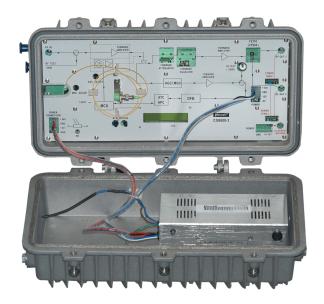


Ningbo Youxin Optic-Electronic Technology Co.,LIMITED



1310nm Outdoor Optical Transmitter manual



I .Summary

- WT-1310 Series field 1310nm laser transmitter is the featured product that we exploited on many years' project practice experience, thoroughly solve the engineering problems that some remote areas can not build indoor machinery room
- WT-1310 Series field 1310nm laser transmitter adopt high performance water-proof cast Aluminum housing, high reliable switch supply, strict anti-thunder system and build in large power electronic refrigerator ,which enable equipment to fit the field environment temperature between -40 $^{\circ}$ C ~ to 60 $^{\circ}$ C and ensure it can work long-time and stably in the field sever environment.

II. Performance Characteristic

- Adopt high performance DFB laser with international famous band, narrow Spectrum, good linear and high output power.
- Adopts RF power digital automatic process technology designed by ourselves at RF driving part. It can auto-adjust RF driving power according to the input RF signal level and channel number(15~84) to make the C/CSO C/CTB and C/N in the best condition ,which ensure performance of the whole equipment and make the output level of optical receiver keep the same.

Advanced multi-frequency point pre-distortion technology with GaAs devices optimize

- C/CTB and C/CSO value, which are the most important index in CATV system, meanwhile maximize the C/N.
- The built-in micro-computer automatic monitor circuit can real-timely and precisely monitor



- various working condition of optical output power and laser to ensure the stable optical output power and prolong the working life of laser effectively.
- Built-in large power semiconductor refrigerator, which can enable the equipment to fit the field environment temperature between -40°C to +60°C.
- Adopt high performance water-proof cast Aluminum housing, high reliable switch supply, strict anti-thunder system, which ensure the equipment work long-time and stably under the field severe environment.

III. Technical parameter

Item	Unit	Technical parameter												
Output optical power	mw	4	6	8	10	12	14	16	18	20	22			
Optical circuit loss	dB	7	9	10	11	11.8	12.5	13	13.6	14	14.4			
Optical wavelength	nm	1310±20												
Laser type		DFB laser												
Optical modulation mode		Direct optical strength modulation												
Optical connector type		FC/APC or SC/APC												
Frequency range	MHz	47~750/862												
RF input lever	dΒμV	72 ~ 88												
Flatness in band	dB	±0.75												
RF input impedance	Ω	75												
Input reflecting loss	dB	≥16 (47~550) MHz; ≥14 (550~750/862) MHz												
C/N	dB	≥51												
C/CTB	dB	≥65												
C/CSO	dB	≥60												
AGC control range	dB	±8												
MGC control range	dB	±8												
Supply voltage	V	AC 160V~250V (50 Hz)												
Consumption	W	30												
Working temperature	°C	-40 ~ +60												
Storage temperature	°C	-50 ~ +70												
Relative Humidity	%	Max 95%no condensation												
Dimension	mm	430 (L) × 250 (W) × 160 (H)												

Circuit test condition

Special Notice

The performance parameters of this manual is according to GY/T143-2000<< Network Entry Technical Requirements and Measurements Method of CATV laser Optical Transmitter and Receiver>>, and get it at the following condition.

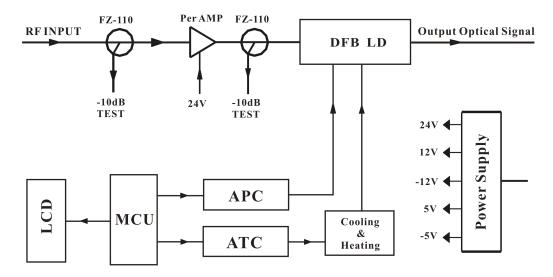
Test condition:

10KM standard optical fiber, optical attenuator and standard optical receiver make up of test circuit. Set with 59 PAL-D analog TV channel signal at range of 550MHz in the stated condition of circuit loss. Transmitting digital modulation signal at rang of 550MHz~862MHz, when the electricity level (8 MHz bandwidth) of digital signal is 10dB lower—than analog signal of carrier electricity level, input power of optical receiver is-1dBm, measure C/CTB, C/CSO, C/N.

${\rm IV}$. Optical Circuit C/N table

Optical circuit loss (dB)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
WT3304 I	53.8	52.8	51.8	51.0	50.1	49.2	48.2								
WT3306 I				53.0	52.0	51.0	50.1	49.1	48.1						
WT3308 I					52.8	51.9	51.0	50.1	49.1	48.2					
WT3310 I						52.9	51.9	51.0	50.1	49.1	48.2				
WT3312 I							52.7	51.8	50.8	49.9	49.0	48.0			
WT3314 I								52.4	51.5	50.5	49.5	48.6	47.8		
WT3316 I									52.0	51.0	50.1	49.1	48.1		
WT3318 I					·				52.5	51.6	50.6	49.7	48.7	47.9	
WT3320 I										51.9	51.0	50.0	49.0	48.0	

V. Block Diagram



VI. Order direction

- The default set of optical interface is FC/APC before delivery, if you have special request, please note it in your order.
- There are two power supply mode: AC60V and AC220V, please note in your order.
- If you have special request for key device such as laser, please note it in your order.