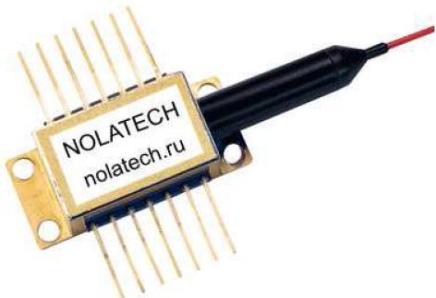


## Laser Diode 1060nm 40mW



BLD-1060-14BF Fiber Bragg Grating laser is single frequency laser diode module designed for optical measurement and communication. The laser is packaged in 14-pin standard butterfly package with monitor photodiode and thermo-electric cooler (TEC).

### Key Features

- Optical output: 40mW
- Narrow linewidth ( $\Delta\nu < 0.1\text{MHz}$ )
- Wavelength: 1060nm @ 25°C
- SM or PM Fiber ( $\varnothing 0.9\text{mm}$ )
- FC-APC connector
- 14-pin butterfly package
- Internal monitor PD and TEC
- Low power consumption

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

Item	Symbol	Test condition	Min.	Typ.	Max.	Unit
Output Power	P <sub>f</sub>			40	50	mW
Forward Voltage	V <sub>F</sub>	P <sub>f</sub> =40mW			2.5	V
Threshold Current	I <sub>th</sub>			20	40	mA
Forward Current	I <sub>F</sub>	P <sub>f</sub> =40mW		200	300	mA
Center Wavelength	λ <sub>c</sub>	P <sub>f</sub> =40mW	1020		1090	nm
Spectral Width	Δλ	P <sub>f</sub> =40mW		100		kHz
Side Mode Suppression Ratio	SMSR	P <sub>f</sub> =40mW	40	45		dB
Monitor Current	I <sub>m</sub>	P <sub>f</sub> =40mW, V <sub>RD</sub> =5V	40		200	μA
PD Dark Current	I <sub>d</sub>	V <sub>RD</sub> =5V			0.1	μA
Cooler Voltage	V <sub>C</sub>	I <sub>F</sub> =EOL, TC=70°C			2.7	V
Cooler Current	I <sub>C</sub>	I <sub>F</sub> =EOL, TC=70°C			1.4	A
Thermal Resistance	R <sub>o</sub>	T <sub>LD</sub> =25°C, B=3900±100K	9.5	10.0	10.5	kΩ
Extinction Ratio	X <sub>P</sub>	P <sub>f</sub> =40mW	17			dB
Mode Hop Free Range	ΔI			30		mA
Single-Frequency Continuous Tuning Range	Δf		3			GHz
Current Tuning	Δλ/ΔI			0.001		nm/mA
Temperature Tuning	Δλ/ΔT			0.08		nm/°C

## Absolute Maximum Ratings

Item	Symbol	Rating	Unit
LD Forward Current	$I_f$	400	mA
LD Reverse Voltage	$V_r$	1.8	V
PD Reverse Voltage	$V_{RD}$	10	V
Operation Case Temperature	$T_c$	-40 to +70	°C
Storage Temperature	$T_{stg}$	-40 to +85	°C
Cooler Current	$I_c$	1.4	A

## PACKAGING

No.	FUNCTION	No.	FUNCTION
1	Cooler anode	8	NC
2	Thermistor	9	NC
3	PD anode	10	LD anode
4	PD cathode	11	LD cathode
5	Thermistor	12	NC
6	NC	13	Case
7	NC	14	Cooler anode

