



LTB3477 2488/1244 Mb/s P2MP OLT Burst Mode 2x10 SFF G-PON 20 km DFB / APD Transceiver

The LTB3477 is a low cost point to multi point (P2MP) Fiber to the Home, Business or Curb (FTTx) G-PON OLT transceiver. It is designed for 2488.32 Mb/s downstream / 1244.16 Mb/s upstream duplex data links that employ high-speed burst mode TDM receivers/transmitters. It is based on the ITU-TG.984.2 Class B+ and the FSAN Class B+ specifications for bidirectional communications over a single fiber and incorporates a high performance 1310 nm Burst Mode APD/TIA receiver and 1490 nm CW mode DFB transmitter with internal optical isolator. It is intended to serve up to 32 subscribers over distances of up to 20 km. The Receiver Loss of Signal (Rx_LOS), Transmit Disable (Tx_DIS), Transmit Fault (Tx_FAULT) and the Page A0 (HEX) I²C diagnostic interface (equivalent to SFP MSA specification) monitor and control functions are LVTTTL compatible. The Receiver Reset (Rx_RESET) control function is LVTTTL compatible. The industry standard 2x10 small form factor (SFF) package incorporates a pigtail fiber with SC/APC or SC/UPC optical connector. It is fabricated with a rugged die cast metal housing and cage assembly. Commercial (0°C to +70°C) and industrial (-40°C to +85°C) temperature ranges are available.



Applications

- Access Networks
- Fiber to the Home, Curb, Office (FTTx)
- Point to Multi Point Service (P2MP)
 - Up to 20 km Reach (32:1 Split)
 - IUT-T G.984.2 Class B+ OLT
 - FSAN Class B+

- 1490 nm CW Mode DFB Laser with Isolator
- ITU-G.984.2 Complaint
- Single 3.3 Volt DC supply
- Low Power Consumption
- 2x10 SFF Package Outline
- Single Fiber, Full Duplex Operation
- Fiber Pigtail with Optional Optical Connector
- Temperature Options:
 - C = 0 to +70°C
 - H = -40°C to 85°C

- Tx DATA
 - LVPECL Differential Data Interface
 - Internally AC Coupled and Terminated
- Rx DATA
 - LVPECL Differential Data Interface
 - Internally DC Coupled
- LVTTTL Monitor and Control Interfaces
 - Rx Loss of Signal
 - Rx RESET
 - Tx Disable
 - Tx Fault
 - I²C Serial Data (Page A0 HEX)
 - I²C Serial Clock

Features

- Dual Wavelength Bidirectional Transceiver
- 2488.32 Mb/s Downstream
- 1244.16 Mb/s Upstream
- BER < 10⁻¹⁰, 1244 Mb/s, PRBS 2²³-1
- 1310 nm APD/TIA Burst Mode Receiver

RECOMMENDED OPERATING CONDITIONS					
Parameter	Symbol	Min	Typ	Max	Units
Case Operating Temperature - Industrial	T _{case}	-40	+25	+85	°C
Case Operating Temperature - Commercial	T _{case}	0	+25	+70	°C
DC Supply Voltage	V _{CC}	3.135	3.3	3.465	Volts
Module Supply Current	I _{IN}	-	200	250	mA
Module Power Dissipation	P _D	-	660	850	mW
Downstream Signaling Speed +/- 100 ppm	S _{down}	-	2488.32	-	Mb/s
Upstream Signaling Speed +/- 100 ppm	S _{up}	-	1244.16	-	Mb/s
Useful Reach (32:1 Split)	D	-	20	-	km
ORDERING INFORMATION					
Part Number	Package Option		Temperature Option		
LTB3477 AC	A	Pigtail, no connector	C	Commercial Temperature	
LTB3477 AH	A	Pigtail, no connector	H	Industrial Temperature	
LTB3477 BC	B	Pigtail, SC/APC	C	Commercial Temperature	
LTB3477 BH	B	Pigtail, SC/APC	H	Industrial Temperature	
LTB3477 CC	C	Pigtail, SC/PC	C	Commercial Temperature	
LTB3477 CH	C	Pigtail, SC/PC	H	Industrial Temperature	
1. Fiber pigtail is 9/125/250 micron non dispersion shifted single mode fiber; nominal pigtail fiber length is 1 meter 2. Optical connector dust cap is of the "T-Type" 3. Fiber pigtail and optical connector meet the requirements of Telcordia GR-326-CORE (1999/09/02)					