

# RET-1550H

**Dual Optical Outputs 1550nm External Modulated Optical Transmitter  
(SBS 13~18dBm 0.5dB Stepping Continuous adjustable, Linewidth $\leq$ 0.65MHz)**



## Overview

RET-1550H series is in line with the international technical standards 1550nm externally modulated optical transmitter, it adopts narrow linewidth (Typ.=0.65MHz), the light source adopts low noise, and continuous wave DFB laser, in favor of reducing the influence from dispersion; the signal modulator adopts CATV special LiNbO<sub>3</sub> external modulator; Based on these innovation technology, it can have back to back CSO  $-65$ dB, CTB  $-65$ dB, CNR  $53$ dB outstanding performance, SBS 13dBm~18dBm continuous adjustable, 0.5dB stepping. This model has RS232 communication interface for perfect SNMP control, and support back-up power supply. This advanced 1550nm external modulated optical transmitter is a good choice for large and medium-sized cable television center head-end, used for main trunk and distribution network trunk.

RET-1550H: Advanced type, dual fiber output CATV work wavelength, 0.65MHz laser linewidth, SBS13dBm~18dBm continuous adjustable, 0.5dB stepping, SNMP optional.

RET-1550HT: Advanced type, dual fiber output ITU work wavelength, 0.65MHz laser linewidth, SBS13dBm~18dBm continuous adjustable, 0.5dB stepping, SNMP optional.

## Application

1. For center office overlong trunk to transfer RFTV, IF/SAT.  
Anlog and digital mixed transmission $>200$ Km ((with using dispersion compensation)  
Pure digital transmission (without using dispersion compensation) $>400$ Km, (with using dispersion compensation)  $>700$ Km.
2. ITU wavelength optical transmitter is suit for DWDM optical fiber CATV system added value service and CFG dispersion compensation system.
3. Available to the substation FTTH which request high index. Point to Point  $>65$ Km, CSO  $-65$ dB. It can provide RFTV, IPTV and VOD added value service to second-grade service area with high quality and high reliability. To avoid the CSO degradation and transmission distance limited by using 1550nm direct modulated optical transmitter.

## Features

1. External modulator technology without laser chirp, extremely low dispersion distortion, high extinction ratio, can be used for overlong trunk and high speed communication.
2. Narrow linewidth (typ.=0.65MHz), low noise figure, DFB continuous wave laser, it is advantageous to reduce the influence from dispersion.
3. Max 862MHz/1080MHz work bandwidth option.
4. Excellent CTB, CSO and CNR value.
5. SBS 13~18dBm continuous adjustable, 0.5dB stepping.
6. Support ITU wavelength.
7. AGC/MGC mode is optional at spot, OMI optional at spot.
8. RS232 communication interface and SNMP network management.
9. Back-up power supply optional.
10. Chassis temperature automatically control.
11. High cost-effective 1550nm external modulated optical transmitter.

## Datasheet

Parameter	Unit	Index
Optical Parameter		
Operating Wavelength	nm	1548~1563nm
		ITU wavelength
Laser Linewidth	MHz	≤0.65
Side mode suppression ratio	dB	≥45
Equivalent noise intensity	dB/Hz	≤-160
Output Port Number	/	2
Output power	dBm	5/6/7/9
Return loss	dB	≥50
Optical Connector	/	SC/APC, FC/APC
RF Parameter		
Work Bandwidth	MHz	47~862/1000/1080
Flatness	dB	± 0.75
Input Level	dBuV	78~88 (AGC)
Input Impedance	Ω	75
RF Return Loss	dB	>15
RF Port	/	F-Female
Link Parameter		

Test Channel Number	/	PAL-D/60CH
CNR1	dB	≥53 (Back to Back)
CNR2	dB	≥51.5 (50KM optical fiber, 0dBm receiving)
CTB	dB	≤-65
CSO	dB	≤-65
SBS	dBm	13~18, 0.5dB stepping
General Parameter		
Power Supply	V	90~265VAC or 48VDC
Power Consumption	W	≤50
Operating Temp.		-5~65
Storage Temp.		-40~85
Operating relative humidity	%	5~95
Communication interface	/	RS232
SNMP network management interface	/	RJ45
Dimension	mm	483*368*44

## Ordering Information

Model	Work Wavelength	Optical Output Power (dBm)
RET-1525H	1548~1563nm	Optical output power≥5dBm
RET-1526H		Optical output power≥6dBm
RET-1527H		Optical output power≥7dBm
RET-1529H		Optical output power≥8.5dBm
RET-1525HT	1528~1563nm Specified ITU wavelength	Optical output power≥5dBm
RET-1526HT		Optical output power≥6dBm
RET-1527HT		Optical output power≥7dBm
RET-1529HT		Optical output power≥8.5dBm

Model	Work Frequency		SNMP		Power Supply		Number of Power Supply		Optical Connector		ITU Grid Channel No.	
RET-1550H(T)	86	47~862 MHz	0	No	11	110V AC	S	Single Power Supply	SC	SC/APC	23	1558.98nm
	10	47~1000 MHz	1	Build in	22	220V AC	D	Dual Power Supply	LC	LC/APC	30	1553.33nm
	18	47~1080 MHz			48	-48V DC			FC	FC/APC	37	1547.72nm
For Example	RET-1527HT-86-1-11-D-SC-23											

## Appendix

### C-Band Wavelength list:

### ITU-TG.692 Standard Wavelength

Channel Number	Frequency (THz)	Wavelength (nm)
61	196.1	1528.77
60	196.0	1529.55
59	195.9	1530.33
58	195.8	1531.12
57	195.7	1531.90
56	195.6	1532.68
55	195.5	1533.47
54	195.4	1534.25
53	195.3	1535.04
52	195.2	1535.82
51	195.1	1536.61
50	195.0	1537.40
49	194.9	1538.19
48	194.8	1538.98
47	194.7	1539.77
46	194.6	1540.56
45	194.5	1541.35
44	194.4	1542.14
43	194.3	1542.94
42	194.2	1543.73
41	194.1	1544.53
40	194.0	1546.12
39	193.9	1546.92
38	193.8	1547.72
37	193.7	1548.52
36	193.6	1549.32
35	193.5	1550.12
34	193.4	1550.92
33	193.3	1551.72
32	193.2	1552.52
31	193.1	1553.33
30	193.0	1554.13
29	192.9	1554.94
28	192.8	1555.75
27	192.7	1556.56

26	192.6	1556.55
25	192.5	1557.36
24	192.4	1558.17
23	192.3	1558.98
22	192.2	1559.79
21	192.1	1560.61
20	192.0	1561.42
19	191.9	1562.23
18	191.8	1563.05
17	191.7	1563.86