



## LTB3665 2488/1244 Mb/s P2MP ONU Burst Mode 2x5 SFF RoHS G-PON 20 km DFB APD Transceiver

The LTB3665 is a low-cost 2488.32 Mb/s downstream and 1244.16 Mb/s upstream G-PON bidirectional ONU 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 LVTTTL compatible Tx Disable feature controls the burst mode laser transmitter and the LVTTTL compatible Rx Signal Detect feature monitors the optical input signal. The industry standard 2x5 small form factor (SFF) 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

- G-PON Access Networks
- G-PON Uplink Services
- Fiber to the Home, Curb, Office
- Point to Multi Point Service (P2MP)
  - 20 km Reach
  - 32:1 Splitting Ratio

### Features

- Single Fiber, Full Duplex Operation
- 2x5 SFF with SC Optical Receptacle
- 2x5 SFF MSA Footprint
- Dual Wavelength Bidirectional Tx/Rx

- 1244 Mb/s Burst Mode 1310 nm DFB Tx
- 2488 Mb/s CW Mode 1490 nm APD Rx
- ITU-T G.984.2 G-PON
- Single 3.3 Volt DC supply
- Power Consumption < 700 mW
- Rugged Metal Enclosure
- BER < 10<sup>-10</sup> (PRBS = 2<sup>23</sup>-1)
- Temperature Options:
  - C = 0 to +70°C
  - H = -40°C to 85°C
- Tx Data Input
  - LVPECL Differential Interface
  - DC-Coupled
- Rx\_Data Output
  - LVPECL Differential Interface
  - AC-Coupled
- Tx\_DISABLE Logic Input
  - Burst Mode
  - LVTTTL Interface
- Rx\_SIGNAL DETECT Logic Output
  - LVTTTL Interface

Recommended Operating Conditions					
Parameter	Symbol	Min	Typ	Max	Units
Ambient Operating Temperature	T <sub>amb</sub>	-40	25	+85	°C
DC Supply Voltage	V <sub>CC</sub>	3.135	3.3	3.465	Volts
Module Supply Current	I <sub>IN</sub>	-	150	300	mA
Module Power Dissipation	P <sub>D</sub>	-	500	700	mW
Tx Signaling Speed +/- 100 ppm	STx	-	1.24416	-	GBd
Rx Signaling Speed +/- 100 ppm	SRx	-	2.48832	-	GBd
Useful Reach (32:1 Split)	D	-	20	-	km
Tx_DIS ON to OFF Burst Mode	t <sub>OFF</sub>	-	-	10	ns
Tx_DIS OFF to ON Burst Mode	t <sub>ON</sub>	-	-	10	ns
Ordering Information					
Part Number	Temperature Options				
LTB3665-X	C	Commercial Temperature (0 to +70°C)			
	H	Industrial Temperature (-40°C to +85°C)			