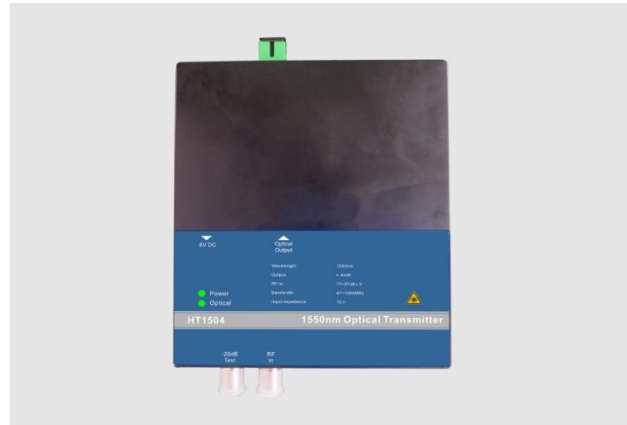


HT1504

1550nm Direct Modulated Optical Transmitter

PRODUCT DESCRIPTION

External modulation technology, with the laser working in direct current, has the advantages of no laser chirp, low dispersion distortion, large extinction ratio, and high speed. It also has the disadvantages of high cost and high difficulty in manufacturing. Direct modulation will lead to high laser chirp (Laser's bias current is modulated by signal and the optical spectrum shifts and shakes). Laser chirp will interact with dispersion effect caused by standard single mode fiber (SMF-28), which will generate serious distortion in the place of 1550nm. This kind of distortion will become more serious with the increase of transmission distance, bandwidth and channel number.



At present, international high performance 1550nm direct modulation has no obvious performance inferior while transmitting an analog and digital multiplexing full channel signal with transmission distance $\leq 15\text{Km}$ or transmitting digital load with transmission distance $\leq 40\text{Km}$.

HT1504 is a 1550nm direct modulation optical transmitter with high index and AGC function. It adopts high linearity and low chirp DFB laser, built-in pre-distortion compensation and AGC, APC, ATC closed loop control, which improves the system index obviously. HT1504 direct modulated optical transmitter can be used in FTTx ($\leq 10\text{Km}$) of second-grade service area (Sub-HE), also can be used in WDM narrow-band multiplexing and IP/QAM.

PRODUCT FEATURE

- ▶ Low chirp, high linearity DFB laser, chirp compensation
- ▶ Dual module RF driver, high efficient laser pre-distortion adjustment
- ▶ Full-automatic OMI control, AGC & MGC
- ▶ Intuitionistic modulation status display
- ▶ Built-in dual back-up power supply, switch automatically
- ▶ Casing temperature auto-control, ensure the long life of the laser

MAIN APPLICATION

- ▶ Provide IPTV, VOD value-added service in second-grade service area (sub-headend).
 - Analog digital mixed transmit $< 15\text{Km}$ (common distance $\leq 10\text{km}$).
 - Pure digital load $< 40\text{Km}$.
- ▶ WDM narrow band multiplex $> 70\text{Km}$.

TECHNIQUE INDEX

Performance			Index	Supplement
Optic feature	Wavelength	(nm)	1550	Optional 1310
	Side mode suppression ratio	(dB)	≥40	SMSR
	Equivalent noise intensity	(dB/Hz)	≤-150	RIN (20~1000MHz)
	Output power	(dBm)	≥6	
	Return loss	(dB)	≥45	
	optical fiber connector		SC/APC	Optional FC/APC
RF feature	Work bandwidth	(MHz)	47-1000	
	Input level	(dBmV)	22±5	AGC
	Flatness	(dB)	≤±0.75	45~1000MHz
	Return loss	(dB)	>16	
	Input impedance	(Ω)	75	RF/INPUT
	RF test	(dB)	-20	
Link feature	Transmit channel		PAL-D/60CH	NTSC/80CH
	CNR	(dB)	≥51	-1dBm receive
	CTB	(dB)	≤-63	
	CSO	(dB)	≤-57	
	SBS restrain	(dBm)	≥17	
General feature	Power supply	(V)	+8V/1A	
	Power Consume	(W)	≤50	Single power works
	Work temp.	(°C)	-5~65	Machine temp. control automatically
	Storage temp.	(°C)	-40~85	
	Relative humidity	(%)	5~95	
	Size	(mm)	143×167×27	(W)×(D)×(H)

PRODUCT SERIES

Model	Distance (Km)	Output power (dBm)	CNR (dB)	CTB (dB)	CSO (dB)	SBS (dBm)
HT1503A-05	5	3	50	-63	-57	17
HT1506A-05		6	50	-63	-57	17
HT1510A-05		10	50	-63	-57	17
HT1503A-10	10	3	50	-63	-57	17
HT1506A-10		6	50	-63	-57	17
HT1510A-10		10	50	-63	-57	17
HT1503A-15	15	3	50	-63	-57	17
HT1506A-15		6	50	-63	-57	17
HT1510A-15		10	50	-63	-57	17

Test condition:

- 47~550MHz, PAL-D/59CH.
- 1dBm input receiver.

ORDER INFORMATION

Ht15 - - -

Product type		Output power		Quality		Wavelength		Transmission distance		Network management		Number of output port		Connector		Power supply	
HT	1550nm Direct modulation CATV optical transmitter	03	3dBm(2mW)	A	Top-class	C	CATV	05	5km	0	Without	1	1 port	FA	FC/APC	8	8VAC
		06	6dBm(4mW)					10	10km	N	With			SA	SC/APC		
		10	10dBm(10mW)											LA	LC/APC		