# Luxglo OTC 1310nm CATV Transmitter

The Luxglo TCDT13 transmitter module is a flexible, high quality forward path transmitter for use in HFC networks. This low noise directly modulated transmitter supports a full 78 NTSC channel loading, has advanced distortion pre-compensation, Automatic Power Control, and a cooled DFB laser with isolation making it one of the most stable, trouble free and versatile transmitters in its price range. It is a member of the Luxglo OTC (Optical Transport Chassis) product family that includes HFC and RFoG return path receivers, EDFAs, 1550nm QAM transmitters along with the 14 slot OTC chassis. The Luxglo 1310nm transmitter module houses one complete optical transmitter in a 1 slot wide package, allowing a single 4RU Luxglo OTC chassis to support as many as 14 HFC nodes, with standard power transmitters. By using optional high output transmitters, (up to 13dBm), the optical outputs may be split allowing higher density applications in a single OTC chassis. As with all other module types, the Luxglo TCDT13 transmitter may be configured and monitored locally via the OTC chassis controls, or remotely using SNMP, allowing it to be easily integrated to your network operations systems.

## Features and Benefits

- Fully automatic gain and power controls provide exceptional stability and linearity.
- Wide frequency range from 47 to 1000 mHz for current and future network applications.
- Distortion pre-compensation allows high fidelity links over long distances for high video quality.
- Remote management using SNMP allows easy integration to standard operations systems.
- Optional output power selections support a wide variety of HFC network configurations.
- Advanced protection circuitry with alarms provides Automatic Laser Shutdown.
- Low power consumption. 16 Watts per module for low cost ongoing operations.
- Status indicators, RF monitor and Hot-swappable design for easy diagnostics & maintenance.
- Keyed laser shut-down switch allows safe maintenance of the optical network
- and components.
- Luxglo OTC Transport system allows flexible deployments and consistent operations

## Applications

- Traditional HFC deployments
  Point to point video transport
- Video distribution

## Generic Specifications

### General

| Dimensions W x H x D | 1.2" x 5.12" x 14.6"  (1 wide chassis slot) |
|---|---|
| Weight | 2.5Lbs. (1.13kg) |
| Transmitters per module | 1 independent transmitter per module |
| Optical connectors | SC/APC  on front panel |
| RF Connectors | 75Ohm, Female "F" connectors |
| Replacement | Plug-in, hot swappable |
| Modulation | Directly modulated |

### Optical Performance

| Output wavelength | 1290nm to 1330nm (1310 typical at 25C) |
|---|---|
| Output power | 6-13 dBm |
| CNR | >51 dB |
| CSO | <-60 dBc |
| CTB | <-65 dBc |

### RF Performance

| RF Bandwidth | 47 to 1000 MHz |
|---|---|
| RF input level | 24dBmV  +3/-2 |
| Channel loading | 78 NTSC channels + 44QAM channels |
| RF return loss | >16dB  (into 75 ohm load) |
| RF Monitor | -20dB  referenced to input RF power |

### Electrical Requirements

| Power consumption | 16  Watts Max |
|---|---|

### Environmental

| Operating temp range | 0 to +50C |
|---|---|

### Management

| The Luxglo TCDT13 is managed via OTC controller.  Front panel controls on the transmitter provide local monitoring & | |
|---|---|
| Local management | Backlit LCD display with menus and navigation control buttons |
| Remote management | RJ45/LAN with SNMP |
| Transmitter controls | Transmitter enable/disable AGC mode MGC OMI, alarm suppression |

# Ordering Information

**(OTC Plug-in module, directly modulated, 1310nm CATV transmitter)**

The Luxglo TCDT13 transmitter module can be ordered and customized to your specific needs as follows:

# TCDT13-pp

**pp =** Optical output power/port dBm   **(6, 8, 10, 12, 13)** No entry defaults to +6dBm

# Mechanical Drawings

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