

# OT1550D-xx

## Features

- ◇ 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.



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## 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  $\leq 15\text{Km}$  or transmitting digital load with transmission distance  $\leq 40\text{Km}$ .

ADK OT1550D 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. It can be used in FTTx ( $\leq 10\text{Km}$ ) of second-grade service area (sub-headend), also can be used in WDM narrow-band multiplexing and IP/QAM.

## Parameter

Item	Specification	
<b>Optical feature</b>		
Optical wavelength	1548~1563nm 1530~1563nm	CATV wavelength ITU standard
Linewidth	$\leq 1\text{MHz}$	FWHM( $\Delta \lambda$ )
Side mode suppression ratio	$\geq 45\text{dB}$	SMSR
Extinction ratio	$\geq 20\text{dB}$	XP
Equivalent noise intensity	$\leq -160\text{dB/Hz}$	RIN (20~1000MHz)



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Output power	6dBm	3, 10 options
Return loss	$\geq 55$ dB	
Optical fiber connector	FC/APC or SC/APC	
<b>RF feature</b>		
Work bandwidth	45~862MHz	
Input level	$20 \pm 2$ dBmV	MGC
Fatness	$\leq \pm 0.75$ dB	45~862MHz
Rerun loss	$> 16$ dB	
Input impedance	75ohm	RF/INPUT
RF test	$0 \pm 1$ dB	
<b>Link feature</b>		
Transmit channel	PAL-D/60CH	NTSC/80CH
CNR	$\geq 50$ dB	-1dBm receive
CTB	$\leq -63$ dB	
CSO	$\leq -57$ dB	
SBS restrain	$\geq 17$ dBm	
<b>General feature</b>		
Network management interface	RJ45, RS232	Support IE &SNMP
Power supply	90~265V	-48V optional
Power consume	$\leq 50$ W	Single power works
Work temperature	-5~65°C	Machine temperature
Storage temperature	-40~85°C	Control automatically
Relative humidity	5~95%	
Dimension	19inch, 1U	

### Applications

- ◇ HFC network
- ◇ PON network