Radiant
Communications
Corporation

OPTICAL TRANSMITTER

VL2510

USER'S MANUAL

Radiant Communications Corporation

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FEATURES

- 5-350MHz bandwidth
- APC circuit
- Overload protection system
- Switching mode power supply
- Optical output power test point on the front panel

SPECIFICATION

1.Optical output

Wave length	1310±40nm
Laser Type	FP, DFB
Optical output power	1mW, 2mW
Connector	FC/APC, or SC/APC
Fiber core/cladding	9/125μm

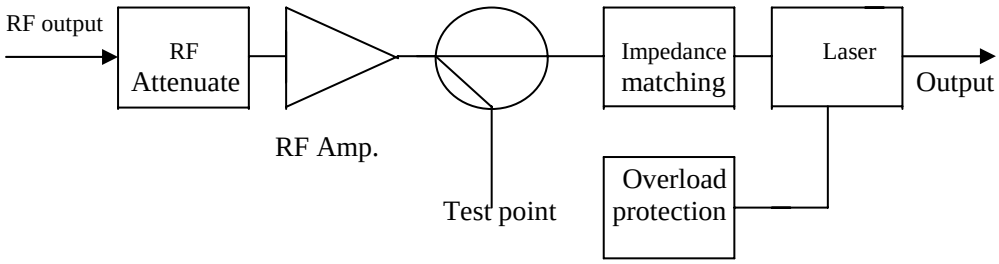
2. RF characteristics

RF Input Levels	+15dbmV to +20dbmV or -28dbm to -34dbm
Frequency response	5~350MHz
Flatness	±0.55dB
RF Input return loss	≥16dB
Input impedance	75Ω
RF attenuator	16dB
Connector	F type

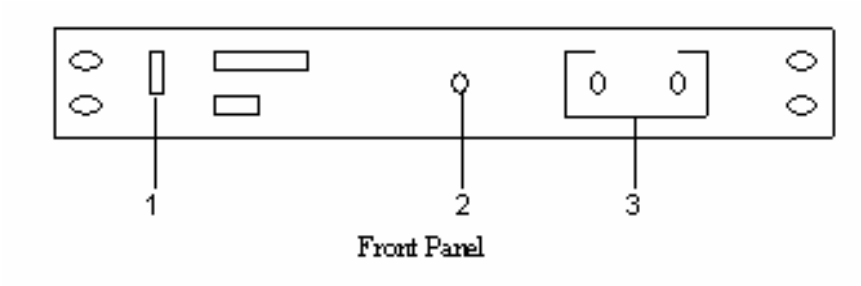
3.Environment

Operating temperature	-10--40°C
Storage temperature	-30°C--+80°C

Block Diagram

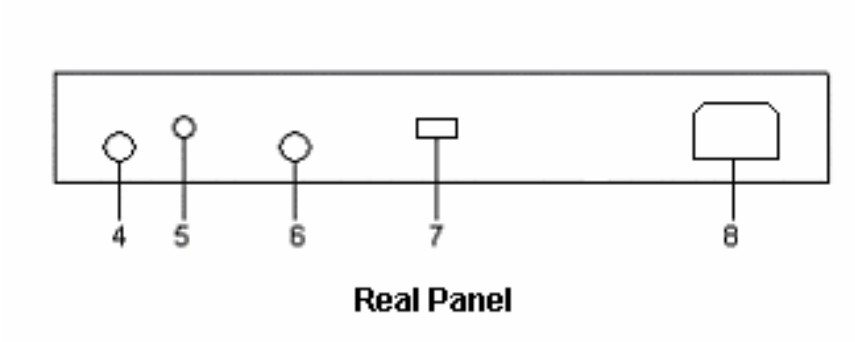


Board Illustration



A. Front Panel

1. ON/STANDBY key
2. Power Indicating Lamp
3. Optical Output Power Test Point



Real Panel

B. Rear Panel

4. RF Input
5. Optical Modulation Efficiency Adjustment
6. RF Input Level Test Point
7. Optical Output (SC/APC)
8. Power cord for AC power input

Operation

1. ***Power Connection*** Apply power to this transmitter, set the ON / STANDBY key on the front panel to "ON" position, then the power indicating lamp is lit. Measure the voltage of the Optical Output Power Test Point with a DC voltmeter to see if it coincides with the value on the rear panel.
2. ***Fiber Connection*** Power off, carefully remove the protective cap from the end of the FC/APC / SC/APC connector, insert the clean optical connector into the mating receptacle and tighten the connector securely.
3. ***Standard Optical Modulation*** It is preset 4%. To obtain the parameter, use a Field-strength Meter to test the level of the "RF Input Level Test point". Compare the test result with the standard value listed on the rear panel. If the result is consistent with the standard value, it shows that the OME value is 4%. Or else, adjust the "Optical Modulation Efficiency Adjustment" key to make them consistent. It indicates that the RF input level is too strong or faint if the above-mentioned operation proves to be no effect.

4. ***Optical Modulation Efficiency (OME) Adjustment*** If you want to set other OME value, please follow step 3. You can set the OME value by changing the level of "RF Input Level Test Point". Suppose the level is A (listed on the rear panel) when the OME is 4%, and the OME is as follows

Table 2

Tested Level	OME
A	4%
A+6	8%
A+8	10%
A+11.5	15%
A+14	20%
A+16	25%
A+17.5	30%
A+19	35%

Table 3

Channel Number	Recommended Max. OME
1	30%
2	25%
4	15%
8	10%
12	8%
18	7%

5. ***Application*** VL2510 Optical Transmitter is designed mainly for transmitting 1~ 4 channels. The distortion target will obviously increase if the system contains more channels.