

DVS INTEGRATED OPTICAL SOURCE MODULE

1. Product Description

The DAS Integrated Optical Source Module integrates the ultra-narrow line-width laser module, pulse- EDFA module, Raman amplifier. All the modules have their own patent. In the meantime, the UNL module integrates the AOM optical device. The UNL module has very high level integration and small dimension. The UNL module increase the sensing distance, because we combine the Pulse-EDFA and Raman amplifier and we could get high SNR. Our module was specially for DVS and Perimeter Security system integrator to satisfy their perfect accessory and solution request.



2. Features

High integration (Ultra-Narrow line-width laser module, Pulse-EDFA, Raman, AOM)

High reliability

Compact Package (190mm*150mm*40mm)

Flexible control mode

3. Applications

Distribute vibration system

OTDR

4. Optical property indexes

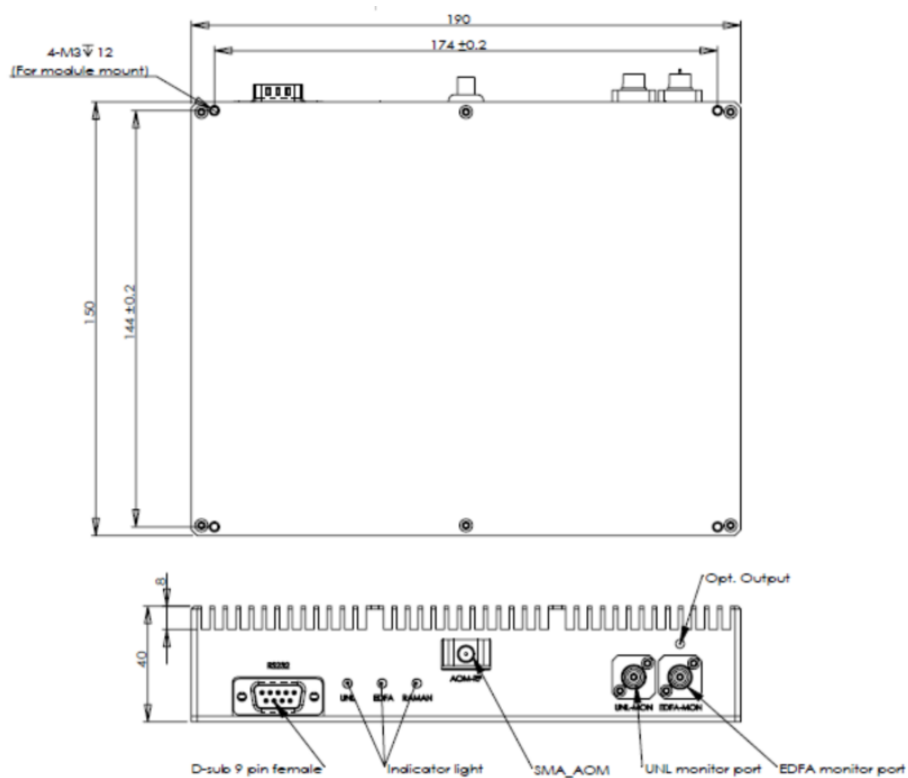
Module parameter	Min	Typ	Max	Unit
Sensing distance		40	60	km
Pulse width	20	100		ns
Warm up time		<15		Min
Power Supply		5		V
Power Consumption		15	30	W
Working Current*		3	6	A
Working temperature	-10	25	55	°C;
Communication mode		RS232		
UNL Module				
Center Wavelength		1550.12		nm

Optical Power		13	15	dBm
Line-width		2.5	3	KHz
RIN			-100	dB/Hz
Wavelength stability	-0.5	-	0.5	pm
Power Stability		1%		
SMSR	55			dB
Pulse EDFA				
Working wavelength		1550.12		nm
Input peak optical power		10		dBm
Input average optical power	-35	-30		dBm
Output peak optical power		23	43	dBm
Output average optical power			0	dBm
Pulse width	20	100		ns
Repeat frequency			100	KHz
Noise Figure		5.5		dB
Polarization dispersion gain			0.5	dB
Polarization mode dispersion			0.5	ps
Raman Amplifier				
Working wavelength		1450		nm
Input optical power range		25	27	dBm
AOM				
Working wavelength range	1530	1550	1560	nm
Average optical power			1	W
Pulse optical power		1		kW
Insertion loss		5	6	dB
Polarization dispersion gain		0.2	0.5	dB
PER	50			dB
Rise/Fall time			10	ns
Frequency		200		MHz
VSWR			1.5:1	
Input impedance		50		Ohm

RF power		2.5		W
Frequency shift		200		MHz

5. Mechanical structure

Structure Type	Parameter	Specification	Unit	Remarks
Module	Dimension	190x150x40	mm	
	Power interface	DC+5V/GND Twisted-pair		Typical
	Input/output pigtail	SM		Customized
	Communication interface	RS232		Customized



6. Communication type

Structure Type	Parameter	Specification
Module	Communication interface	DB9
	Protocol	RS232
	Communication user interface	Can read or set optical output power