

QFRF FT1302EG Optical Transmitter

Transmitter Highlights

- Transmits NTSC, PAL, digital, or compressed digital information for CATV and/or telephony applications
- 1310nm operation
- Optically isolated distributed AM feedback laser with predistorter
- 47-1000MHz RF input bandwidth
- Up to 110 NTSC channels
- Front panel RF test point
- Low RF drive levels required due to built-in RF amplifier
- Microprocessor-controlled diagnostic testing from front panel or remote monitoring
- Optional industry standard RS-232 status monitoring interface



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General Station Description

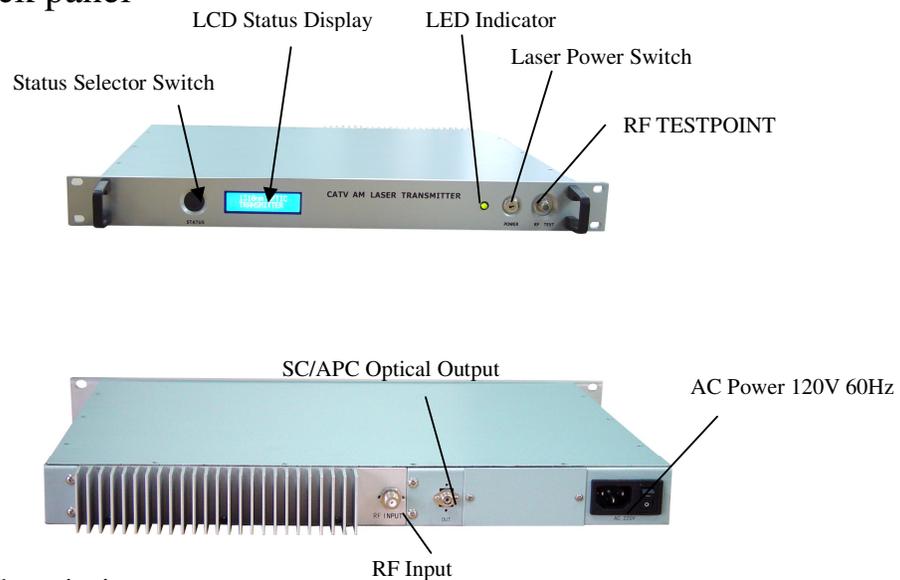
The FT1302EG AM laser transmitter delivers high performance signal transmission of NTSC, PAL, digital or compressed digital information for CATV and/or telephony applications. It is based upon custom high-linearity, optically isolated DFB (Distributed Feedback) lasers, which are specifically designed for multi-channel AM video applications. The unit also features a GaAs driver amplifier and predistorter circuit, which together provide exceptionally low noise and intermodulation characteristics. Automatic output power control, coupled with temperature stabilization provided by a thermoelectric cooler, ensures maximum performance and longer laser life.

The units are packaged in slim 1.75 inch high, 19 inch rack-mounted enclosures. Each unit is fitted with a self-contained UL-Listed power supply with 85-254V AC input, 47-63 Hz for International use.

ALL internal laser parameters and monitoring functions are under microprocessor control: the front panel VFD displays status information related to laser operation. Optional Alarm relay

contacts on the back of the unit can provide remote warning in the case of a disabled transmitter.

Front / back panel



Operation description

A working status LED indicator is near the power supply keyswitch on the front panel. When it is green, the transmitter is working properly. Red indicates the laser output is disabled, and a Red Blinking LED indicates an alarm condition.

1. When AC power is first applied, the front digital panel should display “ READY : KEY OFF” , and the LED will be Red.
2. In order to protect the laser, there is a time-delay function built into the laser bias circuit. After turning the keyswitch ON, the laser will power up after 10 seconds, and the LED Indicator will turn from Red to Green.
3. At this time, the front panel VFD will display the transmitter model number, and the user can read out the related parameters by pressing the STATUS button, displayed on the digital screen (LCD) on the front panel:
 1. Model: ONT-8602AS (FT1302E)
 2. POWER (mW) : Displays the optical output power in dBm
 3. TEMP: Displays the laser temperature in degrees C.
 4. BIAS (mA): Displays the laser bias current in mA.
 5. COOLING/HEATING (mA): Displays the amount of current that the Thermoelectric Cooler requires to maintain the laser temperature at 25 degrees C.
 6. READS the +5V DC supply voltage
 7. READS the +24V DC supply voltage
 8. READS the -5V DC supply voltage
4. If any faults listed above have occurred, there will be alarm (Red LED Blinking), the Micro-processor will shut down the laser automatically, and the digital panel will show the cause of the fault.

Technical index

Model	FT1302EG/ONT-8602AS
Optic power (mW)	≥ 2
Link loss (dB)	6
Wavelength (nm)	1310 nominal
Connector	SC/APC
Bandwidth (MHz)	45~1000
Channel	77 NTSC
CNR (dB)	51
CTB (dBC)	-65
CSO (dBC)	-60
RF input level (dBmV)	23
Flatness (dB)	± 0.86
Power consumption (W)	24
Voltage (VAC)	110~254, 47-63 Hz
Working temperature (C)	0~45
Size (mm)	483×385×44 (19 " × 15 " × 1.86 ")

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