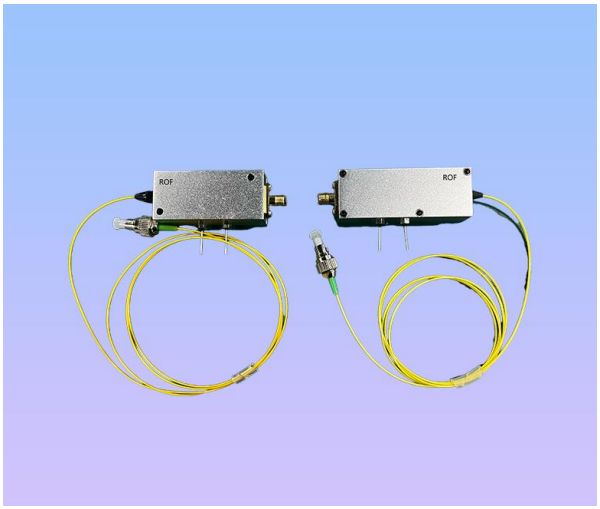
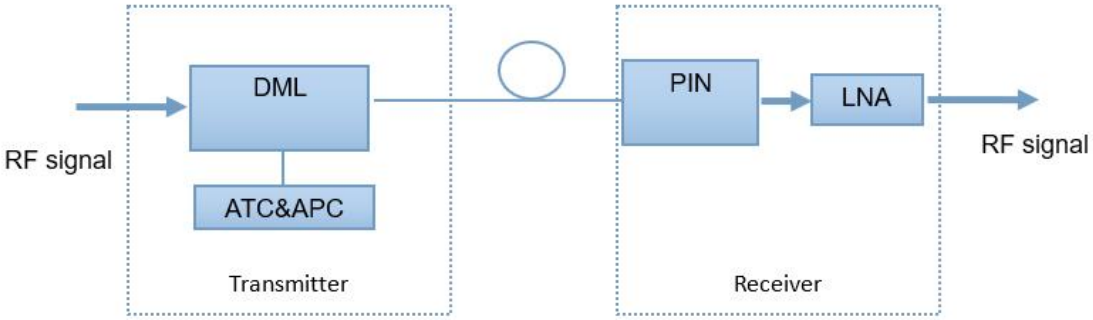
1-6G Microwave optical fiber transmission module



product description：

1-6G microwave optical fiber transmission module is composed of transmitter module and receiver module, and the working principle as shown below. The transmitter uses a high linear linear direct-mode DFB laser (DML) and integrates automatic power control (APC) and automatic temperature control (ATC) circuit, so that the laser can have efficient and stable output.The receiver integrates a high linear PIN detection and low noise broadband amplifiers. Microwave signal modulates laser to produce intensity modulated optical signal directly to achieve electro-optical conversion, after single-mode fiber transmission, the receiver completes photoelectric conversion, and then the signal is amplified and output by the amplifier.



This transmission module delivers a wide range of long-distance, high-bandwidth, low-bandwidth RF signals up to 6GHz in a fully transparent mode of operation, providing excellent linear optical communication for a variety of analog broadband microwave applications. Due to the avoidance of using expensive coaxial cable or waveguide, the transmission distance limitation is canceled, which greatly improves the signal quality and reliability of microwave communication. It is widely used in remote wireless, timing and reference signal distribution, telemetry and delay lines communication field.

Product feature:

Operating frequency 1-6GHz
DWDM wavelength is available for wavelength ,multiplexed
Excellent RF response flatness
Wide dynamic range
Entire transparent work
Can be customized according to customer requirements

Application：

Remote antenna
Long distance analog fiber communication
Tracking, telemetry and control
Delay lines

performance parameters：

RF feature					
Parameter	Unit	Min	Typ	Max	Remarks
Operating frequency	GHz	1		6	
Input RF range	dBm	-60		20	
Input 1dB compression point	dBm		20		
In-band flatness	dB		3		
Standing wave ratio			1.75		
Gain	dB		-10		Optional path loss 6dB
RF emission loss	dB	-10			<6GHz
Input impedance	Ω		50		
Output impedance	Ω		50		
RF connector		SMA-F			

Limit parameters :

Parameter	Unit	Min	Typ	Max	Remarks
Input RF operating power	dBm			20	
Operating voltage	V	4.5	5	5.5	
Operating temperature	℃	-40		+85	
Storage temperature	℃	-40		+85	
Working relative humidity	%	5		95	

*please contact our seller if you have special requirements