

DFB Laser Diode 852nm 10mW

FNPL-10S-852-DFB



FNPL-10S-852-DFB is a CW DFB semiconductor laser diode operating at 852nm. 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

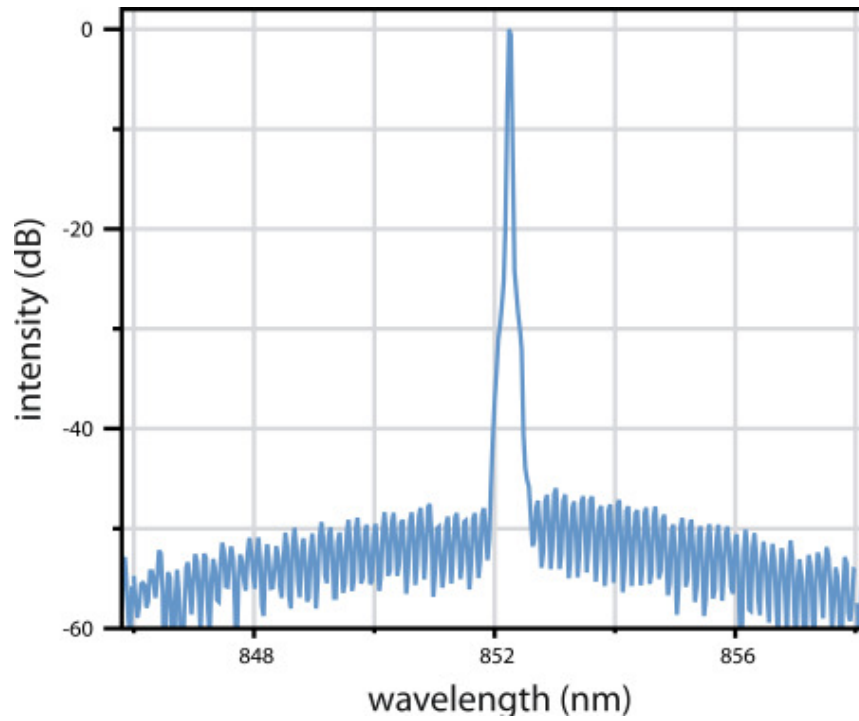
- High performance gas sensing
- Precision metrology
- Atomic clocks
- Spectroscopy; Cs D2 transition
- Space technology

Optical and electrical characteristics:

Operating parameters	Symbol	Min	Typ	Max	Unit
Optical Output Power	P_{out}		10		mW
Lasing Wavelength	λ	851	852	853	nm
Threshold Current	I_{th}	15	20	30	mA
Forward Current	I_f		30		mA
Operating Voltage	V_{op}		1.8		V
Beam Divergence Parallel	$\Theta_{ }$	17	20	25	deg.
Beam Divergence Perpendicular	Θ_{\perp}	25	30	40	deg.
Emitting Area	WxH	2.0x1.0	3.0x1.5	4.0x2.0	μ m
Slope Efficiency	dP_o/dI_{op}	0.4	0.7	0.9	mW/mA
Temp. Tuning Coefficient	C_T	0.05	0.1	0.15	nm/K
Current Tuning Coefficient	C_I	0.003	0.005	0.008	nm/mA
Operating Temperature	T_C	+10		+50	$^{\circ}$ C
Storage Temperature	T_S	-40		+80	$^{\circ}$ C

TYPICAL PERFORMANCE

Room Temperature CW Spectrum at 852nm



Mode-hop Free Wavelength Current Tuning at Different Temperatures

