

DFB Laser Diode 1742nm 3mW

FNPL-3S-1742-DFB



FNPL-3S-1742-DFB is a CW DFB semiconductor laser diode. It is delivered in standard SOT-148 and TO-56 packages with optional monitor diode to stabilize power output and TO-5 and TO-8 packages with integrated TEC, thermistor and monitor diode. Custom mounts are available upon request.

Key Features

Excellent reliability
Variety of packaging options

Applications

High performance gas sensing
Gas Sensing
Sensing of liquids
Free space communications
Spectroscopy

Optical and electrical characteristics: (T = 25 °C)

Operating parameters	Symbol	Min	Typ	Max	Unit
Optical output power	P_{out}	-	3	-	mW
Lasing wavelength	λ	1741	1742	1743	nm
Threshold current	I_{th}	25	30	45	mA
Forward current	I_f	70	80	100	mA
Operating Voltage		-		2.5	V
Beam divergence parallel	$\Theta_{ }$	25	30	35	deg.
Beam divergence perpendicular	Θ_{\perp}	45	50	60	deg.
Side mode suppression		-	35	-	dB
Spectral width (FWHM)	$\Delta\lambda$	-	-	3	MHz
Emitting area	WxH	-	2x1.5	-	μm
Slope efficiency	dP_o/dI_{op}	0.1	0.16	0.2	mW/mA
Current tuning rate	C_I	0.008	0.01	0.012	nm/mA
Temperature tuning rate	C_T	0.08	0.1	0.12	nm/K
Operating temperature	T_C	-20		+50	°C
Storage temperature	T_S	-20		+85	°C

TYPICAL PERFORMANCE

Room Temperature CW Spectrum at 1742nm

