

Technical Specification

1550nm Direct Modulation Optical Transmitter

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JP1510DT



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1.0 Product description

Direct modulation will lead to high laser chirp (Laser's bias current is modulated by signal and the optical spectrum shifts and shakes). Laser chip 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 $\leq 15\text{Km}$.

Junpu JP1510DT 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. JP1510DT direct modulated optical transmitter can be used in WDM narrow-band multiplexing and IP/QAM.

JP1510DT optical transmitter: CATV wavelength.

2.0 Product feature

- Low chirp, high linearity DFB laser, chirp compensation
- 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

3.0 Technique index

Performance		Index	Supplement	
Optic feature	Wavelength	(nm)	1548~1565	JP1510DT
	Output power	(dBm)	10	Optional 3, 8, 10
	Return loss	(dB)	≥55	
	optical fiber connector		FC/APC	Optional SC/APC
RF feature	Work bandwidth	(MHz)	45-862/1000Mhz	
	Input level	(dBmV)	20±2	MGC
	Flatness	(dB)	≤±0.75	45~862MHz
	Return loss	(dB)	>16	
	Input impedance	(Ω)	75	RF/INPUT
	RF test	(dB)	0±1	
Link feature	Transmit channel		PAL-D/60CH	NTSC/80CH
	CNR	(dB)	≥50	-1dBm receive
	CTB	(dB)	≤-63	
	CSO	(dB)	≤-57	
General feature	Network management interface		RJ45, RS232	Support I.E. & SNMP
	Power supply	(V)	90~265 city power	-48VDC optional

Test condition:

1. 47~550MHz, PAL-D/59CH.
2. -1dBm input receiver.