



SOPRANO-1800

1.8 μm Broadband Tunable PM Fiber Laser

Key Features

- Output power 10 mW to 1 W
- Single frequency operation
- Linewidth < 0.05 nm
- Tunable 1750 to 1850 nm
- Single mode, $M^2 \approx 1$
- 19" 2U Benchtop
- USB interface
- Operation Temp: 10 to 40°C
- Standard or All-PM version
- Efficient cooling system

Applications

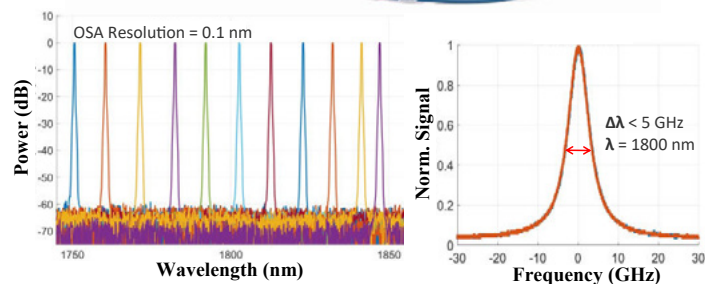
- Atom Cooling
- Laser pumping
- High Energy Physics
- Testing and Measurement
- Spectroscopy

2 μm Amplifiers & Laser Products

- ♦ TENOR Tunable laser 1900 nm
- ♦ PERSEUS Laser 1760 nm
- ♦ ORION Laser 1 W 1860 nm
- ♦ ASTROLIGHT Laser 5 W 1950 nm

The **CYBEL SOPRANO-BT-1800** is a wavelength tunable PM fiber laser with a broadband tuning range from 1750 to 1850 nm and output power from 10 mW up to 1 W. The signal wavelength has a linewidth of 0.05 nm. This signal can be fine tunable over 100 nm with an optical signal to noise ratio (OSNR) > 50 dB/1 nm. The isolated output power is delivered via a single mode PM fiber with polarization extinction ratio (PER) of 20 dB.

The **SOPRANO-BT-1800** model comes in a 19 inch benchtop unit designed with either a manual control of the wavelength tuning or via a USB computer interface. This tunable laser is available in the SKYLINE OEM version (200x150x43 mm³).



Wavelength Sweep Across the Band



SOPRANO-1800 λ Tunable Laser

OPTICAL	Unit	Value	Comment
Wavelength tuning range	nm	1750-1850	Other tuning wavelength bands available
Average output power	mW	100	Up to 1 W available
Output signal Linewidth	nm	< 0.05	
Polarization ext. ratio	dB	20	PM version
Signal to noise ratio (OSNR)	dB	50	OSA Res. 1 nm, For Pout > 100 mW
Beam quality (M ²)	M ²	< 1.1	
Output power stability (RMS)	%	3	1800 nm at 100 mW for 1 hour
Output fiber length	m	1	SM or PM 1950-Armored cable, Optional
Connector		FC/APC	Other connector available
Optical output tap	m	1	Optional, 1—10 %
ELECTRICAL			
Voltage	V	110-220	
Warm-up time	min	20	
Supply power consumption	W	30	@Pout max=1W 25°C
Control interface		USB	
Control mode		ACC	Fiber tap option available
GENERAL			
Dimensions	inch	19	2U Rack mountable
Control Storage temperature	°C	-20 to 65	
Operating case temperature	°C	10 to 40	
Operating relative humidity	%	5 to 95	Non-condensing

CUSTOMIZATION

The **SOPRANO-BT-1800** is a laser platform that can be customized to match Customers' specific requirements. Please contact Cybel.

COMPLIANCE with Regulatory Requirements: These benchtop products are Class 4 lasers as designated by the Center for Device and Radiology Health (CDRH). As such they are intended only in integration into other equipment and do not comply with CDRH requirement. It is the customer responsibility for CDRH certification of the full system that incorporates this industrial laser.

