

PWRBlazerTM Optical Node Return Transmitter Module

Product Description

The PWRBlazerTM Optical Node return transmitter modules are available in several models. All return transmitters feature a bandwidth extending to 200 MHz.

NTM 3244:

- 1310 nm, 0 dBm Fabry-Perot laser
- Suited for element management and set top box communications, low traffic data services

NTM 3245:

- 1310 nm, +3 dBm isolated Distributed Feedback (DFB) laser
- Capable of high data load transmission (i.e., Internet access or telephony)

NTM 3247:

- CWDM, +3 dBm isolated DFB laser
- Utilized for WDM from the node
- Capable of high data load transmission (i.e., Internet access or telephony)

NTM 3248:

- 1550 nm, +3 dBm isolated DFB laser
- Capable of high data load transmission (i.e., Internet access or telephony)

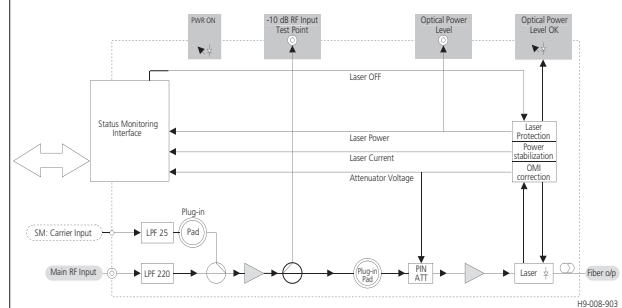
NTM 3248L:

- 1550 nm, 0 dBm isolated DFB laser
- Capable of high data load transmission (i.e., Internet access or telephony)

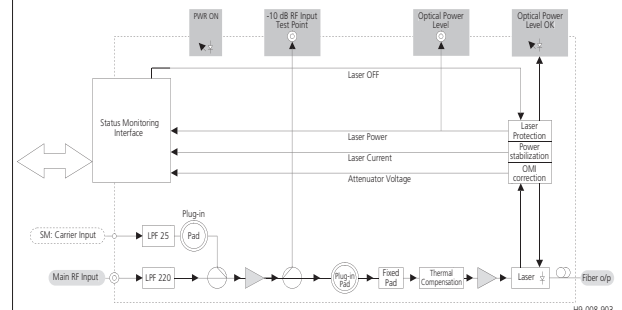
NTM 3249:

- ITU, +8 dBm cooled, isolated DFB laser
- Utilized for DWDM from the node
- Supports high data load transmission (i.e., Internet access or telephony)

NTM 3244/45/47/48/48L Block Diagram

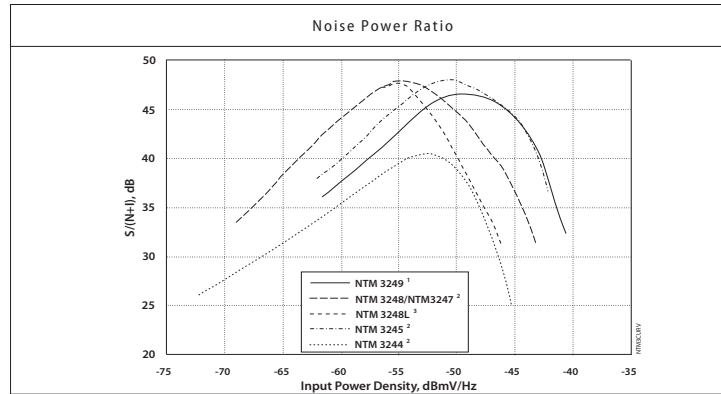


NTM 3249 Block Diagram



Applications

- Element management
- Pay-per-view
- Video-on-demand
- Telephony
- Security
- Alternate access
- Local organization
- Direct customer feeds



Laser Type

NTM 3244	Fabry-Perot
NTM 3245, NTM 3247, NTM 3248, NTM 3248L	Isolated DFB
NTM 3249	Isolated, cooled DFB

Optical Output

NTM 3244, NTM 3248L	≥ 0 dBm
NTM 3245, NTM 3247 NTM 3248	$+3 \pm 0.25$ dBm
NTM 3249	$\geq +8$ dBm

Wavelength

NTM3244/3245	1280 – 1335 nm
NTM3247-47-AS	1470 nm
NTM3247-49-AS	1490 nm
NTM3247-51-AS	1510 nm
NTM3247-53-AS	1530 nm
NTM3247-55-AS	1550 nm
NTM3247-57-AS	1570 nm
NTM3247-59-AS	1590 nm
NTM3247-61-AS	1610 nm
NTM 3248/3248L	1530 – 1575 nm
NTM 3249-C53	1535.04 nm
NTM 3249-C51	1536.61 nm
NTM 3249-C49	1538.19 nm
NTM 3249-C47	1539.77 nm
NTM 3249-C45	1541.35 nm
NTM 3249-C43	1542.94 nm
NTM 3249-C41	1544.53 nm
NTM 3249-C39	1546.12 nm
NTM 3249-W01	1549.32 nm
NTM 3249-W02	1550.92 nm
NTM 3249-W03	1552.52 nm
NTM 3249-W04	1554.13 nm
NTM 3249-W05	1555.75 nm
NTM 3249-W06	1557.36 nm
NTM 3249-W07	1558.98 nm
NTM 3249-W08	1560.61 nm

RF Input

Flatness	± 1 dB
Nominal RF Input/Video Data ⁴ (See Figure)	
NTM 3249	20 dBmV
NTM 3244/3245, NTM 3247 NTM 3248, NTM 3248L	23 dBmV
Operating Band	5 to 200 MHz
Status Monitoring Input	14 dBmV ⁵

Connectors

SC/APC	NTM 3244-AS, NTM 3245-AS, NTM 3248-AS, NTM 3248L-AS, NTM 3249-W0x-AS, NTM 3249-Cxx-AS
SC/UPC	NTM 3244-US, NTM 3245-US
FC/APC	NTM3244-AF, NTM 3245-AF
FC/UPC	NTM 3244-UF, NTM 3245-UF

Link Performance

	NTM 3244 ⁶	NTM 3245 NTM 3247 NTM 3248 ⁶	NTM 3248L ⁷	NTM 3249 ⁸
Video: CNR: C/DSO C/IM3	45 dB 41 dB min 60 dB min	53 dB 45 dB min 60 dB min	53 dB 45 dB min 60 dB min	56 dB 50 dB min 65 dB min
Data	See Figure	See Figure	See Figure	See Figure

User Interface

RF Input Test Point	-10 ± 1 dB
Optical Output Level	1 V/mW
DC Power	Green LED
Optical Power Alarm	Red LED

	NTM 324x	PWRBLAZER OPTICAL NODE RETURN TRANSMITTER MODULE	
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Power Requirements

NTM 3244, NTM 3245, NTM 3248, NTM 3248L	5 W
NTM 3247	7 W steady state, 11.4 W peak
NTM 3249	15 W

NETWatch™ Element Monitoring System

Module Version - monitor
Laser Current - monitor
Laser Power - monitor

Physical

Dimensions (WxHxD)	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

Node Environmental⁹ (with Transmitter Installed)

Operating Temperature Range	
NTM3244, NTM3245, NTM3248, NTM3248L, NTM3249	-40° to +60°C / -40° to +140° F
NTM 3247	-40° to +50°C / -40° to +122° F

Notes:

1. With 35 MHz noise loading, 18 dB optical link.
2. With 35 MHz noise loading, 7 dB optical link.
3. With 35 MHz noise loading, 4 dB optical link.
4. A minimum full gain to achieve 16% OMI.
5. To obtain 1% OMI.
6. One video carrier over 7 dB optical link, 4 MHz bandwidth.
7. One video carrier over 4 dB optical link 4 MHz bandwidth.
8. One video carrier over 18 dB optical link, 4 MHz bandwidth.
9. Ambient temperature outside of the node.

Americas

Americas Sales Headquarters
549 Baltic Way
Sunnyvale, CA 94089 U.S.A.
Phone: 1.800.828.5521 inside the U.S.
+1.408.542.2559 outside the U.S.
Fax: +1.408.490.6001

Harmonic - Latin America
Phone: +1.760.751.3543
Fax: +1.760.751.3508

Asia-Pacific

Harmonic (Asia Pacific) Limited
Suite 703-704, CMG Asia Tower
The Gateway, 15 Canton Road
Tsimshatsui, Kowloon Hong Kong
Phone: +852.2116.1119
Fax: +852.2116.0083

Harmonic International Inc. Beijing Representative
Room 510-511, Office Tower A, COFCO Plaza
8 Jianguomennei Ave
Beijing, China 100005 China
Phone: +86.10.6522.4832
Fax: +86.10.6522.4875

EMEA

U.K., Middle East, and South Africa Headquarters
21 Progress Business Centre
Whittle Parkway
Slough, Berkshire SL1 6DQ United Kingdom
Phone: +44.(0)1.628.600.100
Fax: +44.(0)1.628.666.736

Continental Europe, CIS, and Africa Headquarters
Continental Square, 4 Place de Londres
Saturne Building, 2nd Floor
ROISSY CDG Cedex, 95727 France
Phone: +33.1.49.19.57.70
Fax: +33.1.49.19.57.90

