

## DFB Laser Diode 1877nm 3mW

### FNPL-3S-1877-DFB



**FNPL-3S-1877-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	$\lambda$	1876	1877	1878	nm
Threshold current	$I_{th}$	40	45	55	mA
Forward current	$I_f$	50	80	100	mA
Operating Voltage		-		2.5	V
Beam divergence parallel	$\Theta_{  }$	25	30	35	deg.
Beam divergence perpendicular	$\Theta_{\perp}$	45	50	60	deg.
Side mode suppression		-	35	-	dB
Spectral width (FWHM)	$\Delta\lambda$	-	-	3	MHz
Emitting area	WxH	-	2x1.5	-	$\mu\text{m}$
Slope efficiency	$dP_o/dI_{op}$	0.04	0.07	0.13	mW/mA
Current tuning rate	$C_I$	0.01	0.015	0.03	nm/mA
Temperature tuning rate	$C_T$	0.1	0.12	0.16	nm/K
Operating temperature	$T_C$	-20		+50	°C
Storage temperature	$T_S$	-20		+85	°C

## TYPICAL PERFORMANCE

Room Temperature CW Spectrum at 1877nm

