

DFB Laser Diode 2004nm 3mW

FNPL-3S-2004-DFB



FNPL-3S-2004-DFB is a CW DFB semiconductor laser diode operating at 2004nm. It is delivered in standard TO-5.6 and TO-9 packages with optional monitor diode to stabilize power output and TO-5 and butterfly packages with integrated TEC, thermistor and monitor diode. Custom mounts are available upon request.

Key Features

- Very high spectral purity
- Narrow Line width <3MHz
- Excellent reliability
- Variety of packaging options

Applications

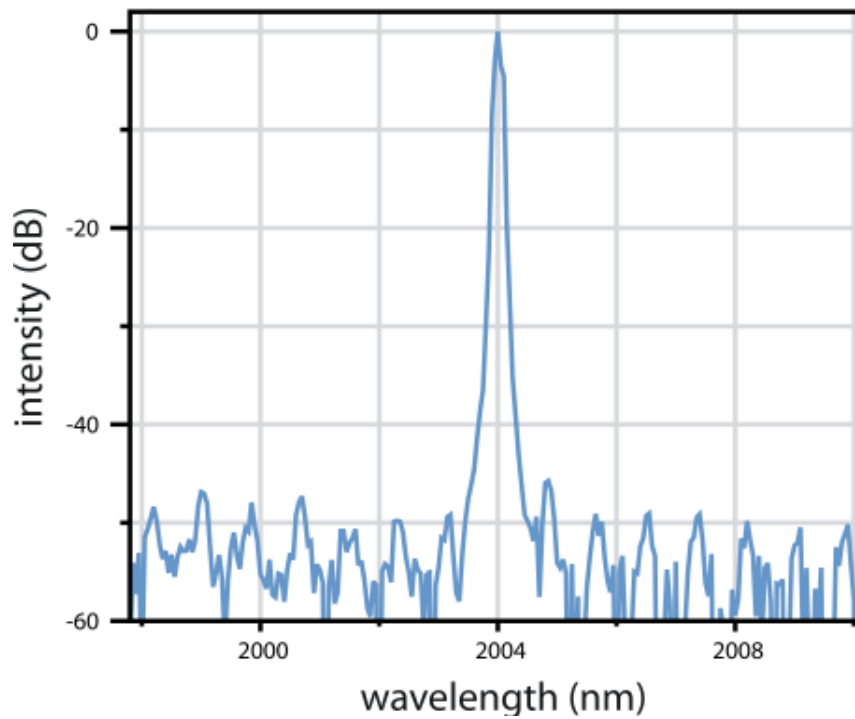
- High performance gas sensing, CO₂
- Precision metrology
- Atomic clocks
- Spectroscopy
- Space technology

Optical and electrical characteristics:

Operating parameters	Symbol	Min	Typ	Max	Unit
Optical Output Power	P_{out}		3		mW
Lasing Wavelength	λ	2003	2004	2005	nm
Threshold Current	I_{th}	20	25	50	mA
Forward Current	I_f		100		mA
Operating Voltage	V_{op}		1.8		V
Beam Divergence Parallel	$\Theta_{ }$	17	20	25	deg.
Beam Divergence Perpendicular	Θ_{\perp}	35	40	45	deg.
Emitting Area	WxH	3.0x1.0	4.5x1.5	5.0x2.0	μm
Slope Efficiency	dP_o/dI_{op}	0.1	0.2	0.23	mW/mA
Temp. Tuning Coefficient	C_T	0.18	0.2	0.22	nm/K
Current Tuning Coefficient	C_I	0.01	0.02	0.03	nm/mA
Operating Temperature	T_C	-20		+50	$^{\circ}\text{C}$
Storage Temperature	T_S	-40		+80	$^{\circ}\text{C}$

TYPICAL PERFORMANCE

Room Temperature CW Spectrum at 2004nm



Mode-hop Free Wavelength Current Tuning at Different Temperatures

