

## DS-LNF Low Noise Figure Fiber-optic Transmission & Simulator series (Customized)

### Abstract

*DS-LNF series are low noise figure fiber-optic transmission & optical simulator series, which has raised the indicator of noise coefficient's quality grades by the advanced technology for microwave photons such as RIN high powered high stable DC light power control, arbitrary point controlled external modulator bias drive, ultra-wideband & high saturation reception. As a result, DS-LNF is better than traditional fiber-optic lines delay & optical simulator 10~20dB.*

*DS-LNF series can be widely applied for broadband high sensitive radar signal receiving, radar signal simulation, electronic war, electronic reconnaissance, etc.*

*DS-LNF series products are customized, which work effectively in the whole P~Ka bandwidth. According to users' demands, we can produce appropriate delays, structures, quality grades products.*

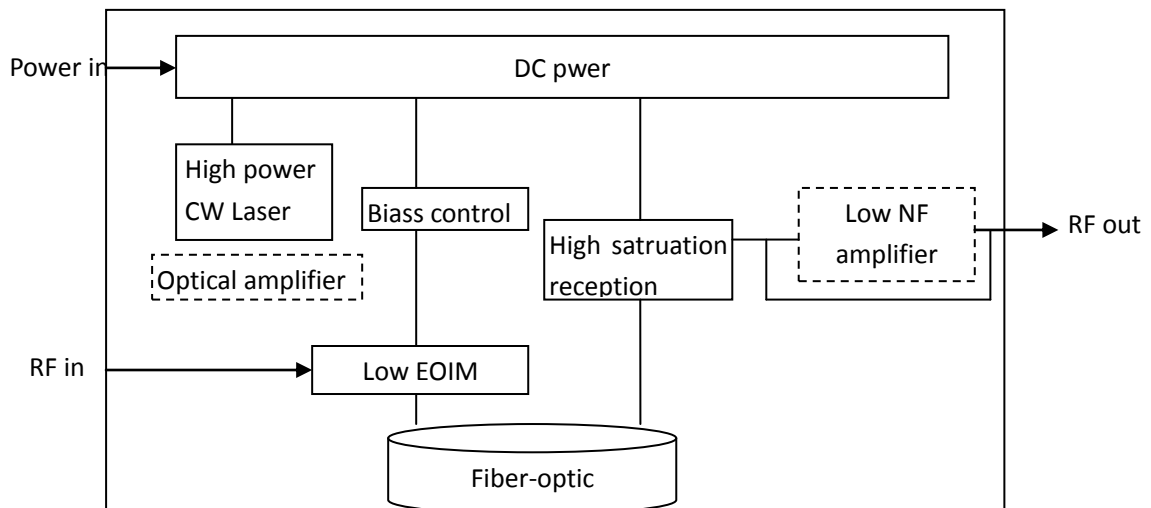
### Features

- ✧ Low Noise Figure
- ✧ Ultra-wideband
- ✧ High saturation reception
- ✧ Miniaturization
- ✧ Wide temperature application

### Application

- ✧ Radar testing/calibration
- ✧ Signal processing
- ✧ Electronic war
- ✧ Phased array antenna
- ✧ Antenna simulation

### Schematic



## Electrical/Optical Characteristics

Parameter	Parameter values			Unit	Remark
	Min	Typical	Max		
Frequency range	2	-	18	GHz	
Amplitude response	-	±1.5	±2	dB	
Time Delay	-	20	-	us	
Delay Accuracy	-5‰	-	+5‰	-	
Insertion Loss	0	30	35	dB	No RF Amplifier
Input VSWR	-	1.5	2	-	
Output VSWR	-	1.5	2	-	
Impedance	-	50	-	Ω	
Input 1 dB Compression	-	+15	+18	dBm	
Noise figure	-	35	40	dB	Measured at room temperature
Operating Temperature Range	-40	-	+70	°C	Confirmed with quality grade
Storage Temperature Rang	-55	-	+85	°C	

Parameter	Parameter values			Unit	Remark
	Min	Typical	Max		
Frequency range	18	-	40	GHz	
Amplitude response	-	±2	±2	dB	
Time Delay	-	20	-	us	
Delay Accuracy	-5‰	-	+5‰	-	
Insertion Loss	0	35	40	dB	No RF amplifier
Input VSWR	-	2	2.2	-	
Output VSWR	-	2	2.2	-	
Impedance	-	50	-	Ω	
Input 1 dB Compression	-	+15	+18	dBm	
Noise figure	-	38	45	dB	Measured at room temperature
Operating Temperature Range	-40	-	+70	°C	
Storage Temperature Rang	-55	-	+85	°C	

### Typical Response Curves

