

Distributed Raman Amplifier Raman Module ORA-WC2-Series



The LiComm ORA-WC2 series are designed for use in ultra-long haul, long haul and wide bandwidth DWDM system of core networks and metropolitan networks. The standard ORA-WC2 series offer flat gain bandwidth over C-band. L-band or any alternative wavelengths are possible for specific application. These provide high output pump power using wavelength-combining high power 14xx(nm) pump laser diodes and integrated pump/signal multiplexer with optical output monitor for easy operation. The GUI can be supported to control Raman amplification pump unit for optimizing the ORA-WC2. The ORA-WC2 series do not effect on polarization and monitor the optical pump power.

Features

- All Self Control AGC
- Support Self Learning Mode for strange transmission fiber
- Support 3 types of transmission fibers (SMF-28, Leaf, Truewave)
- Compact Size
- Ultra Wide Input Dynamic Range
- Variable Gain and Gain Tilt Control
- Integrated pump/signal multiplexer
- Low effective noise figure
- Incorporate polarization
- Optical pump power monitor
- User friendly controlled interface

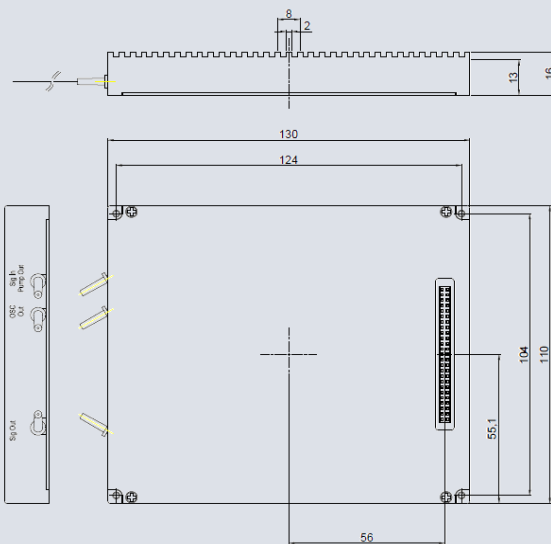
Applications

- Ultra-long haul DWDM systems
- Long haul systems
- 10 Gb/s & 40 Gb/s transmission systems
- High channel count systems
- Increased length of spans between signal regeneration
- Remote amplifier pumping

Distributed Raman Amplifier

Raman Module

Mechanical Dimension (110 X 130 X 16 mm)



Optical Characteristics

Parameter	Symbol	ORA-WC2-05AG	ORA-WL4-05AG	Unit
Signal wavelength range	λ	1528 ~ 1563	1528 ~ 1563	nm
Pump output power	P_{OUT}	500		mW
Number of pumps	P_N	2		ea
Gain flatness	ΔG	1.2		dB
Insertion loss	L	<1.2		dB
Pump degree of polarization	PDP	<7		%
Polarization dependent loss	PDL	<0.2		dB
Raman gain in SMF28	G_S	10		dB
Raman gain in LEAF ⁽¹⁾	G_A	12		dB
Raman gain in TW-RS ⁽²⁾	G_T	14		dB
Effective noise figure in SMF28	NF_S	<-0.7		dB
Effective noise figure in LEAF	NF_A	<-1.2		dB
Effective noise figure in TW-RS	NF_T	<-1.2		dB

(1) LEAF fiber (2) True wave reduced slope

Electric & Environmental Characteristics

Parameter	Typical Value
Power supply voltage	DC+5.0 V
Interface	RS232
Operating temperature	0 ~ 50 °C
Storage temperature	-40 ~ 85 °C
Storage humidity	10 ~ 85 % R.H
Power consumption*	15 W

*Pump output power = 1000 mW, at 25 °C

Ordering Information (ORA-WC4-05AG-B)

O	R	A - W	C	2 - 05	AG	-	B
	R: Raman	T: TDM C: CATV W: DWDM	C: C-band	500mW Output Power	CP Pump APC AG: Self AGC		B: Backward Pumping Direction F: Forward Pumping Direction

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