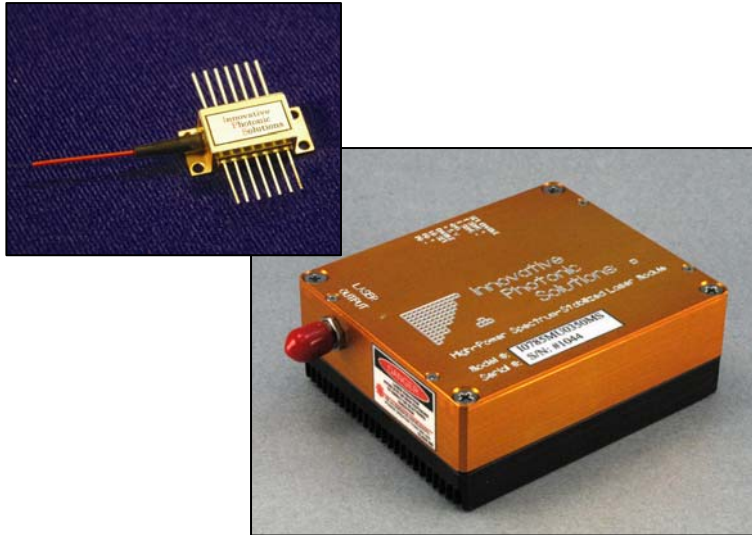


976 nm Single Mode Spectrum Stabilized Laser Model # I0976SB0500P



Features:

- High Power Single Mode Output
- Ultra-Narrow Spectral Linewidth (< 1 MHz)
- Stabilized Output Spectrum (< 0.007 nm/ $^{\circ}$ C)
- Excellent Beam Quality ($M^2 < 1.1$)
- Capable of High Speed Pulse Operation

Target Applications:

- Fiber Laser Pumping
- Interferometry
- Frequency Doubling

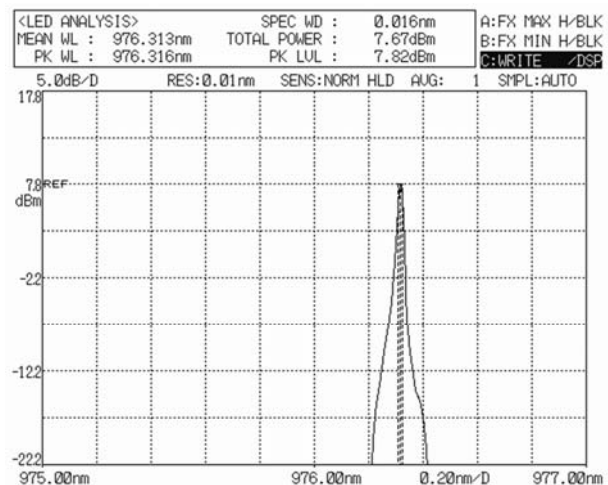
Innovative Photonic Solution's proprietary Single-Mode Spectrum Stabilized Laser features high output power with ultra-narrow spectral bandwidth and a diffraction limited output beam. Designed for fiber laser "core pumping" applications, this single frequency laser offers ultra low noise performance and allows system designers to design fiber lasers with extremely low phase noise.

IPS's single frequency lasers are ideal substitutes for expensive DFB, DBR, fiber, and external cavity lasers, the Single-Mode Spectrum Stabilized Laser offers superior wavelength stability over time, temperature (0.007 nm/ $^{\circ}$ C), and vibration, and is manufactured to meet the most demanding wavelength requirements.

The I0976SB0500P is available in both fiber coupled and open beam formats and can be packaged in a 14-Pin Butterfly package, in an integrated OEM module, or in a fully integrated module with user configurable temperature and power control electronics. Lasing wavelength can be accurately specified and repeatedly manufactured to within 0.1 nm.

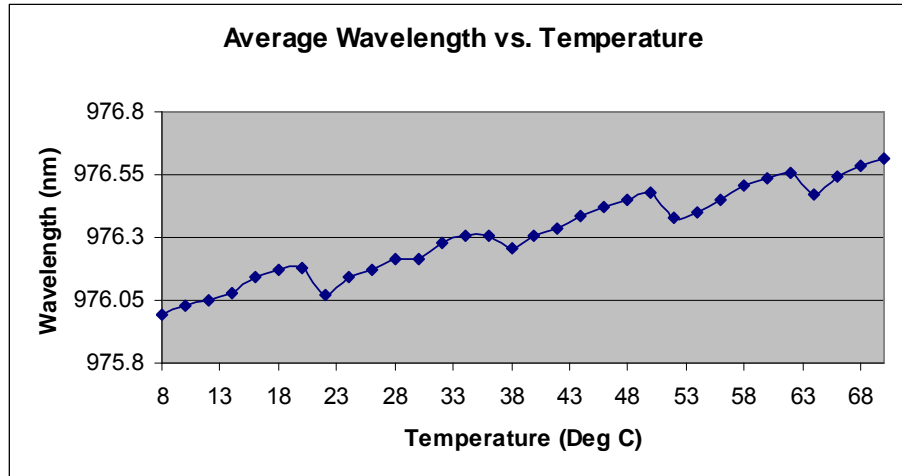
Typical Spectral Plot:

**Ultra-Stable Performance
With Spectral Linewidth
As Low As 150 KHz**



976 nm SS Laser Spectrum @ 25 deg C

Operational Characteristics:



Laser exhibits characteristics of both DFB and ECL lasers

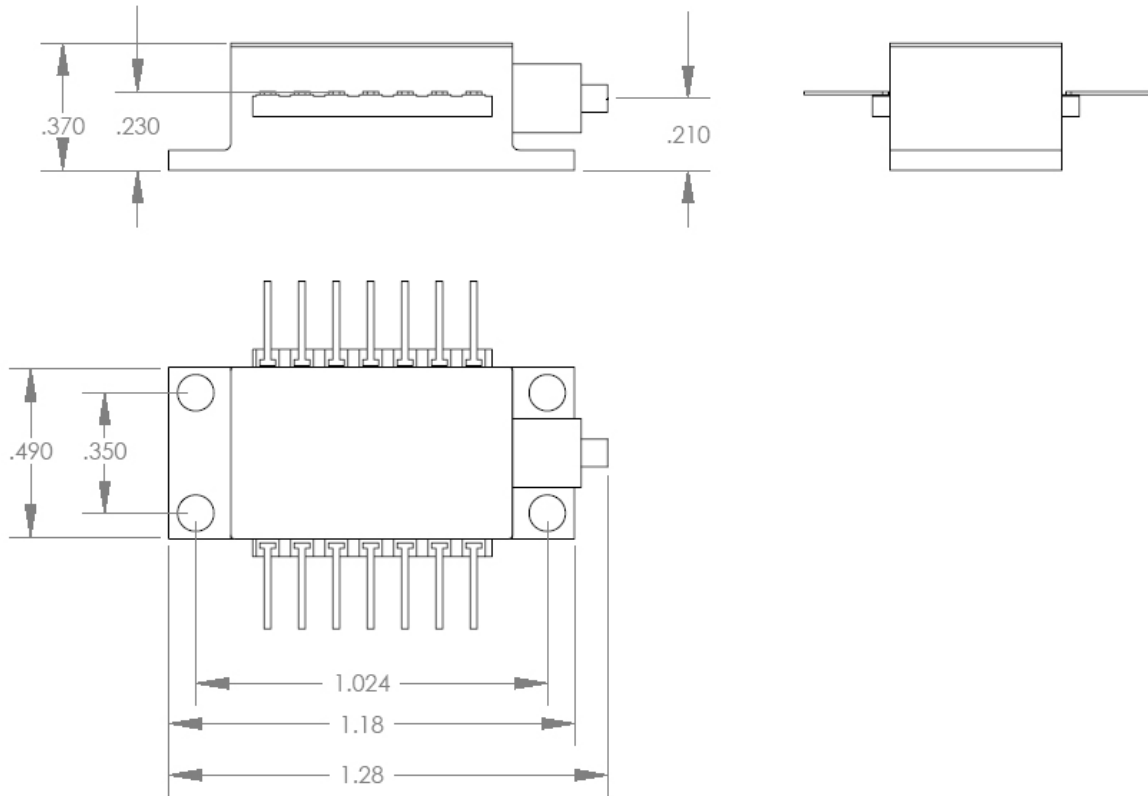
Product Specifications:

Parameter	Test Conditions	Units	I0976SB0500PZ		
			Min	Typ	Max
Stabilized Lasing Wavelength	Peak λ measured in Vacuum at lop and TEC @ 25-35 deg. C	nm	975.50	976.00	976.50
Spectral Width	FWHM at lop and TEC @ 25-35 deg. C	nm		<1 MHz	
Output power	CW Output from PM fiber at at lop and TEC @ 25-35 deg. C	mW	500		
Laser Operational Current	lop	mA			1000
Laser Operational Voltage	Compliance limited	V			2.2
Polarization Extinction Ratio (PER)		dB	20		
TEC Current Limit		A			2.5
TEC Voltage Limit	Compliance limited	V			4.5
Operational Temperature Range		Deg C	10		50

Substitute Z in part number schema with:		Blank for No Connector
	A	For FC/APC

Custom wavelengths, power levels, & packaging configurations are available upon request.

Mechanical Specifications:



BF Module Pin-Out:

Package Pin-Out	
Pin #	Name
1	TEC +
2	THERMISTOR (10K Ohm @ 25C)
3	PD ANODE
4	PD CATHODE
5	THERMISTOR
6	NC
7	NC
8	NC
9	LASER CATHODE (-)
10	LASER ANODE (+)
11	LASER CATHODE (-)
12	NC
13	CASE GROUND
14	TEC -

