

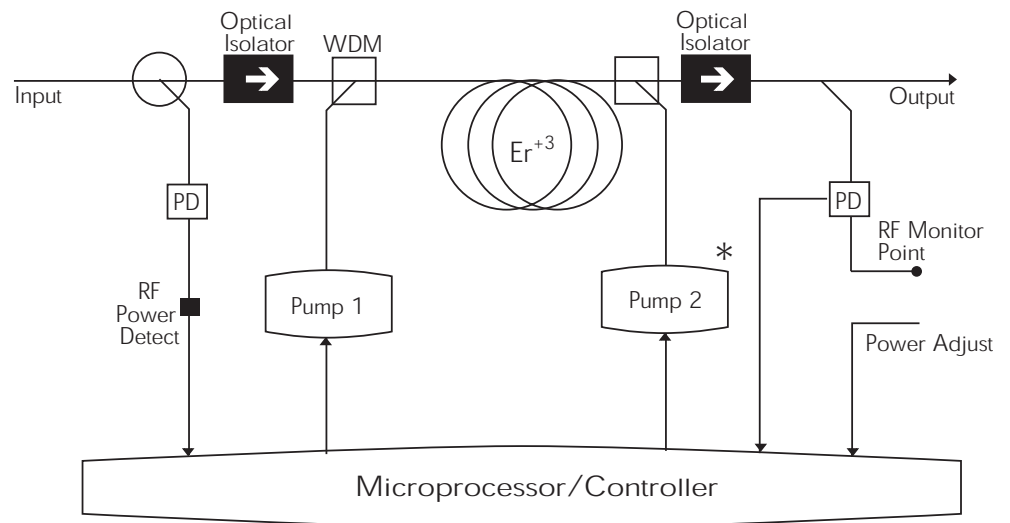
HIGHLIGHTS

- Integrated element management intelligence with SNMP compatibility enables seamless communication with comprehensive network management systems.
- Microprocessor control of all key parameters provides consistent, optimized product performance and monitoring.
- Multiple wavelengths combined on a single fiber allows efficient fiber usage as well as cost and space efficiency.
- Shared platform with Harmonic's MAXLink™ (1550 nm broadcast), PWRLink™ (1310 nm), and GIGALight™ (Gigabit Ethernet) product families enables seamless network management integration of diverse equipment, user interface commonality and maximized rack space efficiency.
- Simple "plug-and-play" operation reduces time and cost of installation.

The Harmonic METROLink™ transmission system is a family of transmitters, optical amplifiers, and passives designed for 1550 nm-based network applications. The METROLink system provides a cost-effective solution for a variety of multi-wavelength applications and architectures. Using Dense Wavelength Division Multiplexing (DWDM), digital narrowcasting services can be carried on a single fiber and targeted by wavelength. The METROLink product line consists of a series of modules for constructing a complete DWDM transmission system. This includes the HLD 7805T forward and HLD 7209T return transmitters on the ITU wavelength grid, as well as a full series of gain flattened optical amplifiers with up to 20 dBm optical output power. The series also includes precision optical multiplexers and demultiplexers. All of these are available as plug-in modules for the HLP 4200 platform. This transmission system has been designed to complement Harmonic's MAXLink™ product family.

The HLP 4200 broadband platform is a compact, 5 ¼" (3 RU) high, 19" wide rack mount housing designed to simplify headend operation. The platform provides for plug-and-play installation and operation through a user-friendly front panel display and push-button controls. As with all Harmonic products, METROLink modules have built-in element management capabilities.

The HOA 7014I-GF, 7017I-GF, and 7020I-GF gain-flat optical amplifiers are designed for use with up to 8 wavelengths in either the "O" band (1549 - 1561 nm) or the "E" band (1535 - 1546 nm). The HOA 7019IL-GF wide-band gain-flat amplifier is designed for use with up to 16 wavelengths across the "O" and "E" bands (1535 - 1561 nm).



Standard Configuration

*Second pump not in all models

OPTICAL OUTPUT

Wavelength	1535 nm - 1565 nm
Model	Optical Output Power
HOA 7014I-GF	+14 dBm (25 mW)
HOA 7017I-GF	+17 dBm (50 mW)
HOA 7020I-GF	+20 dBm (100 mW)
HOA 7019IL-GF	+19 dBm (80 mW)

Optical Power Adjustment Range

Number of wavelengths	
All models but HOA 7019IL-GF	set from 1 to 8
HOA 7019IL-GF only	set from 1 to 16

Output Power per Wavelength¹

HOA 7014I-GF	+2 to +5 dBm
HOA 7017I-GF	+5 to +8 dBm
HOA 7020I-GF	+8 to +11 dBm
HOA 7019IL-GF	+4 to +7 dBm

Input Power Range ²	0 dBm to +10 dBm
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Gain Tilt (dB)³

Model	1549-1561 nm	1535-1546 nm	1535-1561 nm
HOA 7014I-GF	2	2	-
HOA 7017I-GF	2	2	-
HOA 7020I-GF	2	3	-
HOA 7019IL-GF	2	2	2

Noise Figure (dB)⁴

HOA 7014I-GF	4.5
HOA 7017I-GF	4.5
HOA 7020I-GF	5.0
HOA 7019IL-GF	5.0

Optical Return Loss	< -50 dB
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Polarization Sensitivity	< 0.1 dB
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Laser Shutdown	DISABLE/ENABLE switch
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Eye Protection	Safety shutter
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NETWATCH™ ELEMENT MANAGEMENT SYSTEM

NETWatch Interface	RS-485, RS232C connectors (in HLP 4200)
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POWER REQUIREMENTS

Nominal	+24 VDC; supplied by HLP 4200 bus
Maximum	+26 VDC
Consumption	22 Watts maximum

USER INTERFACE

Front Panel

Bi-state Status LED	Normal = Green, Alarm = Red
Module Selection Indicator	Yellow LED
Auto/Manual LED	Auto = Yellow
Function slide switch and set-up adjustment	

Monitor Point

Flatness	±1 dB
Return Loss	> 16 dB
Connector Type	Male GSK

Rear Panel

Laser ENABLE switch	
Laser Disabled	Yellow LED

ENVIRONMENTAL

Operating Temperature Range	0° to +50° C (+32° to 122° F)
Storage Temperature Range	-40° to +70° C (+32° to 158° F)
Relative Humidity	Maximum 85% non-condensing
Over Temperature Laser Protection	Software and hardware

PHYSICAL

Dimensions (W x H x HD)	2.6" x 4.4" x 10.7" 6.6 cm x 11.2 cm x 27.2 cm
Weight	4 lbs/1.8 kg
Mounting	HLP 4200 platform; one module slot
Standard Optical Connectors	SC/APC and E2000. Other connectors available upon request.

Notes:

1. Range of output power per wavelength given for maximum number of wavelengths. For fewer wavelengths, output power per wavelength can be set higher. Consult your Harmonic application engineer for more information.
2. To achieve maximum rated output power.
3. +4 dBm input power.
4. 0 dBm input power.