Alnair
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Preliminary Release

Single Channel C-band, 5W Space Grade High Power Optical Fiber Amplifier

- 1550nm-band, High Power Output of >37dBm
- SDA Wavelength 1536.61nm, 1553.33nm
- Superior OSNR of >45dB at Pin -3dBm
- Radiation Hardened Gain Fiber

Specifications

Parameter	Specificfation			
	Min	Typ.	Max	Unit
Grade		Pre-Engineering Model with Space Grade		
Optical Properties				
Input Signal Type		Continuous Wave (CW), Single Channel		
Operating Wavelength Range	1535		1565	nm
Space Development Agency (SDA) Wavelength Compatible		1536.61 or 1553.33		nm
Input Power, Pin	-6	0	+6	dBm
Output Power @ Pin >-3dBm	36	37		dBm
Output Power Tuning Range (APC mode)	27		37	dBm
Gain @ Pin >-3dBm, 1550nm	38	40		dB
Noise Figure @ Pin >-3dBm, 1550nm		5.5	6.5	dB
Optical Signal to Noise Ratio (OSNR) @ Pin >-3dBm, 1550nm	40	50		dB
Input/Output Isolation		> 30		dB
Polarization Extinction Ratio (PER) (PM Type)	20	23		dB
Input/Output Connector		FC/APC		
Input/Output Fiber Type		Input SMF/PMF, φ0.9mm Hytrel Pigtail 1.5m Output SMF/PMF, φ0.9mm Hytrel Pigtail 2.0m		
Control, Monitor, Electrical & Mechanical Properties				
Power Monitoring		Input Power Monitor (IPM) & Output Power Monitor (OPM)		
Control Method		Automatic Current Control (ACC) Automatic Power Control (APC)		
PC interface		DPin-20, RS232		
Power Supply		DC +12V, 6A		
Electrical Power Consumption		60	72	W
Dimensiosn (Wx H x D) (Excluding Fiber Extrusion)		90 x 28 x 95 or 220 x 30 x 120		mm
Casing Material		Aluminum 6061-T6		
Casing Surface Treatment		ChromitAL®		
Mass		650		g
Environment Specifciation (To Be Tested)				
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		
Vaccum Thermal Test (@Pressure <10^{-3} Pa)		-20, +50		°C
Radiation Test		Cobalt 60, 20krad Dose		

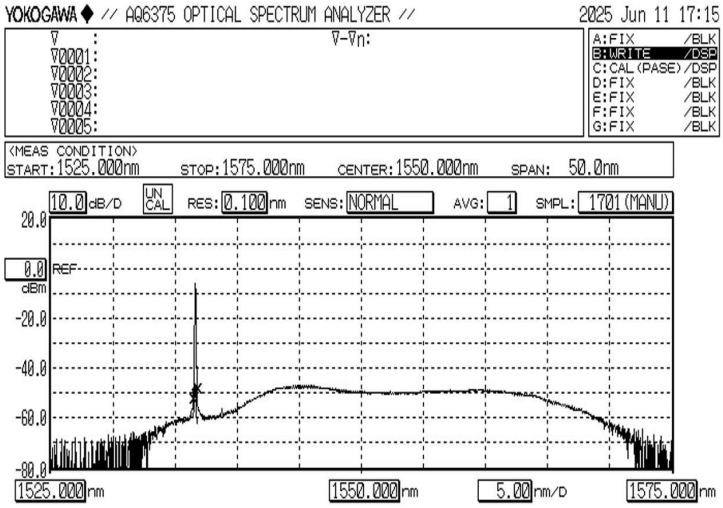

Fig.1: Signal amplification at 1536.61nm (attn.40dB)

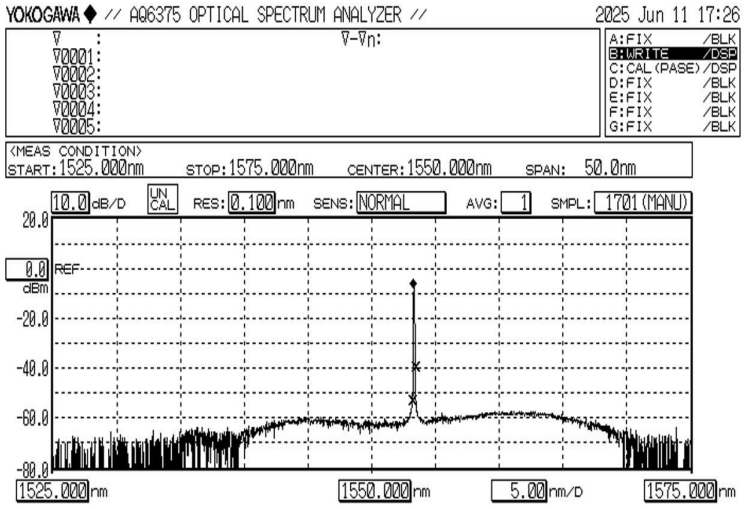

Fig.2: Signal amplification at 1553.33nm (attn.40dB)

Ordering Information

HPA-3565W-37P-SM/PM-M-FA-FA-SG-PREM

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