RA-1455-M

DEVICE

10 dB Gain Raman Amplifier, 1540 to 1565 nm

OVERVIEW

Optilab Raman Amplifier Rackmount Units are designed for distributed Raman amplification in a narrow spectral range in C band. Configured with two high power pump laser diodes at 1455 nm, the RA-1455-M unit provides over 10 dB On/Off gain flattened amplification from 1540 – 1565 nm. The unit includes micro-controller based laser current control circuitry for enhanced stability and reliability. RA-1455-M is an ideal amplifier for single-channel to multi-channel long-haul transmission and fiber sensor systems. It is equipped with LabVIEW (TM) remote user interface for easy operation. Contact Optilab for more information.

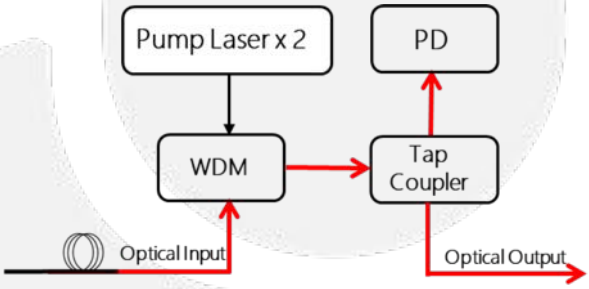
FEATURES

- 1540 – 1565 nm
- >10 dB Gain @ -15 dBm Input
- >15 dB Gain @ -35 dBm Input
- Excellent Stability
- LabVIEW Remote Interface

USE IN

- Long Haul / Ultra-Long Haul Systems
- Long Repeaterless Links
- Low Latency Links
- 10 / 40 Gbps Transmission
- DWDM Networks

FUNCTION DIAGRAM



RA-1455-M

SPECIFICATIONS

GENERAL

Pump Wavelength	1455 nm
Operating Wavelength	1540 – 1565 nm
Pump Power	Up to 400 mW
Input Signal Level	-40 to -10 dBm
Averaged On/Off Gain @ -15 dBm Input	> 10 dB
Averaged On/Off Gain @ -35 dBm Input	> 15 dB
Gain Flatness	< ±1 dB
Signal Insertion Loss	< 1 dB
Output Stability	< ± 0.1 dB for 24 hours
Degree of Polarization	< 5%

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	200 mm x 120 mm x 25 mm
Optical Input Fiber	SMF-28 with 3 mm Jacket (no connector)
Output Fiber Connector	FC/APC

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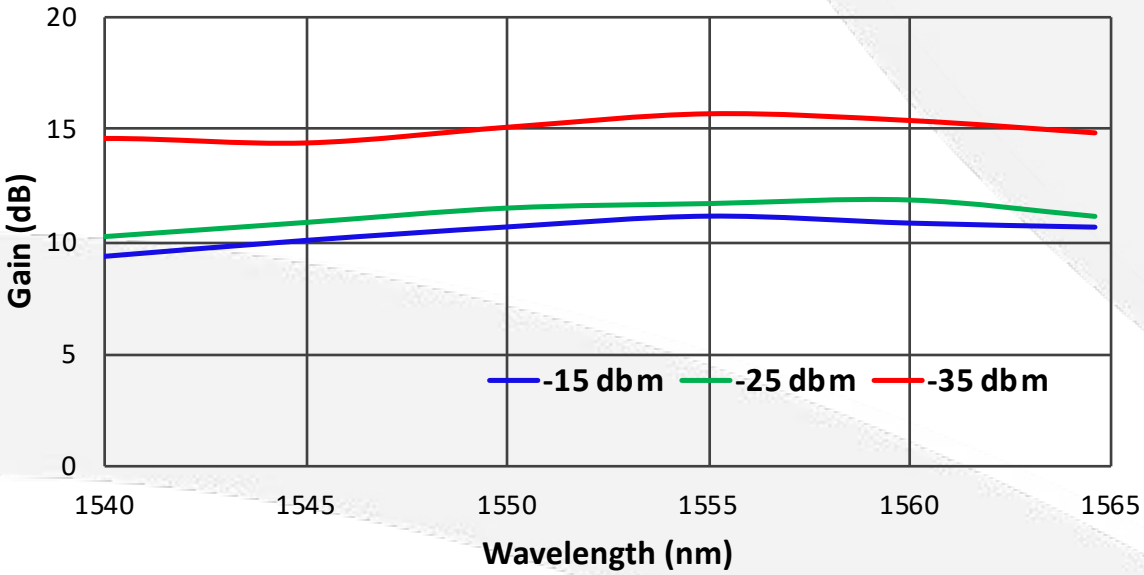
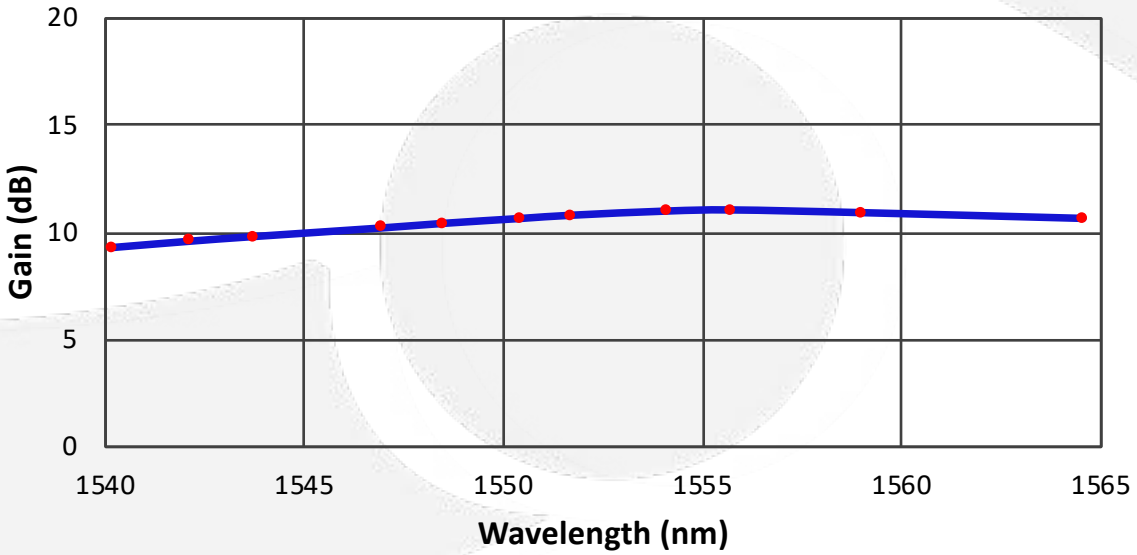
Typical On/Off Gain @ Different Input Power Levels



Multi-Channel On/Off Gain Spectrum @ an Averaged Input Power of -20 dBm



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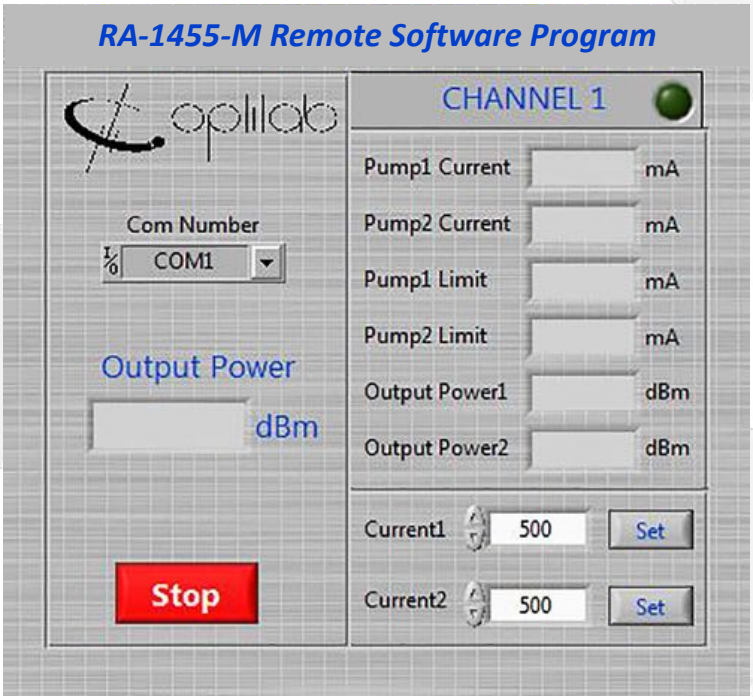
LabVIEW Remote Control Interface



Typical Application Diagram