



18GHz - 40 GHz OPTICAL TRANSMIT LINK

FEATURES

- ◆ Bandwidth 18 GHz-40 GHz
- ◆ Simple power supply
- ◆ No relay, far transmission distance
- ◆ Small size/light-weight/strong capability of anti-electromagnetism



APPLICATIONS

- ◆ Analog signal communication
- ◆ Test/Control
- ◆ Local oscillator remoting
- ◆ Signal remoting

KEY TECHNICAL PARAMETERS

ELECTRICAL SPECIFICATIONS					
PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
Operating frequency	3dB bandwidth	MHz	18000		40000
Gain **		dB	-32	-28	0
Gain flatness		dB			±1.5
Noise figure **		dB		43	45
Group delay	Peak-to-peak ($\geq 500\text{MHz}$)	ns		0.1	0.2
VSWR	TX RF _{in} /RX RF _{out}				2:1
Phase noise	10KHz offset	dBc		105	
Input power at 1dB compression		dBm		15	
Spurious-free dynamic range	At 18 GHz bandwidth	dB/Hz ^{2/3}	-	105	
Maximum input power	No damage	dBm			20
RF connector ***	V joint (optional)				
Impedance	TX RF _{in} /RX RF _{out}	Ohms		50	
NOTE: -10dBm input power, 1m of fiber, **At 18 GHz					
*** “K” style optional.					



OPTICAL PERFORMANCE SPECIFICATIONS					
PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
Fiber optic connectors	FC/APC (other connector types optional)				
Fiber	Signal mode fiber (9/125um)				
Spectral width	FWHM	nm		0.1	
Optical power in fiber		mW	3	6	10
Emission wavelength		nm		1550	
acceptable input optical power	Reference only	mW		6	10
Acceptable optical wavelength		nm	1200		1650

NOTE:

POWER REQUIREMENTS					
PARAMETERS	CURRENT/ROOM TEMPERATURE 25 °	PIN	MIN.	TYP.	MAX.
Transmitter*	VCC:100mA, 800mA (MAX)	VCC	4.7	5	5.2
	VDD:100mA, 230mA (MAX)	VDD	-5.2	-5	-4.7
Receiver	230mA	VCC	11	12	13

NOTE:*At different temperature, the operating current of transmitter(VCC,VDD) would change

BLOCK DIAGRAM

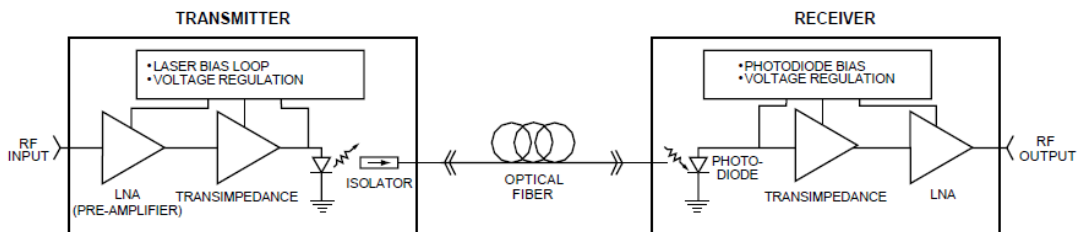


Figure 1-- Block diagram



SIZE AND STRUCTURE

Transmitter size and structure please see figure 2a, receiver size and structure see figure 2b.

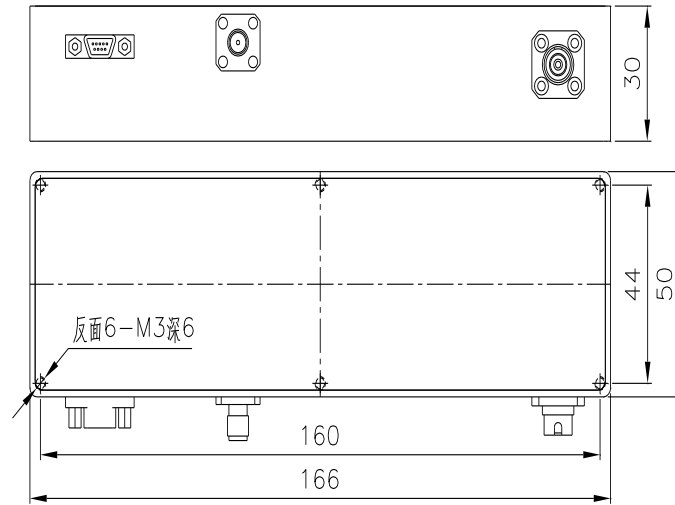


Figure 2a-- Transmitter size and structure diagram

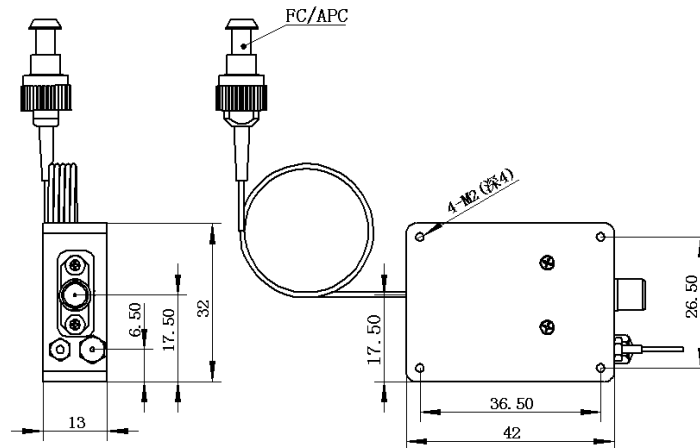


Figure 2b-- Receiver size and structure diagram

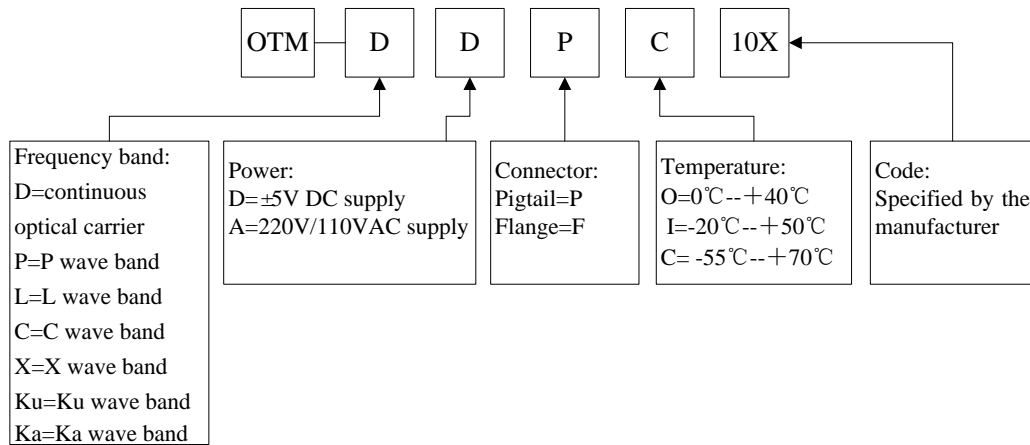


ENVIRONMENTAL CONDITIONS

Quality level Environmental	Commercial(O)	Industrial(I)	Custom(C)
Operating temperature	0°C ~+40°C	-20°C ~+50°C	-55°C ~+70°C
Storage temperature	0°C ~+50°C	-40°C ~+70°C	-55°C ~+85°C
Relative humidity	\	95%	95%
Vibration	\	\	RMS meet different requirements
NOTE	If you have special requirements please contact manufacturer		

ORDERING INFORMATION

Optical Transmitter Module:



Optical Receiver Module:

