



ISO 9001 Registered

ITU GRID DWDM RETURN PATH TRANSMITTER

FSX-TXUQ
DTX-TXUQ



The IPITEK return path transmitter is a direct modulation 1550 nm laser transmitter with output wavelengths based on the International Telecommunications Union (ITU) grid frequency plan. It is an integral part of the IPITEK Dense Wave Division Multiplex (DWDM) transport system. The transmitter transports QPSK, 16 QAM or 64 QAM modulated signals being returned to a hub or head-end. The system bandwidth and specifications provide optimum performance with narrow or wide band return signals. In system applications, the transmitter allows system providers the ability to combine multiple return path signals for efficient transport and maximum utilization of valuable system fiber assets.

The transmitter offers the unique ability to tune the output wavelength over a range of three 100 GHz spaced ITU channels. This enables the transmitter to be used as a replacement for multiple transmitters and can substantially reduce spares inventory. The transmitter can be tuned directly at the unit or can be

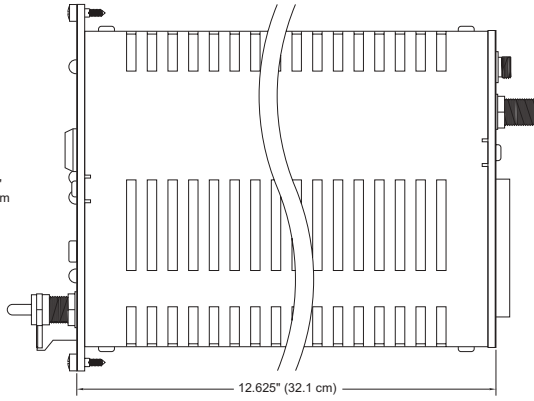
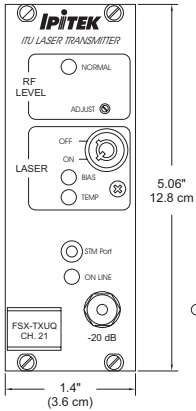
- ### FEATURES & BENEFITS
- Provides Maximum Fiber Usage when Integrated in DWDM Systems
 - Optimized Performance for Return Signals, Including QAM and QPSK
 - Local or NMS Tunable over 3 - 100 GHz Channels for Optimum Flexibility
 - Compatible with IPITEK Optical Amplifiers and DTX Receivers for Long Distance Transmission
 - Compact Size Allows up to 8 Tx's (DTX) or 10 Tx's (FSX) in One Chassis

managed through the IPITEK Network Management System.

The FSX/DTX-TXUQ transmitter can be operated as a stand alone transmitter or as part of an IPITEK DWDM system. The transmitter is fully compatible with IPITEK optical amplifiers, which allows system operators to create systems with longer link budgets and larger service areas. Since the transmitter output is on the ITU grid frequency plan, the unit may be integrated into a larger DWDM system which may include other signals with comparable levels. This also allows the user to create system designs which provide equipment or route redundancy or a combination of both applications.

As an integral part of the IPITEK FSX and DTX systems, the FSX/DTX-TXUQ can be integrated into a chassis as either a complete system or intermixed with other transport modules.

MECHANICAL



SPECIFICATIONS

Optical

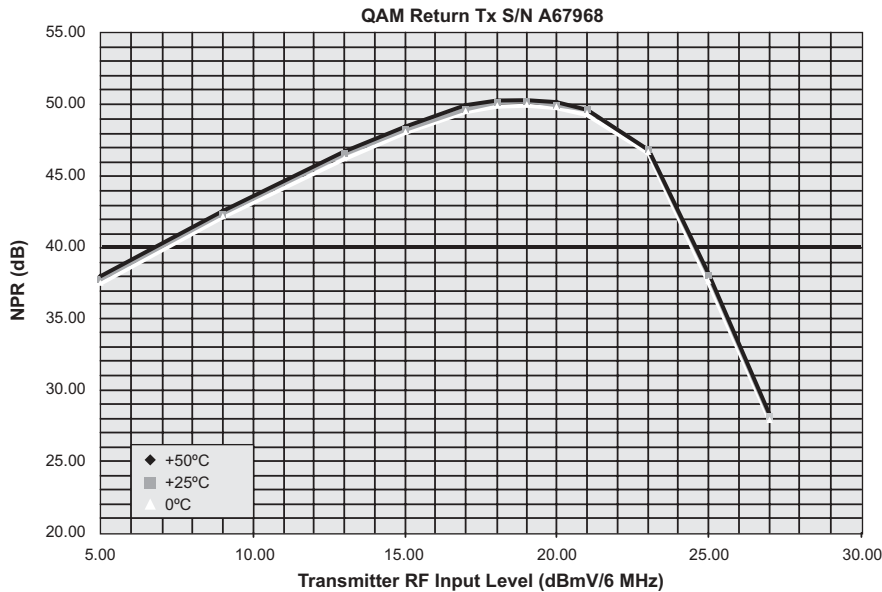
Laser Type: 1550 nm ITU Grid based Laser Transmitter
Optical Wavelength: Typical match to Optical Multiplexer 1530.33 nm (ITU Ch. 59) to 1561.42 nm (ITU Ch. 20)
Spacing: Capable of 100 GHz spacing
Optical Output: 6, 8 or 10 mW avg output power
Wavelength Stability: ±0.1 nm over 24 hours at operating temperature, typically ±0.01 nm
Noise Power Ratio: > 40 dB over 15 dB dynamic range

Electrical

RF Bandwidth: 5 - 300 MHz
Nominal Bandwidth: 5 - 42 MHz US/Canada
 5 - 65 MHz International
Input Signal: QPSK, 16 QAM, 64 QAM
Input Signal Level: +20 dBmV ±5 dB/channel
Input Impedance: 75 ohms

Environmental

Operating Temperature: 0°C to 50°C
Storage Temperature: -40° to 70°C
Humidity: 5% to 85% non-condensing
Power Consumption: 27 watts max.



ORDERING INFORMATION

FSX-TXUQ	- 300	- N15	- IXX	- PXX	- FT	- XX	- X
12-SLOT FSX COMPATIBLE UPSTREAM ITU TRANSMITTER	Bandwidth 300 = 5-300 MHz	Wavelength N15 = 1550 nm	ITU Channel # IXX = Channel #(20 to 59) I20 = Channel #20 I21 = Channel #21 ⋮ I59 = Channel #59	Output Power P06 = 6 mW avg P08 = 8 mW avg P10 = 10 mW avg	RF Connector FT = F-Type	Optical Connector FC = FC SC = SC E2 = E-2000	Polish A = APC P = UPC

DTX-TXUQ	- 300	- N15	- IXX	- PXX	- FT	- XX	- X
10-SLOT DTX COMPATIBLE UPSTREAM ITU TRANSMITTER	Bandwidth 300 = 5-300 MHz	Wavelength N15 = 1550 nm	ITU Channel # IXX = Channel #(20 to 59) I20 = Channel #20 I21 = Channel #21 ⋮ I59 = Channel #59	Output Power P06 = 6 mW avg P08 = 8 mW avg P10 = 10 mW avg	RF Connector FT = F-Type	Optical Connector FC = FC SC = SC E2 = E-2000	Polish A = APC P = UPC



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IPITEK reserves the right to modify product specifications without prior notification.