

## FIBT-1310 SERIES

1310nm FIBER OPTIC TRANSMITTERS



### KEY FEATURES

- » 47 to 1218 MHz RF bandwidth for DOCSIS 3.1 compatibility
- » High performance and low power consumption GaAs technology
- » 1310 nm DFB laser in 4 output power levels (6, 10, 13.5, and 15 dBm)
- » RF AGC for optimum laser performance
- » LCD front panel status display with built-in microprocessor
- » SNMP network management for remote monitoring
- » ETL certified

### PRODUCT OVERVIEW

The **FIBT-1310** (Fiber Optic Transmitter) is an ideal solution to seamlessly transport high-speed digital data over single-mode optical fiber. It is designed to transport data streams that adhere to DOCSIS 3.1 standards and/or were generated utilizing high order quantization techniques, such as QAM 1024, 8PSK, and COFDM.

The **FIBT-1310** is built with a directly modulated DFB laser, providing low noise and high linearity performance. The RF AGC and pre-distortion circuit ensures the optimum laser drive level for the best overall CNR, CSO, and CTB operation. The transmitter is available in power output levels ranging from +6 dBm (4 mW) to +15 dBm (31 mW) to satisfy various system topologies and supports an increased band-edge to 1218 MHz for DOCSIS 3.1 applications.

Laser output power, unit temperature, and RF input level are accurately monitored by a built-in microprocessor and shown on the front panel LCD display, in addition to the unit function messages. Remote status monitoring is provided through SNMP network management.

### ORDERING INFORMATION

| MODEL          | STOCK#          | DESCRIPTION  |
|----------------|-----------------|--|
| FIBT-1310-06   | <b>7603 06</b>  | Fiber Optic Transmitter, Single-mode, DFB Laser; 1310 nm, +6 dBm Output    |
| FIBT-1310-10   | <b>7603 10</b>  | Fiber Optic Transmitter, Single-mode, DFB Laser; 1310 nm, +10 dBm Output   |
| FIBT-1310-13.5 | <b>7603 135</b> | Fiber Optic Transmitter, Single-mode, DFB Laser; 1310 nm, +13.5 dBm Output |
| FIBT-1310-15   | <b>7603 15</b>  | Fiber Optic Transmitter, Single-mode, DFB Laser; 1310 nm, +15 dBm Output   |

# FIBT-1310 SERIES

## SPECIFICATIONS



| OPTICAL                |  |
|------------------------|--|
| Operating Wavelength   | 1310 nm ± 20 nm  |
| Optical Power Output   | 3 dBm (2 mW), 6 dBm (4 mW), 10 dBm (10 mW), 12 dBm (16 mW) & 15 dBm (31 mW)  |
| Laser Type             | Class 1 DFB (directly modulated; Hazard Level 1). The 3 dBm model is built with an uncooled laser. The 6 & 10 dBm models are available with either a cooled or uncooled laser. The 12 & 15 dBm models employ only cooled lasers. |
| Beam Divergence Angle: | 8° max   |
| Connector              | SC/APC<br>(FC/APC connection adapter is sold separately for applications requiring it. See below under "Accessories")  |

| LINK PERFORMANCE * |                                      |
|--------------------|--------------------------------------|
| CNR                | ≥ 51 dB (see Optical Link C/N Table) |
| CSO                | < -62 dBc                            |
| Operating Humidity | < -65 dBc                            |

\* 77 CW carriers (50-550 MHz) and digital channels (550 - 1218 MHz, RF level 10 dB lower) at -1 dBm optical input into a Blonder Tongue FTTB receiver.

| RF              |             |
|-----------------|-------------|
| Connector       | "F" Female  |
| Frequency Range | 47-1218 MHz |
| Input Level     | 15-25 dBmV  |
| Flatness        | ±1.0 dB     |
| Impedance       | 75 Ω        |
| Return Loss     | ≥ 16 dB     |
| AGC Range       | 0-15 dB     |
| MGC Range       | 0-15 dB     |

| GENERAL                |   |
|------------------------|---|
| Dimensions (W x H x D) | 19.0 x 1.75 x 15.31 in<br>(483 x 44 x 369 mm) |
| Weight                 | 7.0 lbs (3.18 kg)                             |

| POWER                       |                           |
|-----------------------------|---------------------------|
| Power Supply                | 100-240 VAC 50/60 Hz      |
| Power Consumption           | 15 W                      |
| ENVIRONMENTAL               |                           |
| Operating Temperature Range | 32 to 113 °F (0 to 45 °C) |
| Relative Humidity           | 0 to 95%, non-condensing  |

| ALARMS & MONITORING    |  |
|------------------------|--|
| Local Monitoring       | 1x Status Tri-Color LED<br>(Red, Green, Amber)                                 |
| Local Control          | <b>Display:</b> LCD<br><b>Navigation:</b> 3 Buttons for LCD<br>(Up/Down/Enter) |
| Remote Monitor/Control | <b>SNMP:</b> RJ45 Connector @<br>100/1G  |

## ACCESSORIES

| STOCK#         | STOCK# | DESCRIPTION                                    |
|----------------|--------|--|
| FC/APC Adapter | 7607   | SC/APC Male to FC/APC Female Connector Adapter |

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## SPECIFICATIONS



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## 1310nm FIBER OPTIC TRANSMITTERS

### OPTICAL LINK C/N TABLE

| OPTICAL LOSS (dB) | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   |
|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| FIBT-1310-06      | 52.0 | 51.0 | 50.1 | 49.1 | 48.1 |      |      |      |      |      |      |      |
| FIBT-1310-10      |      |      |      |      | 51.9 | 51.0 | 50.1 | 49.1 | 48.2 |      |      |      |
| FIBT-1310-13.5    |      |      |      |      |      |      |      | 52.3 | 51.3 | 50.4 | 49.5 |      |
| FIBT-1310-15      |      |      |      |      |      |      |      |      |      | 51.9 | 50.9 | 49.9 |

### FUNCTION BLOCK DIAGRAM

