

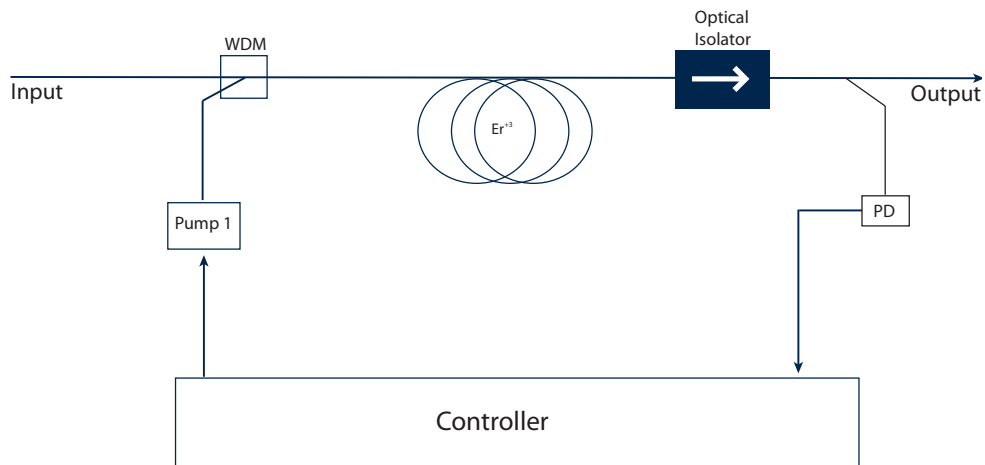
HIGHLIGHTS

- 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

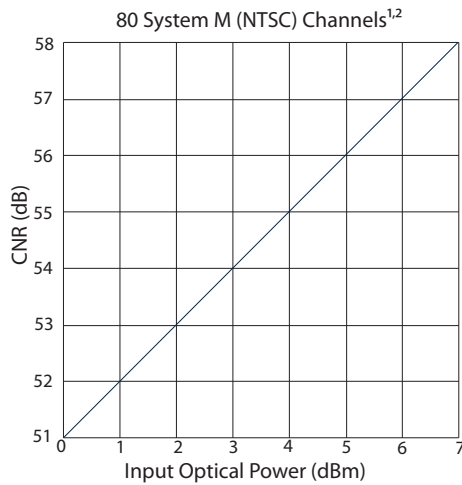
The Harmonic NOA 7014-GF Node Optical Amplifier is designed for 1550 nm-based network applications. It provides a cost-effective solution for a variety of applications and architectures, including long haul applications that are beyond the reach of 1550 nm transmitters.

The NOA 7014-GF optical amplifier is built into Harmonic’s standard 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.



Block Diagram



CNR vs. Input Optical Power

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

Notes:

1. Specifications for 80 unmodulated System M (NTSC) channels and 200 MHz digital at -10 dBc.
2. For System B/G, I and D (PAL), decrease CNR by approximately 1 dB (5 MHz video bandwidth).
3. 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.
4. Full +14dBm output power achieved for optical power input of 0 dBm.
5. Unit fits in Harmonic's optical nodes. Consult your Harmonic applications engineer for more information.