

Single Channel C-band, -55dBm Space Grade Low Noise High Gain Optical Fiber Amplifier

- Low Input Power -55dBm
- Support SDA Wavelength 1536.61nm, 1553.33nm
- High Gain of >40dB at Pin -55dBm



Specifications

Parameter	Specification			
	Min	Typ.	Max	Unit
Grade	Pre-Engineering Model with Space Grade			
Optical Properties				
Input Signal Type	Continuous Wave (CW), Single Channel			
Operating Wavelength Range	1530		1565	nm
Space Development Agency (SDA) Wavelength Compatible	1536.61 or 1553.33 (Customer Define)			nm
Input Power, Pin	-55	-40	-10	dBm
Output Power @ Pin >-50dBm	10	13		dBm
Signal Gain @ Pin -55dBm, 1553.33nm	40	45		dB
Noise Figure @ Pin -55dBm, 1553.33nm (SM Type)		3.5	4.2	dB
Optical Signal to Noise Ratio (OSNR) @ Pin >-55dBm, 1553.33nm	6	8		dB
Input/Output Isolation		> 30		dB
Polarization Extinction Ratio (PER) (for PM Type Only)	20	23		dB
Input/Output Connector	FC/APC			
Input/Output Fiber Type	Input SMF-28e or PMF, φ0.9mm Hytrel Pigtail 1.5m Output SMF-28e or PMF, φ0.9mm Hytrel Pigtail 2.0m			
Control, Monitor, Electrical & Mechanical Properties				
Power Monitoring	Output Power Monitor (OPM), Input Power Monitor Upon Request			
Control Method	Automatic Current Control (ACC) Automatic Power Control (APC)			
PC interface	DSub-9, RS232			
Power Supply	DC +5V, 1A			
Electrical Power Consumption		2	3.5	W
Dimensions (W x H x D) (Excluding Fiber Extrusion)	90 x 25 x 85			mm
Casing Material	Aluminum 6061-T6			
Casing Surface Treatment	ChromiAL®			
Mass		250		g
Environment Specification (To be Test)				
Operating Case Temperature	-20		+55	°C
Storage Temperature	-40		+75	°C
Shocks Test (SRS, Shock Response Spectrum)	100~1000Hz, Level (Overall Peak): 6dB/Octave 1000~10,000Hz, Level (Overall Peak): Flat at 1000g			
VibrationTest	Z Direction, Random Freq. 20~2000Hz, 20g @ 120s X, Y Direction, Random Freq. 20~2000Hz, 11.5g @ 120s			
Vacuum Thermal Test (@Pressure <10 ⁻³ Pa)	-20, +50			°C
Radiation Test	Cobalt 60, >20krad Dose			

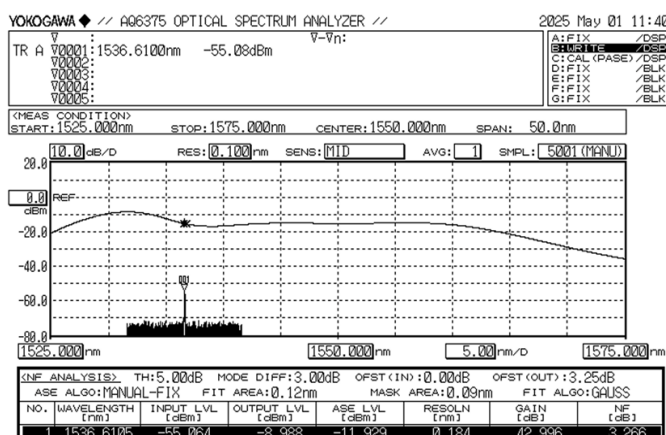


Fig.1: Signal amplification at 1536.61nm @ Pin -55dBm

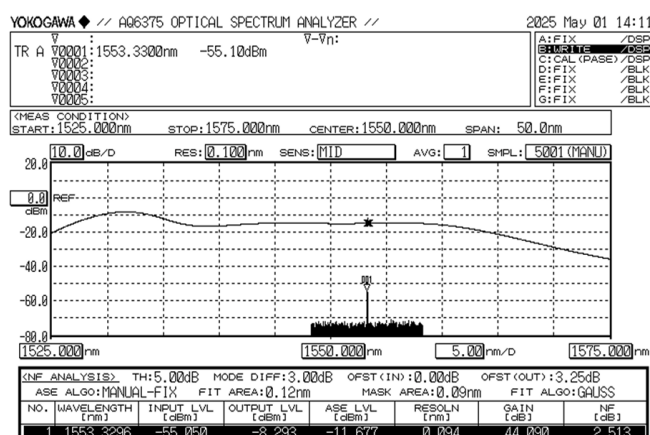


Fig.2: Signal amplification at 1553.33nm @ Pin -55dBm

Ordering Information

LNA-3065W-M55-SM/PM-M-FA-FA-SG-PREM

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