RLS-5-R

5 Channels Raman Laser Source, Rackmount

The Optilab RLS-5-R Raman Laser Source is designed as a base unit for Raman amplifier developmental. It can be customized up to 10 different optical pump wavelengths allowing it to meet requirements of different optical networks. The RLS-5-R can be configured to provide optical gain in ultra long-haul DWDM networks, and can also be incorporated into CATV networks to increase the transmission distance of digital and analog channels. Unlike EDFAs, Raman Amplifiers are based on non-linear effect that occurs during the back scattering wherein the single mode optical fiber in the link itself acts as the gain medium, and is typically installed in the mid-stream of a signal or placed before receivers to increase the optical power level signals. Utilizing a multiple high-power pump laser design, the RLS-5-R provides a wide variety of optical wavelength pump lasers and power levels for customized configuration. Contact Optilab for more information.

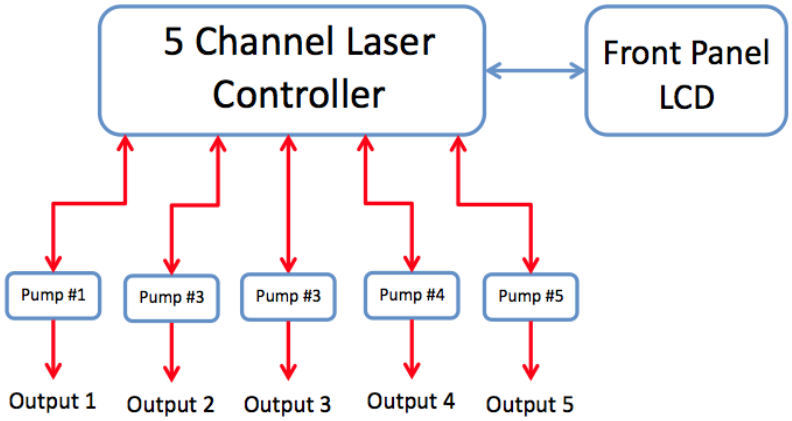
Features

- Up to 5 Raman pump lasers
- 10 wavelengths to start from
- Customizable for different networks
- 1U rackmount housing
- Remote interface via LabVIEW

Applications

- DWDM
- Ultra-Long Haul
- HFC Networks
- Undersea Link
- Research and Development

Functional Diagram



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OPTIONS

RLS-X-R

X: Number of pump lasers 2-5

TECHNICAL INFO

For technical info and support:

sales@optilab.com

www.optilab.com

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Optilab Advantage

- Innovation
- Performance
- Quality
- Customization
- Warranty

Optical Specifications	
Pump Laser Type	TEC cooled and FBG stablized
Number of Pump Lasers	Up to 5 in one
Pump Wavelength	1420-1490 nm available; See table 1
Pump Wavelength Tolerance	+/- 1.0 nm
Laser Linewidth	1.0 nm max.
Combined Pump Power	Up to 12 vv00 mW
Degree of Polarization	5% max.
Optical Isolation	30 dB typ.
Output Stability	0.1 dB over 8 hrs

Mechanical Specifications	
Operating Temperature	0° to +50° C
Storage Temperature	-10° to +70° C
Power Supply	80-240 V, 43-63 Hz AC
Power Consumption	100 W max.
Display	Output Power Level, TEC Temperature
Controls/Monitoring	Pump Laser Temperature and Current
Communication Interface	RS-232 interface cabling from PC to rackmount units
Alarms	Over Temperature, Over Current
Dimensions	1RU: 19" x 20.5"x 1.75"

Avaliable Pump Lasers Table 1		
Wavelenth	Single Pump	Dual Pump
1420 nm	240 mW	400 mW
1426 nm	300 mW	480 mW
1435 nm	240 mW	400 mW
1440 nm	240 mW	400 mW
1444 nm	240 mW	400 mW
1455 nm	240 mW	400 mW
1462 nm	240 mW	400 mW
1471 nm	280 mW	440 mW
1480 nm	300 nm	N/A
1490 nm	240 nm	440 mW

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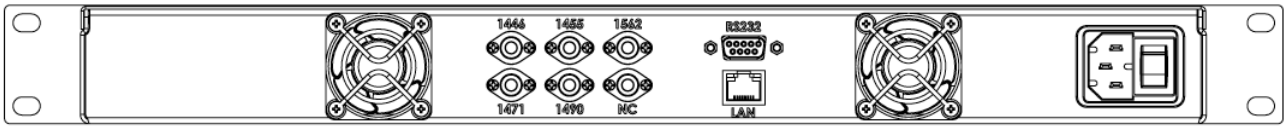
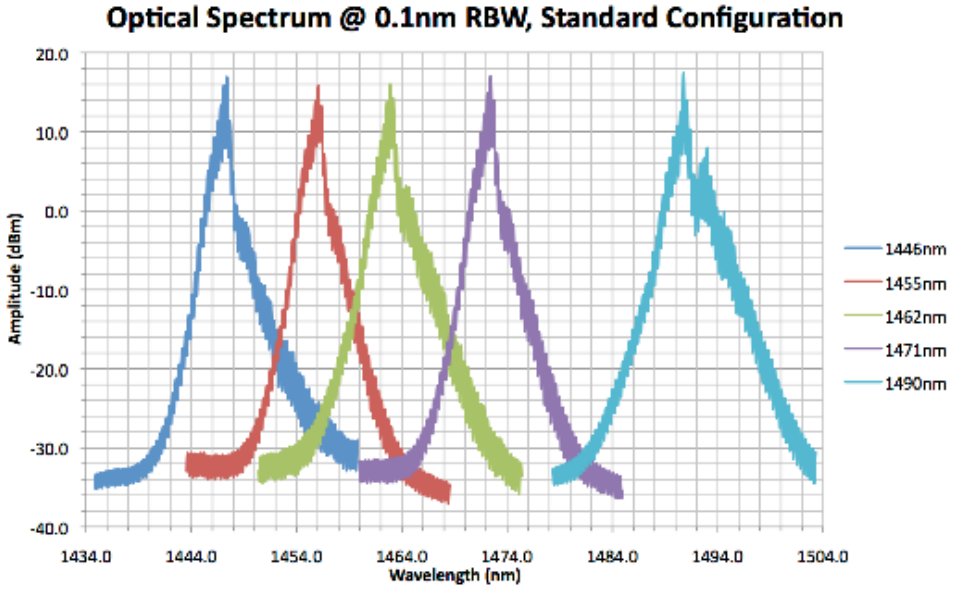
Mechanical Drawing, Rear Panel

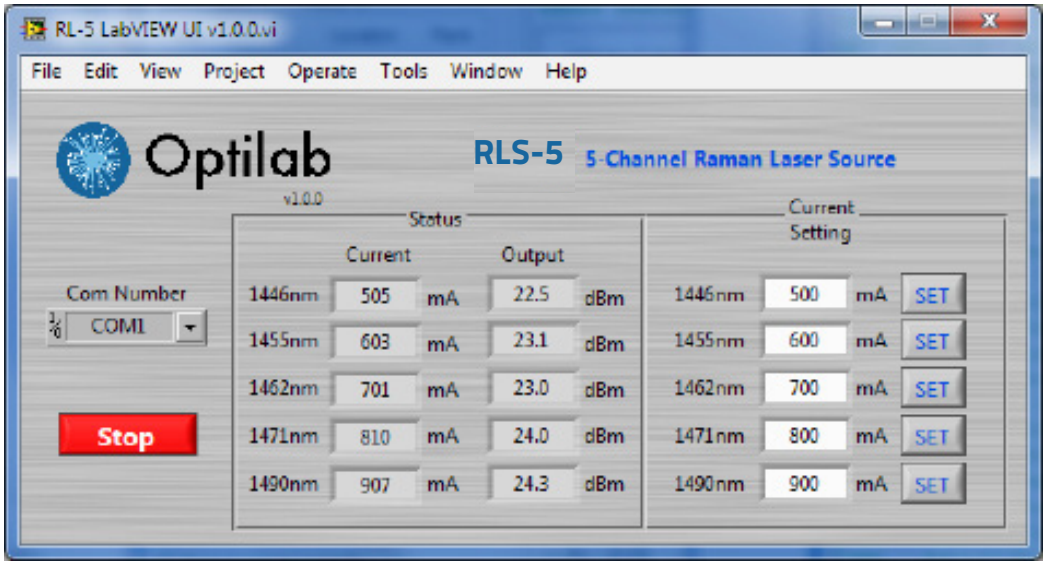


Sample Spectrum



Remote Labview Interface

Optilab offers remote interface via Labview software, for parameter adjustment and status monitoring, contact Optilab for more details.



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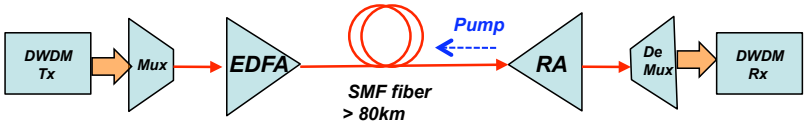
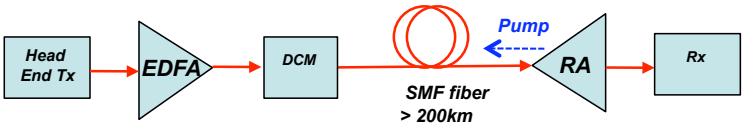
RA Application in DWDM Networks



RA Installation in HFC/CATV Transport



4 Pump Raman Amplifier Example