Specification

of
3Ru 1310nm Forward Path Transmitter Module
for CATV Integrate system
FTX-3U1310xxxUM Series

Universal Microelectronics
Photonics Division
Catalog 2008~ 2009

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3Ru forward transmitter module for CATV integrate system

Features

- Module design for 19” standard 3U rack
- High quality DFB laser
- Status/ Power in/ RF in LED display
- Numeral LED display
- Alarm LED
- AGC/ MGC
- RF test point
- Keyless design
- Hot swap
- Support NTSC–79 / PAL-64Channels

Applications

- Cable TV integrate system

1. Introduction

These compact amplitude-modulated transmitters are packaged as convenient plug-in modules and incorporate an RF driver, a DFB laser diode, advanced pre-distortion electronics, and a front panel-mounted RF monitor connector. A three-digit numeric display and easy-to-use pushbutton adjustments are provided for local monitoring of performance and control.

2. Function

1. Hot swap plug-in module.
2. Optical output power is 06mW.
3. Up to 870MHz transmission bandwidth.
4. AGC ±5dB control range.
5. OMI level ±3dB control range.
6. RF front-panel monitor point.
7. Front panel numeric display and pushbutton controls provide ready access to performance parameters.
8. Alarm number display. Alarm number and description is listed below.

Alarm Number	Description
001	Optical Output Power Low

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002	Optical Output Power High
003	LD Bias High
004	LD Temperature High
005	RF Input Low
006	Fan Fault
007	Environmental Temperature High
008	TEC Current High

9. Built in SPI interface to connection NMS module, HMS compatible with SCTE standard.
10. HMS SNMP variables are listed below.

heOpTxUnitOutputStatus

heOpTxInputRFPower

heOpTxInputAGCMode

heOpTxInputRFPadLevel

heOpTxLaserTemp

heOpTxLaserBiasCurrent

heOpTxLaserOutputPower

heOpTxLaserType

heOpTxLaserWavelength

heOpTxLaserOutputStatus

heFanUnitAlarm

heFanStatusAlarm

3. Optical Specifications

Output Wavelength	1310±10nm
Output Power	06 , 08 , 10 , 13 , 16 , 20 mW
Connector Type	SC/APC

4. RF Specifications

Operational Bandwidth	45 to 870MHz
Input channels	NTSC 79 channels
Input Level	15 to 25dBmV/ch, with AGC mode
AGC±5dB RF Variation	Max. 1.0dB

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CSO (Note1,2)	Min. 63dB
CTB (Note1,2)	Min. 67dB
Flatness	Max. ±0.75dB
Return Loss	Min. 16dB
Impedance	75Ω
Connector Type	F Female

Note1: Testing Temperature：0~50℃

Note2: Optical link (fiber 20 km + attenuator), Receiver input power: -1dBm

5. CNR Link Performance

Output Power \ Link Loss (dB)	07	08	09	10	11	12	13	14	15
06mW (08dBm)	53	52	51	50					
08mW (09dBm)		53	52	51	50				
10mW (10dBm)			53	52	51	50			
13mW (11dBm)				53	52	51	50		
16mW (12dBm)					53	52	51	50	
20mW (13dBm)						53	52	51	50

6. User Interface (Front Panel)

STATUS LED	Green = Normal, Red=Alarm
LD ON LED	Green = Laser is ON No light = Laser is OFF
RF IN LED	Green = RF input power is normal No light = RF input power is abnormal
OPT PWR LED	Green = LED display show optical output power (mW)
AGC SET LED	Green = LED display show AGC level
MGC SET LED	Green = LED display show MGC level
ALARM LED	Green = LED display show alarm status number
▲,▼,**SET** Push Button Switch	Select display and set function item
TP, RF Test Point	F type, -20±1dB

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7. Electrical/Environmental/Mechanical

Power Consumption	16 Watt
Fan Function	DC12V/3pin, include monitor pin for fan alarm
Occupy 1 Slots	Any One Slot from Slot #2 to Slot #11
Operational Temperature Range	0 to 50℃ (32 to 122℉)
Storage Temperature Range	-40 to 70℃ (-40 to 158℉)
Relative Humidity	Max. 85% non-condensing
Dimensions	30.1mm **W** (x1 slot) x 129.7mm **H** x 412.9mm **D**
Weight	1.0 Kg

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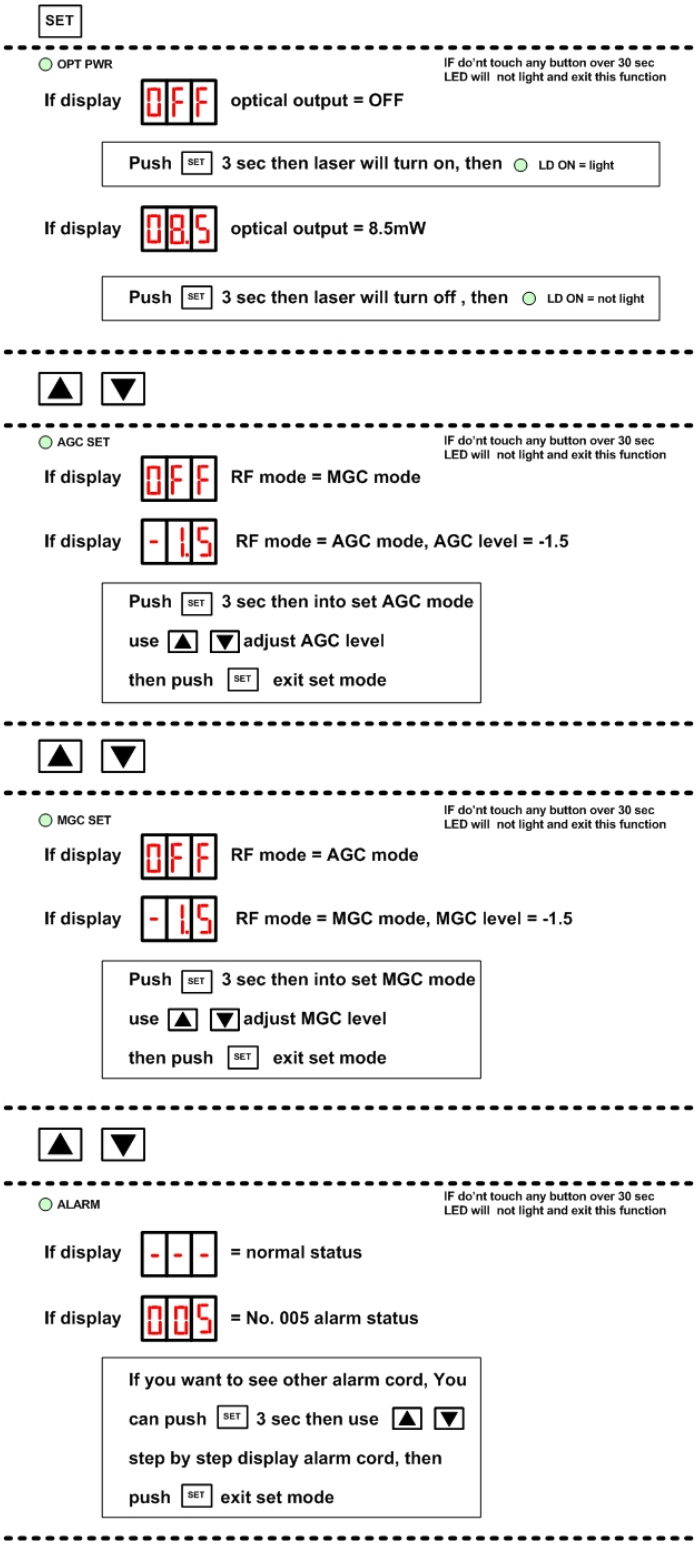
8. Front Panel Numeric Display Operation Description

First push SET into LED display and set function



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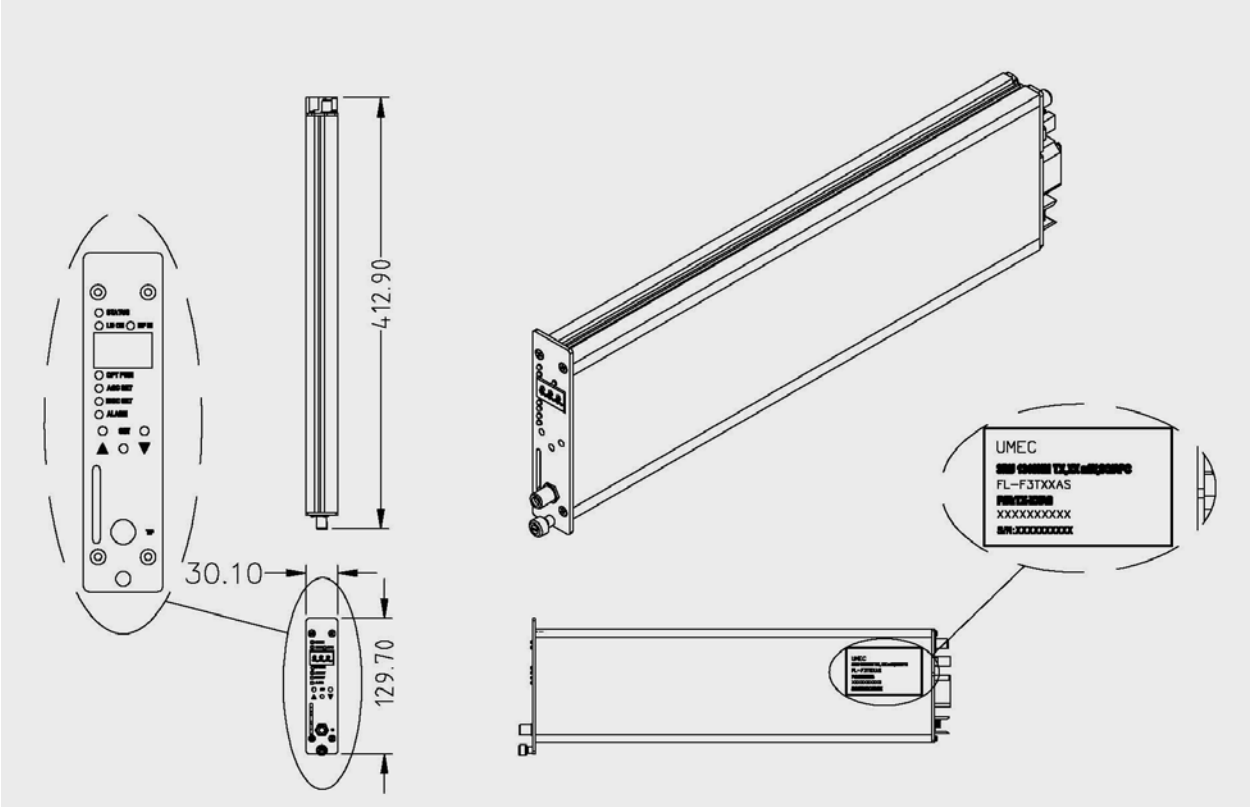
9. Drawing



Ordering Information

FTX- 3U-1310-XX –X-UM

- Input Channels:
  - N = NTSC-78channels
  - P = PAL-64 channels
- Out put power:
  - 06 = 6mW
  - 08 = 8mW
  - 10 = 10mW
  - 13 = 13mW
  - 16 = 16mW
  - 20 = 20mW
- Wavelength: 1310nm
- 3Ru type
- Forward Transmitter Module

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