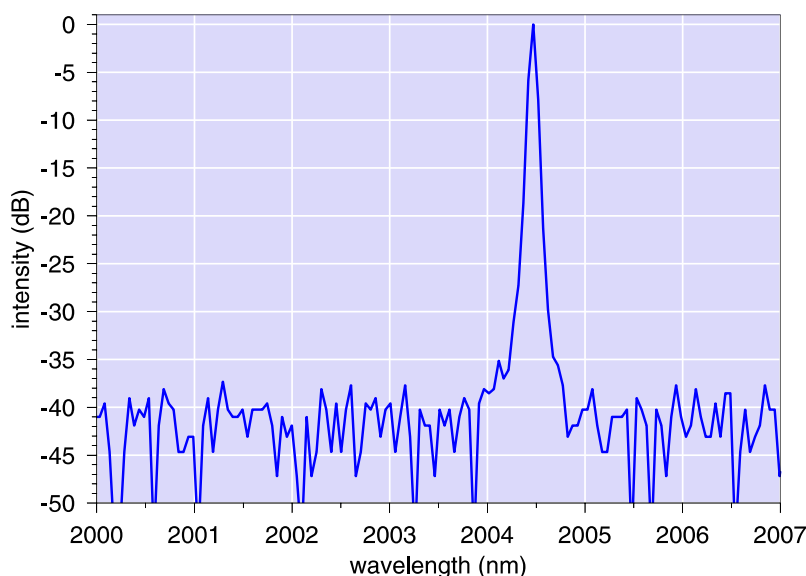


DFB laser diodes for 2000nm applications

Device protected by US patent no. 6,671,306

description

nanoplus 2.0 μm DFB laser diodes (in the following a 2004nm device is exemplary presented) show unique device performance to meet the requirements of our customers. Their high side mode suppression ratio (SMSR) and high spectral purity make them perfectly suited for applications like e.g. CO₂ spectroscopy. Mode-hop free DFB emission with a high side mode suppression ratio (SMSR) around 35dB is guaranteed for the device in the entire specified temperature and current range of operation.



specifications

Parameter	Symbol	Unit	min	typical	max
Wavelength		nm	2003	2004	2005
Side mode suppression		db		35	
Optical output power	P_{opt}	mW		3	
Forward current	I_f	mA	40	50	100
Threshold current	I_{th}	mA	20	25	50
Beam divergence parallel		deg.	25	30	35
Beam divergence perpendicular		deg.	45	50	60
Slope efficiency	e	mW/mA	0.08	0.12	0.15
Current tuning rate	C_I	nm/mA	0.01	0.02	0.03
Temperature tuning rate	C_T	nm/K	0.18	0.2	0.22

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■ absolute maximum ratings

Parameter	Symbol	Unit	Rating
LD forward current	I_f	mA	100
Operating temperature	T_{op}	deg C	-20-50
Storage temperature	T_{store}	deg C	-20-85

■ applications

- CO₂ sensing

■ packaging

nanoplus offers a wide variety of different packaging options for their FP and DFB laser diodes in the entire wavelength range, including all standardized TO headers (e.g. TO 5.6 mm, TO 9 mm, TO 8) with or without Peltier cooler. Please refer to our *packaging datasheet* for more information.

Other customized packages (e.g. mounting on customer specific submounts) are available upon request. Please do not hesitate to contact us for further details.

