



## LTB3677 2488/1244 Mb/s P2MP OLT Burst Mode 2x10 SFP G-PON 20 km DFB / APD Transceiver

The LTB3677 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), the Burst Mode Receiver Reset (Rx\_RESET), Transmit Disable (Tx\_DIS), Transmit Fault (Tx\_FAULT) and the 8472 I<sup>2</sup>C diagnostic interface monitor and control functions are LVTTTL compatible. The industry standard 2x10 small form pluggable (SFP) package incorporates the SC receptacle. 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. RoHS compliant models are offered.



### 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+
- 2488.32 Mb/s
- 1490 nm DFB Laser
- Internal Optical Isolator
- Upstream Burst Mode Receiver
  - 1244.16 Mb/s
  - BER < 10<sup>-10</sup>, PRBS 2<sup>23</sup>-1
  - 1310 nm APD/TIA Detector/Amplifier
- Single 3.3 Volt DC supply
- Low Power Consumption
- 2x10 SFP Package Outline
  - Bail Latching Mechanism
  - SC Optical Receptacle
- Temperature Options:
  - C = 0 to +70°C
  - H = -40°C to 85°C
- Tx DATA
  - LVPECL Differential Data Interface
  - Internally AC Coupled / 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
  - I<sup>2</sup>C Serial Data
  - I<sup>2</sup>C Serial Clock

### Features

- Bidirectional Transceiver
  - Dual Wavelength
  - Single Fiber
  - Full Duplex Operation
  - G.984.2 Compliant
- Downstream CW Mode Transmitter

RECOMMENDED OPERATING CONDITIONS					
Parameter	Symbol	Min	Typ	Max	Units
Case Operating Temperature - Industrial	T <sub>case</sub>	-40	+25	+85	°C
Case Operating Temperature - Commercial	T <sub>case</sub>	0	+25	+70	°C
DC Supply Voltage	V <sub>CC</sub>	3.135	3.3	3.465	Volts
Module Supply Current	I <sub>IN</sub>	-	200	250	mA
Module Power Dissipation	P <sub>D</sub>	-	660	850	mW
Downstream Signaling Speed +/- 100 ppm	S <sub>down</sub>	-	2488.32	-	Mb/s
Upstream Signaling Speed +/- 100 ppm	S <sub>up</sub>	-	1244.16	-	Mb/s
Useful Reach (32:1 Split)	D	-	20	-	km
ORDERING INFORMATION					
Part Number	Temperature Option				
LTB3677 BC	C	Bail Latch, Commercial Temperature			
LTB3677 BH	H	Bail Latch, Industrial Temperature			
LTB3677 BCR	C	RoHS Compliant, Bail Latch, Commercial Temperature			
LTB3677 BHR	H	RoHS Compliant, Bail Latch, Commercial Temperature			