

# RA-L1-15-R



## DEVICE

## 15 dB Gain Raman Amplifier, 1560 nm to 1585 nm

## OVERVIEW

Optilab Raman Amplifier Rackmount Units are designed for distributed Raman amplification in L-Band at 1560-1585 nm. The RA-L1-15-R unit provides over 15 dB On/Off gain flattened amplification from 1560nm to 1585nm, 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 pump wavelengths are 1462nm and 1471nm. The unit includes micro-controller based laser current control circuitry for enhanced stability and reliability. RA-L1-15-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.

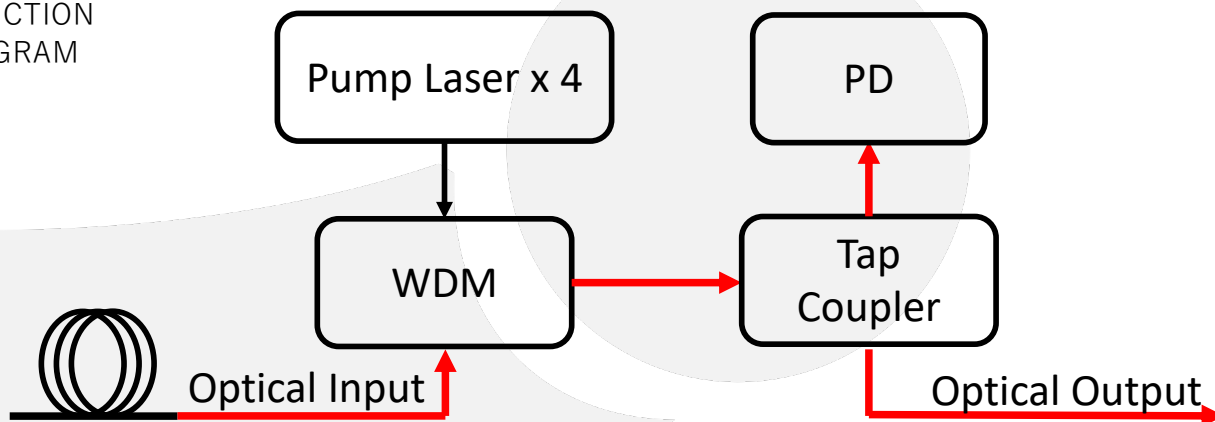
## FEATURES

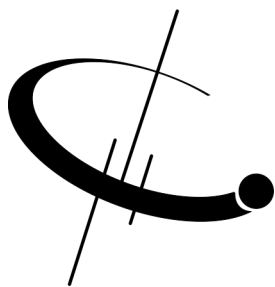
- 1560 nm – 1585 nm
- Over 15 dB On/Off Gain
- Gain flatness of  $< \pm 1.5$  dB
- Excellent Stability
- Up to 50 DWDM Channels
- Touch Screen LCD & USB Interface

## 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-L1-15-R

## SPECIFICATIONS

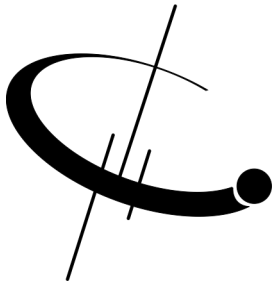
### GENERAL

|                               |                         |
|-------------------------------|-------------------------|
| Pump Wavelengths              | 1462, 1471              |
| Operating Wavelength          | 1560 nm to 1585 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

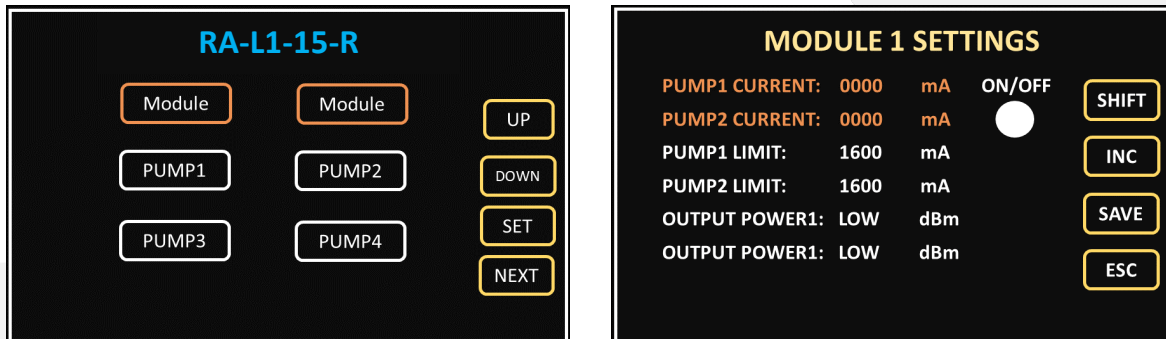
|                        |  |
|------------------------|--|
| Operating Temperature  | -5°C to + 55°C                         |
| Storage Temperature    | -40 °C to 80 °C                        |
| Operating Humidity     | 0% to 90% Relative Humidity            |
| Power Supply           | 110 – 240 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                                 |



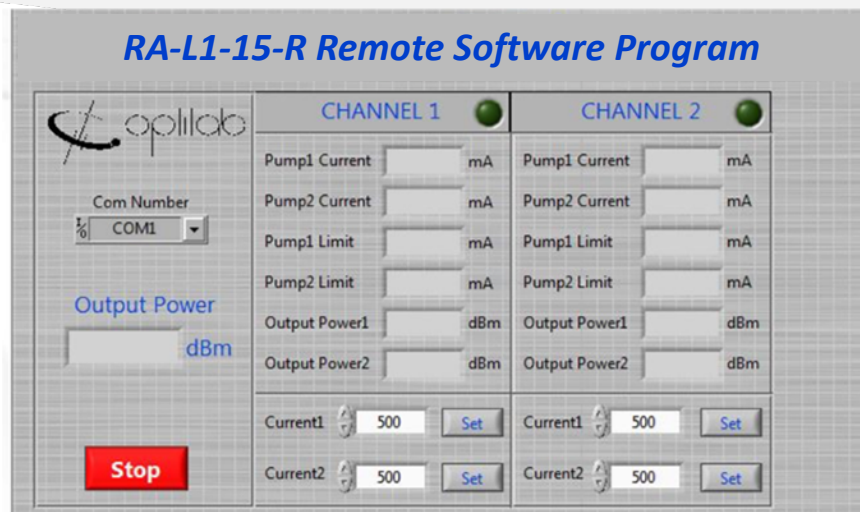


# RA-L1-15-R

Touch Screen Interface: easy adjustment of pump current settings



LabVIEW Remote Control Interface



Typical Application Diagram

