

1550nm Directly Modulated Optical Transmitter

1.1 Product Description

V8610TD is a high performance forward path transmitter. 19 inches rack mount structure, high linearity and low noise 1550nm DFB laser and state of the RF control circuits, pre-distortion, these make V8610TD a desirable choice for metro HFC network.

V8610TD uses 1550nm DFB laser with high linearity and low noise. Pre-distortion circuit improves the performance and stability of DFB laser. AGC/ATC mechanism provides protection to laser and ensures the performance and stability module and feedback to intelligent system platform. This ensures the laser to work at normal status and high performance. If the laser operating parameter out of specification that is set by software, it will set-off the lasers power supply, and display the information on the front panel LCD.



Figure 1 Optical Transmitter

1.2 Product categories

Product model	Output optical power(dBm)
V8610TD	10

Table 1 Product categories

1.3 Key Features

- ✓ 1550 optical transmitter
- ✓ Selectable AGC (automatic gain control) or MGC (manual gain control)
- ✓ Accepts low signal input levels
- ✓ Front panel LCD display
- ✓ Low RIN, High CNR
- ✓ High CSO, CTB and XMOD
- ✓ High linearity and low noise DFB laser, large transportation capacity
- ✓ Effective Automatic Temperature Control (ATC) and Automatic Power Control (APC) of the laser to ensure stable operation
- ✓ Microprocessor control and monitor
- ✓ RS485 interface for remote monitoring and control
- ✓ 45~870/1000 MHz bandwidth
- ✓ RF pre-distortion circuit for excellent CNR and low distortion performance

1.4 Application Chart

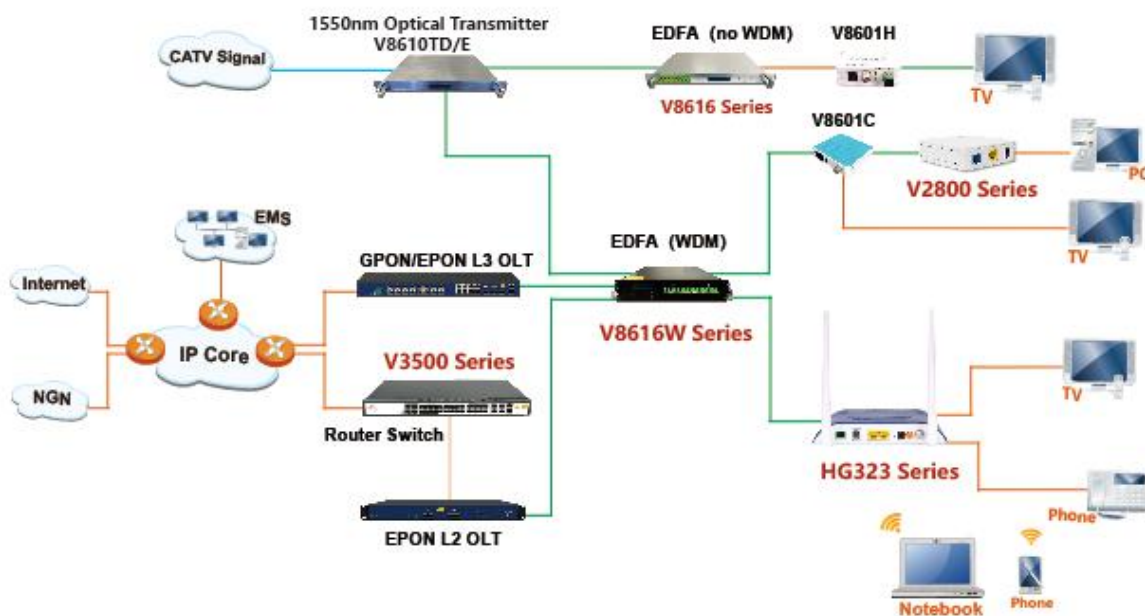


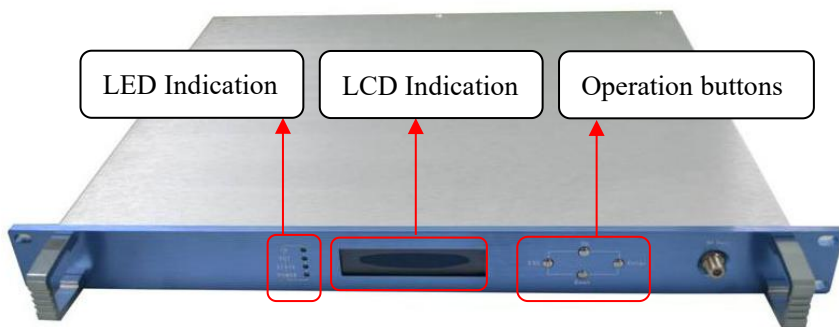
Figure 2 Application Chart

1.5 Technical parameters

Description	Unit	value	Notes
Optical specifications			
Optical wavelength	nm	1555±20	
Laser Type		Cooled DFB LD	
Optical Power	dBm	10	
LD RIN	dB/Hz	≥-160	
Connect type		SC/APC	FC/APC(option)
RF specifications(
Operating bandwidth	MHz	45~870/1000	
Flatness	dB	≤±0.75	
RF Input Impedance	Ω	75	
input Return Loss	dB	≥16	45~550 MHz
		≥14	550~1000MHz
RF Input Level	dBmV/Ch	80±5	@59CH PAL-D CW loading
Test Point	dBuv	≥70	
Connector Type		F type female	F type male option
AGC	dB	±5	
CNR		51dB(typical)	59CH PAL-D CW loading, PHOTON standard Reciever, 10km optical fiber , -1dBm optical input power, 80 dB V input level at 870MHz, 3.6% OMI
CSO		≤-57 dBc	
CTB		≤-63dBc	
others			
Control Interface		RJ45	
Power supply		90~260VAC 50/60Hz	
Power consumption	W	30	MAX
Dimension L x W x H	mm	483x450x44	Box:530x500x100
Operating Temperature	℃	0~+50	
Storage Temperature	℃	-25~+65	
Storage Humidity	PH%	5%~95%Max	No Condensation
weight	Kg	Net :2.8	Gorss:3.8

Table 2 Technical parameters

1.6 Interface description



Port Type	Function
LED Indication	Display device operating status
LCD Indication	Display device operating status
Operation buttons	Operating the device

Table 3 Interface description