



PWRBlazer™ Node Optical Amplifier NOA 7014-GF

Product Description

The Harmonic NOA 7014-GF Node Optical Amplifier is designed for 1550 nm-based network applications. It provides a cost-effective solution for a variety of applications and architectures, including long haul applications that are beyond the reach of 1550 nm transmitters.

The new NOA 7014-GF optical amplifier is built into a standard Harmonic's single width optical node module. This enables the amplifier to be mounted in the Harmonic PWRBlazer Scaleable and PWRBlazer II optical nodes. The ability to place an optical amplifier in a node provides a high degree of flexibility in design to the system operator.

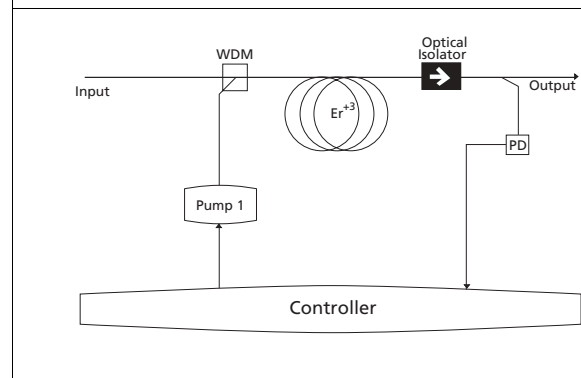
The NOA 7014-GF is gain flattened, and hence is suitable for broadcast, narrowcast (DWDM) and return path applications.

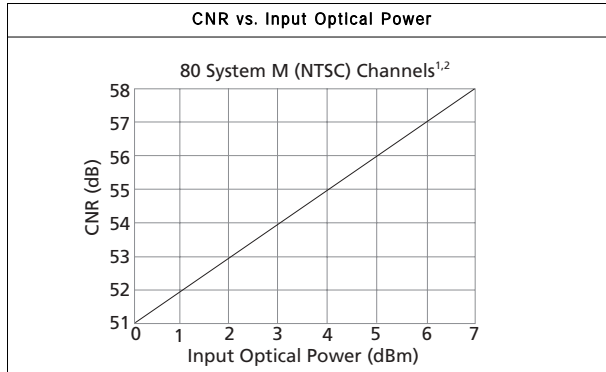
Advantages

The NOA 7014 node optical amplifier technology offers many advantages:

- Compact module size
- Use of a node optical amplifier can allow the operator to avoid using hubs
- Simple "plug-and-play" operation in the Harmonic nodes reduces time and cost of installation
- Gain flattened for flexible operation

Block Diagram





Optical Amplifier Performance

Carrier-to-Noise (CNR)	Shown in figure above
Carrier-to-CSO	> 80 dB
Carrier-to-CTB	> 80 dB

All performance specifications are WORST CASE.³

Optical Output

Wavelength	1535 - 1565 nm
Output Power ⁴	+14 dBm (25 mW)
Input Range	-10 dBm to +10 dBm
2 dB Gain Tilt Input Range (dBm per wavelength)	
1549-1561 nm (C21-C35)	-10 to +1
1535-1546 nm (C39-C53)	-7 to +1
Noise Figure	4.5 dB
Optical Return Loss	< -50 dB
Polarization Sensitivity	< 0.1 dB

Power Requirements

Consumption ⁵	12.1 Watts maximum
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User Interface

Power on	Green LED
Output Alarm	Red LED
Shutdown DISABLE/ENABLE push button switch	

Environmental

Operates within Harmonic node. Harmonic node is specified to operate over ambient temperature range -40° to +60° C and relative humidity of 0 - 100%

Physical

Dimensions	5.5" W x 2.0" H x 1.93" D / 14 cm W x 5.1 cm H x 4.9 cm D
Weight	0.6 lbs. / 0.3 kg

Notes:

- Specifications for 80 unmodulated System M (NTSC) channels and 200 MHz digital at -10 dBc.
- For System B/G, I and D (PAL), decrease CNR by approximately 1 dB (5 MHz video bandwidth).
- Overall performance of a 1550 nm transmission system depends on both transmitter and optical amplifier performance. Consult MAXLink 1550 nm Transmitter specifications and your Harmonic applications engineer for more information.
- Full +14dBm output power achieved for optical power input of 0 dBm.
- Unit fits in Harmonic's optical nodes. Consult your Harmonic applications engineer for more information.