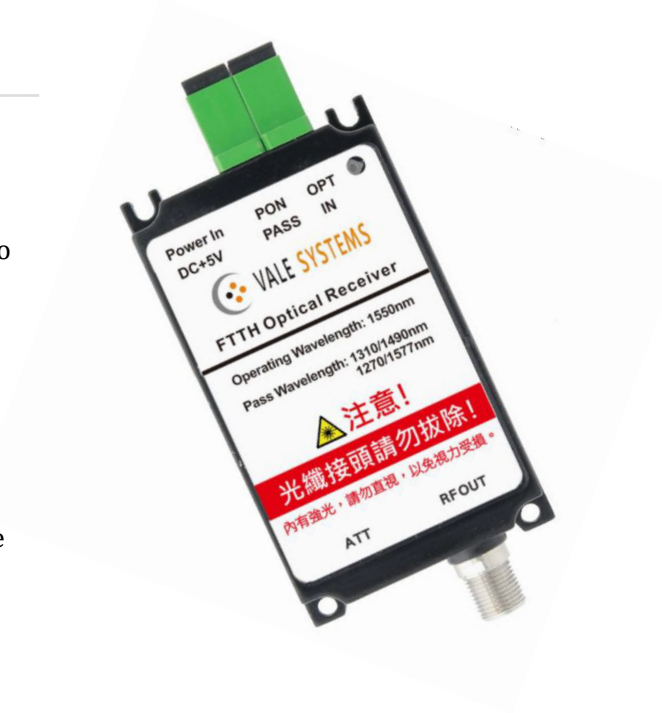
# VMRX mini optical receivers

## Description




The VMRX series mini optical receivers are ideal for fiber-to-the-home applications in CATV networks. It has 1003MHz bandwidth to meet the needs of next generation CATV networks.
VMRX series compact optical receivers have good heat dissipation and are widely used in universities, hospitals and commercial buildings. The VMRX series compact optical station can provide WDM technology to provide two-way service for fiber-starved networks. The device is compatible with EPON, GPON and XGPON transmission modes. The LED signal indicator on the front panel prompts an alarm by displaying different colors if the optical inp signal does not meet the requirements. The device uses a low-noise MMIC amplifier circuit to ensure that the receiver has a good distortion index and a high MER value at lower received power.

## Features

- Frequency range: 45~1003MHZ
- Standard output level of 75dBuV
- Automatic gain control
- Input optical power -15 ~ 1 dBm
- LED signal indicator for alarm
- Low power consumption using GaAs synthesis technology
- Suitable for FTTH, PON-CATV


10400 Overland Road #408 Boise, ID 83709-1449, USA
Tel: 208.935.6317 Fax: 208.935.6234
Http://www.valesys.com
Document #: 01-01-018 Revision: 1.6

# VMRX mini optical receivers

## Specifications

| Parameter | Unit | Specification | s |
|---|---|---|---|
| Optical Performance | | | |
| Receiving wavelength | nm | 1550 | -- |
| Pass wavelength | nm | 1310/1490,1270/1577 | -- |
| Responsibility | A/W | ≥0.9 | -- |
| Input optical power | dBm | -15 ~ +1 | -- |
| Optical Return Loss | dB | ≥45 | -- |
| AGC range | dBm | -15 ~ -5 | |
| Isolation | dB | ≥30 | |
| RF Performance | | | |
| Frequency range | MHz | 45~1003 | -- |
| Impedance | Ω | 75 | -- |
| Flatness | dB | ≤±1.0 | -- |
| Return Loss | dB | ≥16 | -- |
| Output level | dBuV | ≥75 @ AGC:-15 ~ -5dBm | -- |
| CN | dB | ≥36 | -- |
| CTB | dB | ≥60 | -- |
| CSO | dB | ≥57 | -- |
| MER | dB | ≥37dB @-15dBm | 1 |
| BER | -- | ≤1.0E-9 @-15dBm | 1 |
| Indicator light | | | |
| Optic-ALM Status indication LED | Red light flashing: input light power outside the AGC range ( ≥-5 dBm ) | | -- |
| | Green light always on: input light power outside the AGC range ( ≥-15 dBm, ≤-5 dBm) | | |
| | Red light always on: input light power outside reception range ( ≤-15 dBm) | | |
| Electrical/Physical Performance | | | |
| Supply Voltage | VDC | 5 | -- |
| Power consumption | W | ≤2 | -- |
| Dimensions | mm | 110x50x22(Aluminum housing), 50x88x22(Plastic housing) | -- |
| Environmental performance | | | |
| Working temperature | ℃ | -20~+55 | -- |
| Storage temperature | ℃ | -20~+70 | -- |
| Humidity | | 0% to 90%Non-condensing | -- |

**Note 1:** Link test conditions: 50 (256QAM) channels, -15dBm input optical signal, Class 1 EDFA at 5dB noise factor, 20Km transmission, modulation OMI 3.8%; 4 frequency points tested, 250±20MHz range, 350±20MHz range, 450±20MHz range and 550±20MHz range Four frequency points were tested, 250±20MHz range, 350±20MHz range, 450±20MHz range and 550±20MHz range.


**10400 Overland Road #408 Boise, ID 83709-1449, USA**
**Tel: 208.935.6317 Fax: 208.935.6234**
**Http://www.valesys.com**
**Document #: 01-01-018 Revision: 1.6**

# VMRX mini optical receivers

## Order Information

| VMRX | - | X | - | X | - | X | - | X | - | X | - | XX |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Power adapters：<br><br>N= w/o Power Adapter<br><br>B= w/ Power adapter | | RF Power Supply：<br><br>N= No RF/ Power<br><br>B= Build in RF/ Power | | Cable Wire：<br><br>0= w/o Cable<br><br>1= w/ Cable | | Filter/WDM type：<br>0= w/o filter<br>1= w/ filter<br>3= w/ WDM 1550/1310/1490nm<br>5= w/ WDM 1550/1310/1490 1270/1577nm | | AGC control：<br><br>1= w/ AGC | | Type of optical connector：<br><br>SA=SC/APC<br><br>SASU= IN:SC/APC Pass:SC/UPC<br><br>SASA= IN:SC/APC Pass:SC/APC |


10400 Overland Road #408 Boise, ID 83709-1449, USA
Tel: 208.935.6317 Fax: 208.935.6234
Http://www.valesys.com
Document #: 01-01-018 Revision: 1.6