

## Features

- Six “O” band wavelengths per fiber
- Optical output powers available from +6 to +12 dBm
- Reach up to 30 km
- 46–1002 MHz RF bandwidth
- Dual RF broadcast / narrowcast input ports with AGC
- Superior flatness,  $\pm 0.5$  dB
- +15 dBmV/channel RF input drive level (Manual mode)
- Front access –20 dB input test point
- True dynamic Plug and Play
- Occupies only one full-depth slot
- Enables very high rack density (14 transmitters per 3RU chassis)
- Front panel laser On/Off interlock switch
- Local and remote status monitoring features
- Open standard TCP/IP SNMP support

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## LcWDM Transmitter (1 GHz Models for Multi-wavelength Plan)



The Aurora AT3300L series 1 GHz LcWDM (Low Cost Wave Division Multiplexing) Transmitters provide increased bandwidth capacity per fiber for the expanding service demands of HDTV, VoIP, VOD and high speed DOCSIS. These transmitters are ideal for segmentation of node service areas because they enable the reuse of existing fiber up to six times over distances up to 25 kilometers (depending on the number of wavelengths per fiber and required performance specifications). These transmitters are designed for transport requiring optical output powers ranging from 6 to 12 dBm.

AT3300L series transmitters are available with dual 46–1002 MHz RF ports for combining separate broadcast and narrowcast inputs within the transmitter. 50dB isolation between the broadcast and narrowcast inputs protects against NC crosstalk on adjacent transmitters via the RF drive network. AGC circuitry compensates for variations in RF input level to maintain constant transmitter output RF drive level to the laser.

High density packaging enables network operators to install up to 14 transmitters per 3RU chassis, all of which can be monitored remotely or locally from the power supply module. Additionally, the compact single-width module design can be plugged in either the front or rear of the CH3000 3RU chassis to optimize equipment installation and operating conditions. The compact design minimizes rack space requirements in headends or hubs and enhances deployment of traditional HFC, passive HFC and fiber to the home (FTTH) networks.

# AT3300L (Multi-wavelength LcWDM)

## Product Specifications

### Physical:

- Dimensions: 13.0" D x 4.3" H x 1.0" W (3RU)  
(33 cm x 11 cm x 2.5 cm)
- Weight: 1.7 lbs (0.77 kg)

### Environmental:

- Operating temperature range: 0° to +50°C  
(32° to 122°F)
- Storage temperature range: -40° to +85°C  
(-40° to 185°F)
- Humidity: 5% to 95% non-condensing

### Power Requirements:

- Input voltage: 12 V<sub>DC</sub>
- Power consumption: 12 W

### General:

- Wavelengths: KK, LL, MM, NN, RR and SS
- Hot plug-in/out
- Manual gain alignment
- Standard AGC

### RF and Optical Interface:

- RF input(s): F-type (at Back Plate BP-A8)
- Input RF test point: G-type (at front panel, -20 dB)
- Optical connector: SC/APC (at Back Plate BP-A8)

### Electrical:

- Pass band: 46–1002 MHz
- 79 NTSC analog channel loading: 46-552 MHz
- 75 QAM channel loading: 552-1002 MHz  
(6 dB below analog channels)
- Frequency response (including slope):  
BC Input: ±0.5 dB  
NC Input: ±0.75 dB
- Nominal RF input levels (dBmV/ch):  
Mode  
AGC Manual  
NTSC 50-550 MHz: 18 15  
QAM 550-1002 MHz: 18 15  
(Level of QAM signals through Aux RF input becomes 6 dB less after internal combiner.)
- User-controlled AGC setup function for any channel loading; AGC capture range ±3 dB with respect to input level
- Manual gain control range: 0 to -6 dB minimum
- Manual gain control step: 0.5 dB
- Input impedance: 75 Ω
- Input return loss, minimum (all RF inputs): 18 dB (46–1002 MHz)
- Level stability: ±0.5 dB (over operating temperature range)

- Link performance (with full channel loading of 50–550 MHz analog and 550–1002 MHz QAM), typical:

CNR <sup>1</sup> :	52 dB
CSO <sup>2</sup> :	65 dB
CTB:	70 dB
XMOD:	65 dB

- <sup>1</sup> CNR measurements with 4 MHz noise bandwidth for NTSC channels.
- <sup>2</sup> CSO can vary with wavelength. Contact your Aurora representative for detailed distortion data.
- NC-BC RF input isolation: >50 dB (for models with optional second port for narrowcast RF input)
- 256 QAM BER (ITU-C pre-FEC): 1.0x10<sup>-5</sup>

### Optical Fiber Loss and Performance:

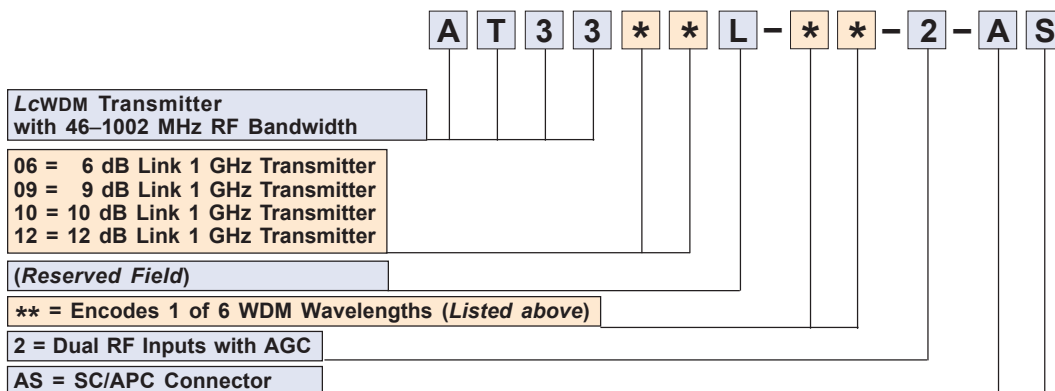
Link Loss (dB)	Output Power (dBm)	Fiber Loss (min) (dB)
6	5.75 – 6.75	5.5
9	8.75 – 9.75	8.5
10	9.75 – 10.75	9.5
12	11.0 – 12.75	10.0

NOTE: Contact an Aurora representative for detailed link engineering.

### Application Requirements:

- Analog Broadcast Content - must use identical BC content for all transmitter wavelengths (QAM Narrowcast content may differ)
- Max Difference Among Cable Lengths for RF Input to Transmitters: 100 feet

## Ordering Information



### Required Module Back Plate

Back plates are included with ordered modules.



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