



The LTB3669 is a low-cost 2488.32 Mb/s downstream and 1244.16 Mb/s upstream G-PON bidirectional transceiver designed to meet the requirements of the ITU-T G.984.2 specification for point to multi point service in advanced “triple play” Optical Network Termination (ONT) or Optical Network Unit (ONU) equipment. It incorporates a high performance 1310 nm burst mode DFB transmitter and 1490 nm CW mode APD receiver. 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 I²C diagnostic interface monitor and control functions are LVTTTL compatible. The industry standard small form pluggable (SFP) package incorporates the SC receptacle. It is fabricated with a rugged die cast metal housing and cage assembly, is Class I laser safety compliant and meets the EEC Directive 2002/95/EC for RoHS compliance.



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+ ONU
 - FSAN Class B+

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 DFB Burst Mode Laser
- 1490 nm CW Mode APD/TIA Receiver
- ITU-G.984.2 Complaint
- Single 3.3 Volt DC supply
- Low Power Consumption
- SFP Package Outline
- SC Receptacle, Full Duplex Operation
- Temperature Options:
 - C = 0 to +70°C
 - H = -40°C to 85°C

Electrical Interface

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

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	Sup	-	1244.16	-	Mb/s
Useful Reach (32:1 Split)	D	-	20	-	km

ORDERING INFORMATION

Part Number	Package Option		Temperature Option	
LTB3669 BC	B	SC Duplex Receptacle	C	Commercial Temperature
LTB3669 BH	B	SC Duplex Receptacle	H	Industrial Temperature