

### RF/CATV Wideband Transmitter

The RFV-870/XMT is a high quality, full featured, cost effective CATV transmitter designed around the latest optical component technology to reliably deliver a full slate of multiplexed video, high speed data and telephony services in an HFC broadband environment.

A comprehensive lineup of DFB laser offerings provides superior performance over a wide range of optical budgets to 21-25dB, allowing unrepeated spans of over 60-70km (38-45 miles) when used in conjunction with high performance, high-sensitivity node receivers like the RFV-100ND/RCV. The unit is ideally suited for direct fiber transmission of CATV RF signals in FTTC, FTTH, MDU, industrial, corporate, government, educational or other I-Net applications where a high performance, compact, standalone transmitter is required.

### System Design

The RFV-870/XMT is a rugged, self-contained device with exterior RF and optical connections and test points. The field-configurable SC-APC (or FC-APC) optical output connector can be mounted on the front or rear-panel. The RFV-870/XMT is forced air cooled via an external high-MTBF fan, which is designed to be field-replaceable without interrupting operation. The unit features a unique provision which allows the unit to perform as a stand alone transmitter or as a rack mount transmitter with the RFVTLL-RMKIT (optional). Up to (3) RFV-870's can be mounted in a 1RU (1.75") 19" EIA space with each kit.



### Features

- Unique, self-contained, low-profile, rugged package for low-density stand alone CATV applications
- Low power consumption; runs cool
- 48-870MHz bandwidth supports most analog and QAM digital broadband Transport applications
- Wide range of 2mW to 31mW DFB laser options for TX launch power from 3dBm to 15dBm
- Unsurpassed noise and distortion performance at all optical powers
- External RF and Optical Test Points facilitate optical circuit set-up and maintenance

865	1310	1550	Type	Mode	Wavelength Suffix	Fiber Type	Output Power	Receiver Sensitivity	Optical Loss Budget	Range*	Conn Type
	•		Laser	SM	L2	09/125μ	3 to 15 dBm	---	---	---	SC

\* Chromatic dispersion and additional losses should be taken into account

## Specifications

Input frequency range	48MHz to 870MHz
Frequency response	+ 1.0 dB
Optimum input level	+18dBmV/carrier minimum
Input return loss	>15dB
Optical output power	3, 6, 8, 10, 12, 14 or 15 dBm
Distortion performance	Measured at input level of +18dBmV/carrier to 547.25MHz (77 channels) and simulated digital loading @ 6dB reduced level from 550MHz to 870MHz
	CSO >60dB down
	CTB >62dB down
Input adjustment range	4dB minimum to +22dBmV/carrier
RF test point	Set to +10dBmV/carrier for optimum performance
Carrier to noise	Measured with high sensitivity RFV-100ND/RCV receiver. At 0dBm optical input >52dB
Power requirements	<10watts - 90V <sub>AC</sub> to 240V <sub>AC</sub> @ 50-60Hz
Test points	RF Test Point: Type F
Optical power test	Test Jack 1V/mW for 3-6dBm, and 0.1V/mW for 8-15dBm.
Laser current test jack	- 1V/50mA
RF connector	RF input: Type F
Impedance	75Ω

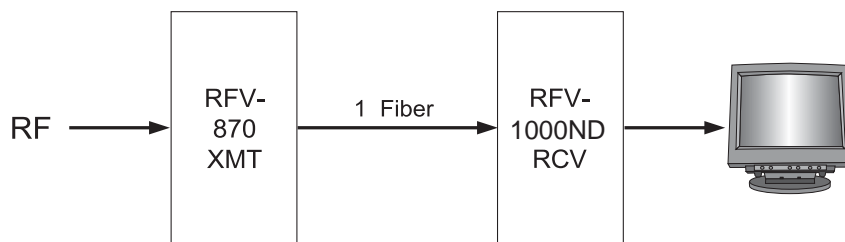
## General

Optical connector	SC/APC -standard; FC/APC - optional
Cooling	Fan-cooled forced air. Fan is removable without interrupting operation
Size	5 15/32" (W) x 1 3/8" (H) x 7 5/8 " (D)
Weight	1.5 lbs. / 0.68 kg
Power connector	IEC 320 w/ 5x20 0.5A Slo Blo Fuse
Temperature	Operating: -40° C to +74° C; Storage; -55° C to +85° C
Humidity	0 to 95% non-condensing
Operating voltage	12 V <sub>DC</sub> (200 mA) or 24 V <sub>AC</sub> (300mA) or 110/220 V <sub>AC</sub>
Vibration/Shock	Up to 5 g's/Up to 12 g's

## Diagnostics

Status monitoring	LED indication
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## Sample Configuration



Optiva™ Configurable Communication Platform
Network Management
SDI & HD-SDI
Composite Video, Audio & Data
RGB/VGA/DVI
Audio/FSK/Intercom
Data (Ethernet/Serial/USB)
CATV/RF & L-Band
Optical Switching, Routing & Redundancy
Passive Multiplexing Solutions
Enclosures, Racks & Frames
Power Supplies & Accessories

