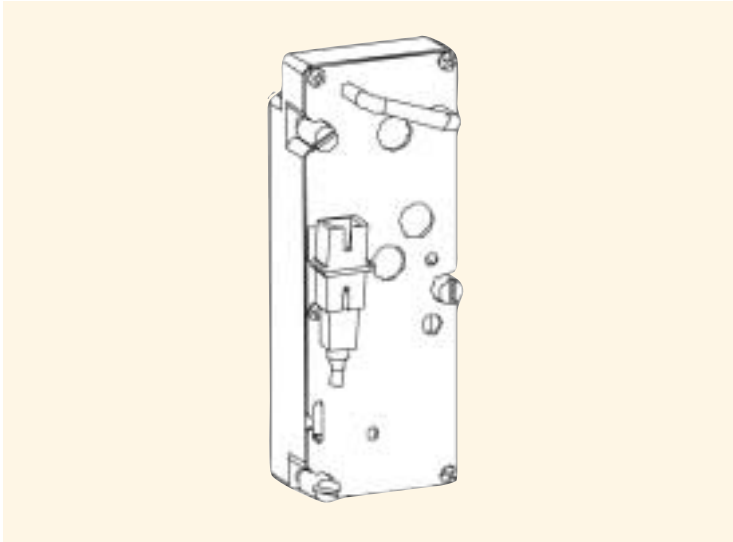


PWRBlazer™ Optical Node Return Transmitter



Product Description

The PWRBlazer Optical Node return transmitter modules are available in several models:

NTM 3244:

- 1310 nm, 0 dBm Fabry-Perot laser.
- Suited for element management and set top box communications.

NTM 3245:

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

NTM 3246:

- 1310 nm, +6 dBm cooled, isolated Distributed Feedback laser.
- Supports the highest data and video loading.

NTM 3248:

- 1550 nm, +3 dBm isolated Distributed Feedback laser.
- Capable of high data load transmission; i.e. Internet access or telephony.

NTM 3248L:

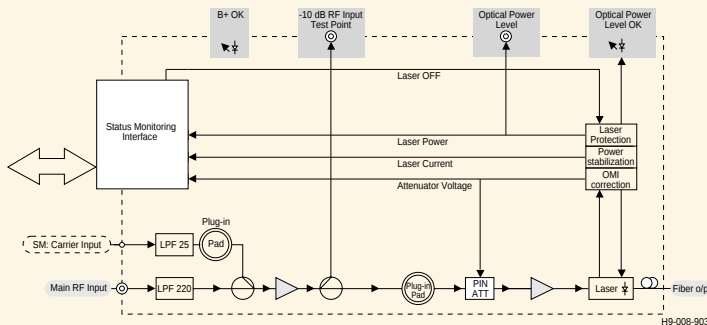
- 1550 nm, 0 dBm isolated Distributed Feedback laser.
- Capable of high data load transmission; i.e. Internet access or telephony.

NTM 3249:

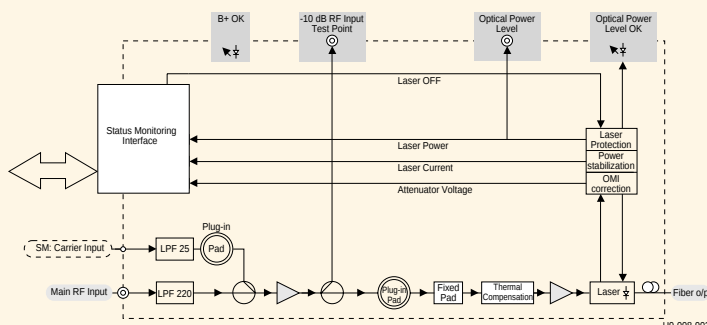
- ITU, +8 dBm cooled, isolated Distributed Feedback laser.
- For DWDM from the node.
- Supports high data load transmission; i.e. Internet access or telephony

All return transmitters feature a bandwidth which extends to 200 MHz.

NTM 3244/45/48/48L
Block Diagram



NTM 3246/49
Block Diagram



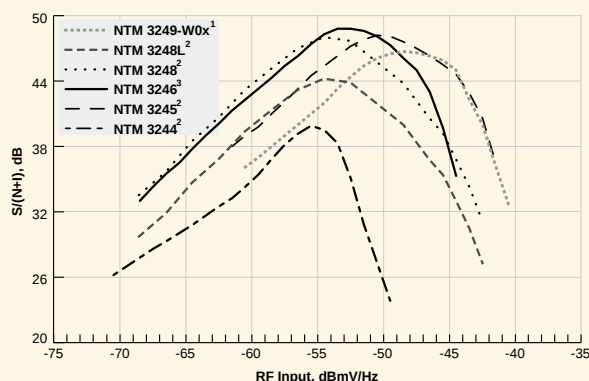
Applications

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



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Figure 1



Laser Type

NTM 3244: Fabry-Perot
NTM 3245, NTM 3248, NTM 3248L: Isolated DFB
NTM 3246, NTM 3249: Isolated, cooled DFB

Optical Output

NTM 3244, NTM 3248L: ≥ 0 dBm
NTM 3248, NTM 3245: $+3 \pm 0.25$ dBm
NTM 3246: $+6 \pm 0.25$ dBm
NTM 3249: $\geq +8$ dBm
Wavelength:
NTM 3244, NTM 3245, NTM 3246: 1280 - 1335 nm
NTM 3248, NTM 3248L: 1530 - 1575 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

Connectors:

SC/APC: NTM 3244-AS, NTM 3245-AS,
NTM 3246-AS, NTM 3248-AS,
NTM 3248L-AS, NTM 3249-W0x-AS
SC/UPC: NTM 3244-US, NTM 3245-US, NTM 3246-US
FC/APC: NTM 3244-AF, NTM 3245-AF, NTM 3246-AF
FC/UPC: NTM 3244-UF, NTM 3245-UF, NTM 3246-UF

RF Input

Flatness: ± 1 dB
Nominal RF input/video: 23 dBmV⁴
data: See Figure 1
Operating band: 5 to 200 MHz
Status monitoring input: 14 dBmV⁵

Link Performance

	NTM 3244	NTM 3245	NTM 3246/ NTM 3249	NTM 3248	NTM 3248L
Video:					
CNR:	45 dB ⁶	56 dB ⁶	56 dB ⁷	56 dB ⁶	53 dB ⁶
C/DSO:	40 dB min ⁶	45 dB min ⁶	50 dB min ⁷	45 dB min ⁶	45 dB min ⁶
C/IM3:	60 dB min ⁶	60 dB min ⁶	65 dB min ⁷	60 dB min ⁶	57 dB min ⁶
Data:	See Figure 1	See Figure 1	See Figure 1	See Figure 1	See Figure 1

User Interface

RF input test point: -10 ± 1 dB
Optical output level: 1 V/mW
DC power: Green LED
Optical power alarm: Red LED

Power Requirements

NTM 3244, NTM 3248L: 5 W
NTM 3245, NTM 3248: 8 W
NTM 3246, NTM 3249: 15 W

EMS Interface

Module version - monitor
Laser current - monitor
Optical output - monitor
Laser temperature (NTM 3246 and NTM 3249 only) - monitor
Attenuation voltage - monitor

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:

1. With 35 MHz noise loading, 18 dB optical link
2. With 35 MHz noise loading, 7 dB optical link
3. With 200 MHz noise loading, 13 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 13 dB optical link, 4 MHz bandwidth