

# RET-1550E

**Single Optical Output 1550nm External Modulated Optical Transmitter  
(SBS:13dBm CNR 52dBm, Linewidth $\leq$ 1MHz)**



## Overview

RET-1550E series is a low cost 1550nm externally modulated optical transmitter, designed with SBS 13dBm apply to second grade service area; it adopts low noise, narrow bandwidth, and continuous wave DFB laser as its light source, adopts low cost single-output LiNbO<sub>3</sub> external modulator that is specially designed by JDS-U to modulate optical signal. Based on these innovation technology, it can reach excellent flatness 0.75dB in-band 47~862MHz; 13dBm SBS satisfy point to point >50Km fiber optical transmission (0dBm receiving) ; it also bring CSO -65dB, CTB -65dB, CNR 52dB outstanding performance, it is the most high cost-effective 1550nm external modulated optical transmitter.

RET-1550E: Single fiber output, 1547~1564nm work wavelength, 1MHz laser linewidth, SBS 13dBm, SNMP optional.

RET-1550ET: Single fiber output, specified ITU wavelength, 1MHz laser linewidth, SBS 13dBm, SNMP optional.

## Application

1. Apply to second-grade service area of sub-station, with its high quality, high reliability and high cost-effective features to provide RFTV, IPTV, VOD services.

## Features

1. External modulator technology without laser chirp, extremely low dispersion distortion.
2. Narrow linewidth (typ.=1MHz), low noise figure, DFB continuous wave laser.
3. Max 862MHz/1080MHz work bandwidth option.
4. Excellent CTB, CSO and CNR.
5. SBS 13dBm, poin to point >50Km fiber optical transmission.
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
<b>Optical Parameter</b>		
Operating Wavelength	nm	1540~1563nm ITU wavelength
Linewidth	MHz	≤1
Side mode suppression ratio	dB	≥45
Equivalent noise intensity	dB/Hz	≤-160
Output port number	/	1
Optical output power	dBm	3/5/6/7
Return loss	dB	≥55
Optical Connector	/	SC/APC, FC/APC
<b>RF Parameter</b>		
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	>16
RF Port	/	F-Female
<b>Link Parameter</b>		
Test Channel Number	/	PAL-D/60CH
CNR1	dB	≥52 (Back to Back)
CNR2	dB	≥50.5 (50KM optical fiber, 0dBm receiving)
CTB	dB	≤-65
CSO	dB	≤-65
SBS	dBm	13
<b>General Parameter</b>		
Power Supply	V	90~265VAC or 48VDC
Power Consumption	W	≤50
Operating Temp.		0~50
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-1513E	1540~1563nm	Single fiber optical output 3dBm
RET-1515E		Single fiber optical output 5dBm
RET-1517E		Single fiber optical output 7dBm
RET-1513ET	1528~1563nm Specified ITU wavelength	Single fiber optical output 3dBm
RET-1515ET		Single fiber optical output 5dBm
RET-1517ET		Single fiber optical output 7dBm

Model	Work Frequency		SNMP		Power Supply		Number of Power Supply		Optical Connector		ITU Grid Channel No.	
	RET-1550E(T)	86	47~862 MHz	0	No	11	110V AC	S	Single Power Supply	SC	SC/APC	23
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-1517ET-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	1545.32
36	193.6	1548.51
35	193.5	1549.32
34	193.4	1550.12
33	193.3	1550.92
32	193.2	1551.72
31	193.1	1552.52
30	193.0	1553.33
29	192.9	1554.13
28	192.8	1554.94
27	192.7	1555.75
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