

# VM900XX Micro Node

## Description

The VM900xx series Micro Nodes are designed to offer Optical Node application flexibility in an extremely compact housing. They are also ideal for advanced FTTH applications for CATV and Telephony networks. The VM900xx series nodes provide a high RF output level in a 1003MHz bandwidth. The high RF output will reduce or eliminate the need for post-node amplifiers in the network. VM900xx series Micro Nodes feature a fifteen fin heat dissipation housing and 6KV surge protection. It is ideal for use in high density applications, MDU's, and commercial complexes such as Universities, Hospitals, and Business Parks. The VM900xx series Micro Nodes also offers WDM technology as an option to allow two-way service in limited fiber networks. Return transmitters can be added and ordered as ether 1310nm or 1550nm depending on the system requirements. All VM900xx series Micro Nodes are can be ordered with optional FP and DFB return transmitters.



## Specifications

Parameter	Unit	Specification	
<b>Forward</b>			
<b>Optical Performance</b>		High output	Flat output
Wavelength	nm	1200-1600	1200-1600
Input optical power	dBm	-3 to +2	-6 to +1
Test point	V/mW	1	1
Optical indicator	dBm	>-4	>-7
<b>RF Performance</b>			
Bandwidth	MHz	54/70/85-1003	54/70/85-1003
Flatness	dB	+/-1	+/-1
Return loss	-dB	≥16	≥16
Stability	dB	+/-2	--
Output level	dBmV	35.3/50@-1dBm	35/35@-1dBm
Test point	dB	-20+/-1	-20+/-1
<b>Link Performance</b> (15Km fiber+attenuator , -1dBm optical input power , NTSC77 channels , OMI=3.5%)			
CNR	dB	>51	>51
CSO	-dBc	>64	>64
CTB	-dBc	>61	>64
<b>Return</b>			
<b>Optical Performance</b>			
Wavelength	nm	1310+/-20,1550+/-20 or ITU CWDM	
Output power	dBm	Refer to ordering information	
Test point	V/mW	1	
Optical indicator	dBm	>-3	
<b>RF Performance</b>			
Bandwidth	MHz	5 to 42/55/65	
Flatness	dB	+/-1	
Return loss	-dB	≥16	
Input level	dBmV	20	
Test point	dB	-20+/-1	

**Link Performance** (6dB link loss , 10Km fiber+attenuator)

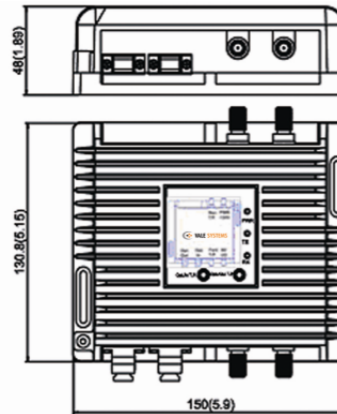
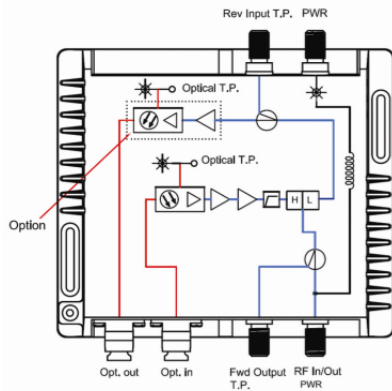
CNR	dB	>48@FP,>51@DFB
CSO	-dBc	>51@FP,>55@DFB
CTB	-dBc	>55@FP,>55@DFB

**Electrical/Physical/Environmental Performance**

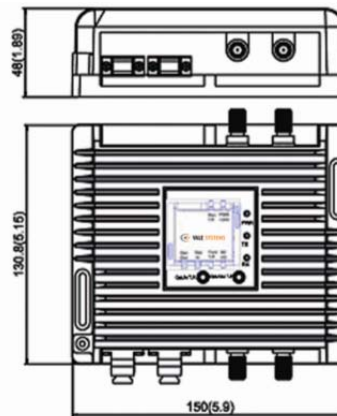
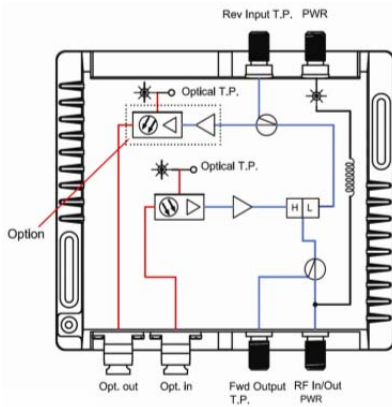
Supply voltage	VDC	20-37
Power consumption	W	<12(receive only) , <14.5(standard) <10(receive only) , <12.5(standard)
Dimensions	mm	LxWxH, 150x130.8x48
Weight	Kg	0.8
Operating temperature	°C	-40 to +60
Storage temperature	°C	-40 to +70
Humidity	%	85% , non-condensing

# Block Diagram

## High output type



## Flat output type



# Features

- 1003MHz high output with GaAs technology
- High RF output - 50dBmV
- Compact housing size
- Fifteen fin heat dissipation housing
- 6KV surge protection for RF I/O ports
- I/O optical level test points (1V/mW)
- 20dB directional coupler test points for forward and reverse
- LED indicators for power, optical input and output
- Die-cast aluminum housing
- Powder coating housing
- Low power consumption
- WDM technology available options for two-way services
- Flexible powering at local or remote sites

# Ordering Information

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<p><b>Type :</b>                  VM900H:high output                  VM900F:flat output                  VM900HW:high output with WDM                  VM900FW:flat output with WDM</p>	<p><b>Return transmitter :</b>                  00:None                  L1:1310 FP,1mW,w/o iso                  L2:1310 FP,1mW,w iso                  L3:1310 FP,2mW,w/o iso                  L4:1310 FP,2mW,w iso                  L5:1550 FP,1mW,w/o iso                  L6:1550 FP,1mW,w iso                  L7:1550 FP,2mW,w/o iso                  L8:1550 FP,2mW,w iso                  D13:1310 DFB,2mW,w iso                  D15:1550 DFB,2mW,w iso                  D47-D61:CWDM,2mW,w iso</p>	<p><b>Connector :</b>                  SA:SA/APC                  FA:FC/APC</p>	<p><b>Adaptor :</b>                  0:None                  1:NA                  2:Europe                  3:Japan                  4:Austrilia                  5:China                  6:Other</p>
<p><b>Frequency :</b>                  0:None                  1:42/54                  2:55/70                  3:65/85</p>			