



RA-C1-15-R



DEVICE

15 dB Gain Raman Amplifier, 1525 nm to 1544 nm

OVERVIEW

Optilab Raman Amplifier Rackmount Units are designed for distributed Raman amplification in C-Band. The RA-C1-15-R unit provides over 15 dB On/Off gain flattened amplification from 1525nm to 1544nm, thus can support up to 50 DWDM channels. Each of the two pump channels is configured with two high power pump laser diodes and one polarization beam combiner (PBC). The unit includes micro-controller based laser current control circuitry for enhanced stability and reliability. RA-C1-15-R is an ideal amplifier for high channel count DWDM 40G/100G transmission and fiber sensor systems. It is equipped with LCD touch screen and LabVIEW (TM) remote user interface for easy operation. Contact Optilab for more information.

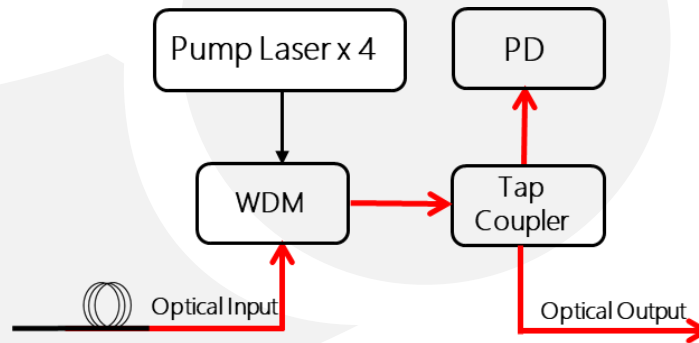
FEATURES

- 1525 nm – 1544 nm
- Over 15 dB On/Off Gain
- Gain flatness of $< \pm 1.5$ dB
- Excellent Stability
- Up to 50 DWDM Channels
- Touch Screen LCD & USB Interface

USE IN

- Long Haul / Ultra-Long Haul Systems
- Long Repeaterless Links
- Low Latency Links
- Multi-Channel DWDM Networks
- 40 / 100 Gbps Transmission

FUNCTION DIAGRAM





RA-C1-15-R

SPECIFICATIONS

GENERAL

Operating Wavelength	1525 nm to 1544 nm
Input Signal Level	-40 to -10 dBm
Pump Power	Up to 750 mW
Averaged Gain @ -15 dBm Input	> 15 dB
Gain Flatness	< ±1.5 dB
Signal Insertion Loss	< 1 dB
Output Stability	< ± 0.1 dB for 24 hours
Degree of Polarization	< 5% for each channel

MECHANICAL

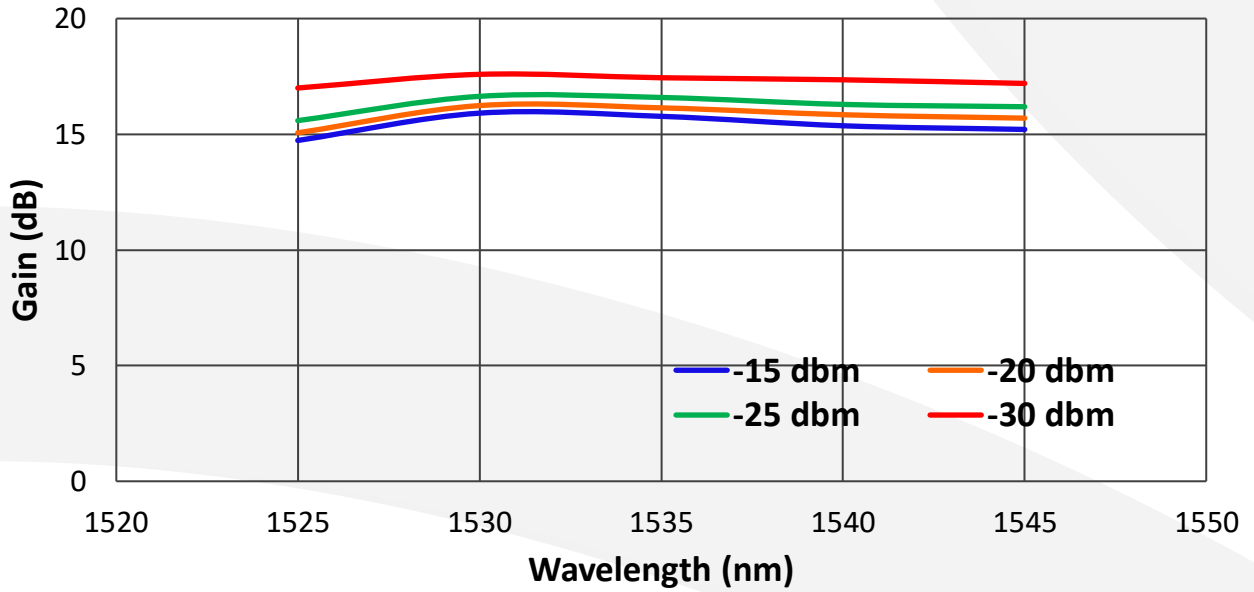
Operating Temperature	-5°C to + 55°C
Storage Temperature	-40 °C to 80 °C
Operating Humidity	0% to 90% Relative Humidity
Power Supply	110 – 240 VAC
Remote Port	USB 2.0
Dimensions	3U: 450 mm x 615 mm x 137 mm
Optical Input Fiber	SMF-28 with 3 mm Jacket (no connector)
Output Fiber Connector	FC/APC



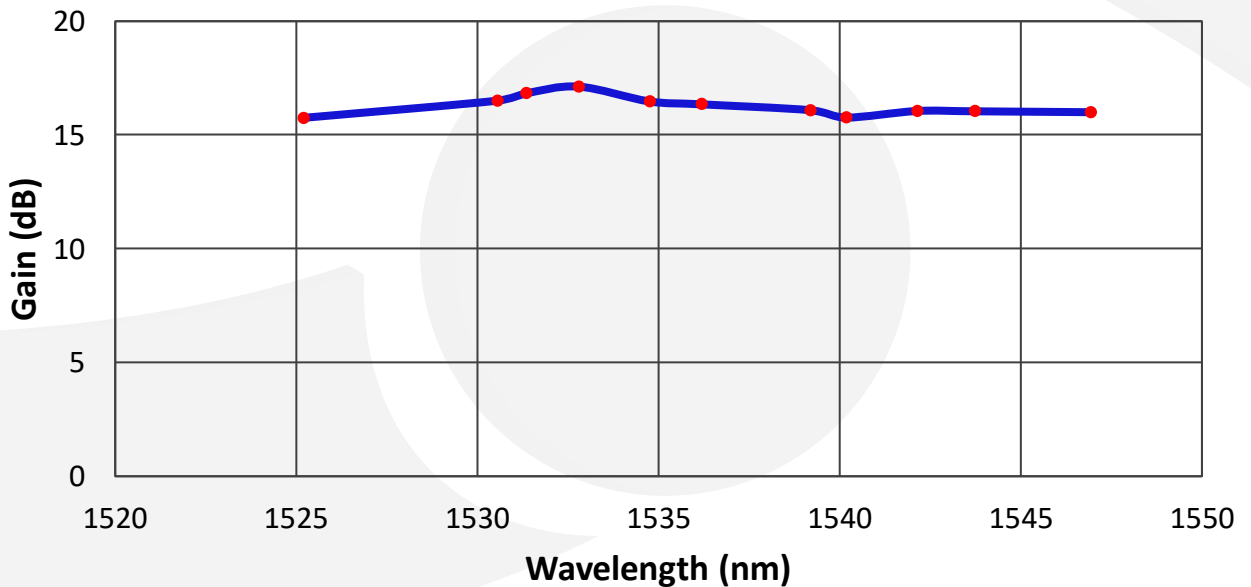


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Typical On/Off Gain @ Different Input Power Levels



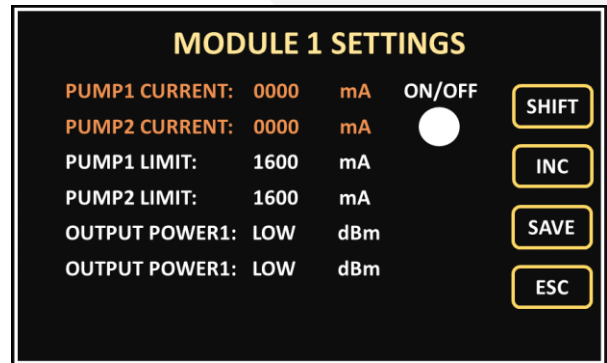
Multi-Channel DWDM On/Off Gain @ an Averaged Input Power of -25 dBm



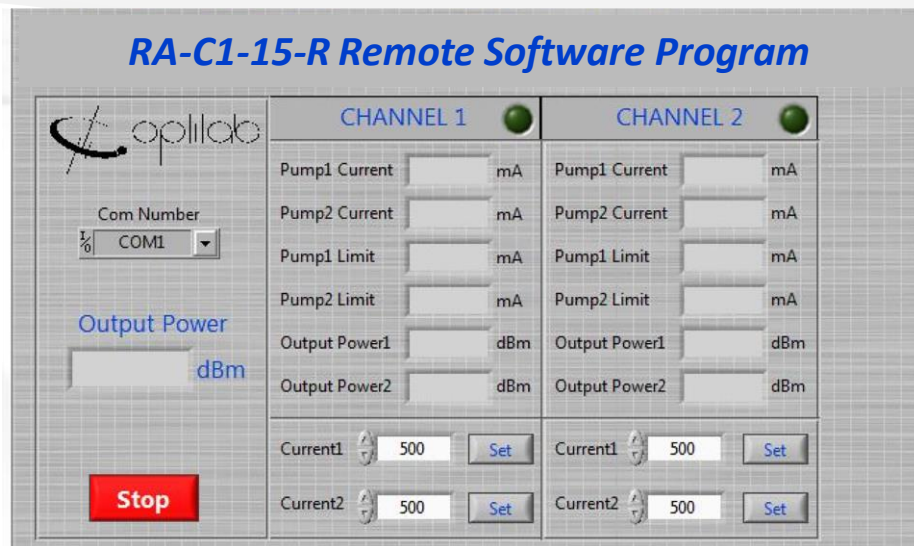


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Touch Screen Interface: easy adjustment of pump current settings



LabVIEW Remote Control Interface



Typical Application Diagram

