

NYCMT Series UWB Directly Modulated Transmitter

Product Features

- ※ Ultra-wideband (better than 18GHz)
- ※ CWDM
- ※ High-Dynamic-Range
- ※ High output power
- ※ Low RIN
- ※ Operating case temperature: (-40°C ~ 70°C)



Applications

- ※ Antenna & Radar
- ※ Electronic countermeasure system
- ※ Analog RF links transmission
- ※ Broadband Wireless Communication
- ※ Mobile communication base station

Introduce Of NYCMT

NYCMT Transmitter are mainly composed of high-speed directly modulated DFB laser, automatic optical power control circuit, automatic temperature control circuit, voltage-stabilizing conversion circuit , monitoring and indicating circuit.

The wavelength of NYCMT is optional (1270nm, 1290nm, 1310nm, 1330nm, 1350nm, 1370nm, 1390nm). Its modulation bandwidth is better than 18GHz, output power can reach 10mW. A single positive power supply, which can make NYCMT works stably in the voltage range of +7V ~ +36V. NYCMT takes many advantages, such as low relative intensity noise, good stability of output wavelength, high output power, etc.

Besides, NYCMT Transmitter has the indicating function, which show the power supply and optical power output is normal or not.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typ.	Max.	Unit
Storage temperature	T _{STG}	-55	+25	+85	°C
Operation temperature	T _C	-40	+25	+70	°C
RF input power ¹	P _{in}	-	+10	+20	dBm
Voltage	V _{in}	+7	+12	+36	V

(1) Continuous wave (CW) working mode.

Optical and Electrical Specification (T_C = 22±3°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Wavelength	λ	-	1370	CWDM	1390	nm
Frequency (3dB)	f _{3dB}	X band	0.1	-	12	GHz
		Ku band	1	-	18	
Light output power	P	-	5	10	-	mW
Relative Intensity Noise	RIN	-	-	-	-155	dBc/Hz
Return loss (VSWR)	VSWR	X band	-	-	2	-
		Ku band	-	-	2.2	
Input 1 dB Compression	-	-	+13	+15	-	dBm

Power Supply (T_C = 22±3°C)

Parameter	Min.	Typ.	Max.	Unit
Voltage	+7	+12	+36	V
Current ⁽²⁾	0.07	0.1	1	A

(1) Test condition: V_{in}=+12V.

Typical Response Curve

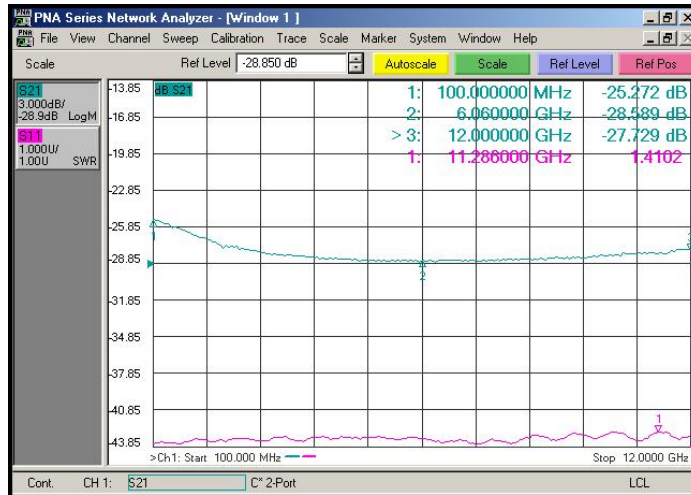


Figure 1 NYCMT-X Transmitter Typical Response Curve

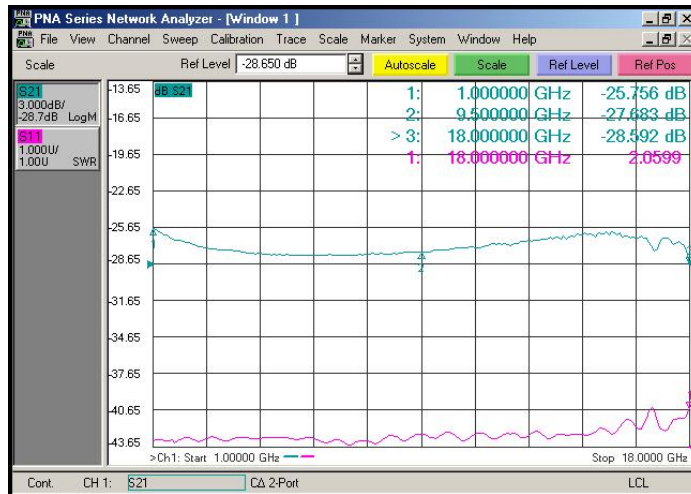


Figure 2 NYCMT-Ku Transmitter Typical Response Curve

Typical Spectrogram

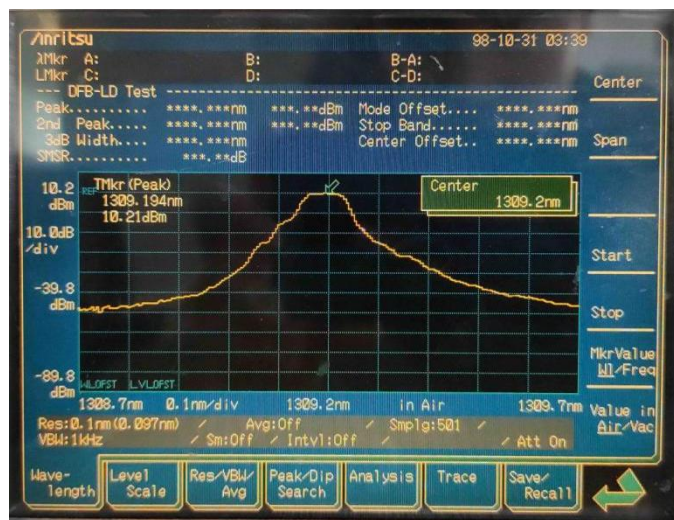
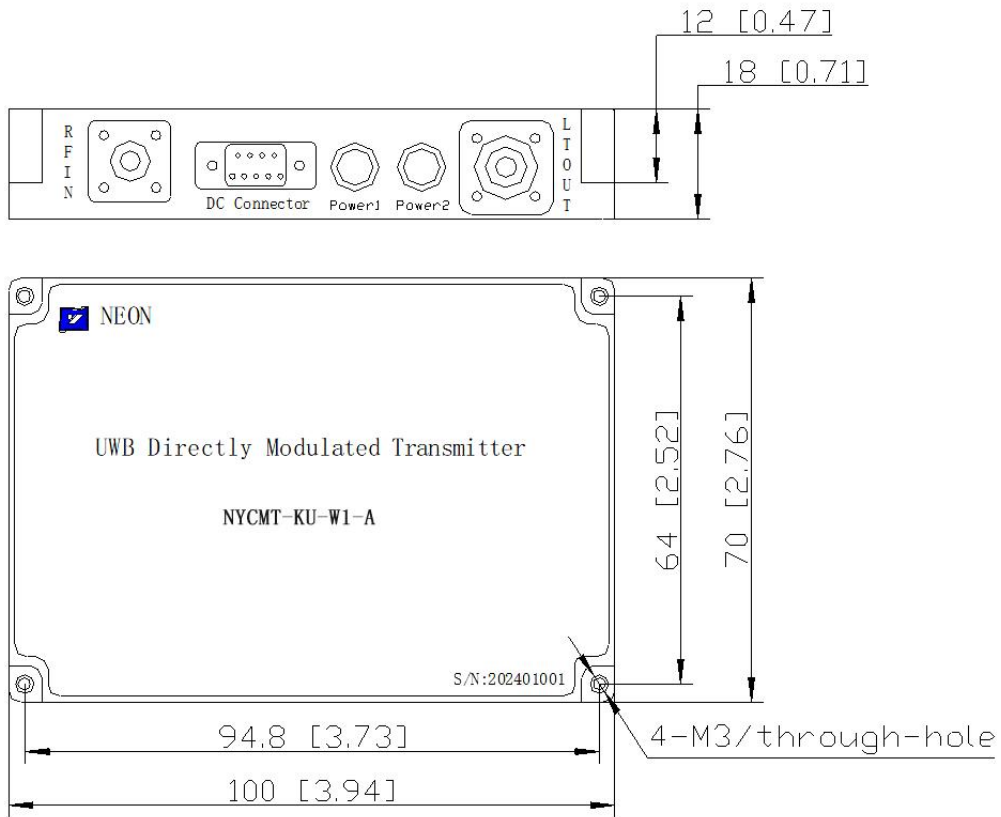


Figure 3 NYCMT Transmitter Typical Spectrogram

Dimension Unit: mm[inch]



RF Connector: SMA

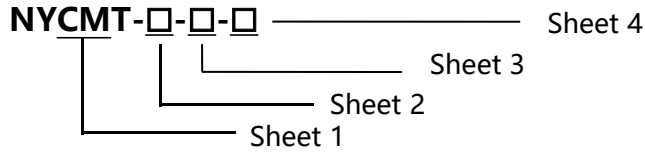
Power Connector: J30J-9-ZKP

Figure 4 NYCMT Transmitter Dimension

Pin Of Power Supply

Parameter	Description								
Pin	1	2	3	4	5	6	7	8	9
Voltage	V _{in}			NC		GND			NC

Order Information



Sheet 1:

Symbol	Description
CM	CWDM Coarse Wavelength Division Multiplexer 7PIN butterfly

Sheet 2:

Symbol	Description
X	0.1 ~ 12 GHz
Ku	1 ~ 18 GHz

Sheet 3:

Symbol	W1	W2	W3	W4	W5	W6	W7
Wavelength(nm)	1270	1290	1310	1330	1350	1370	1390

Sheet 4:

Symbol	Connector Type	Description
N	Customized	Customized
A	FC / APC	Standard 9/125μm SM fiber
P	FC / PC	Standard 9/125μm SM fiber