



Ligent

intelligent photonics

a global leader in transceiver technology

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Ligent Photonics, Incorporated, a St. Charles, Illinois based U.S. Corporation is a world-class supplier of optical transceivers for telecommunication and data communication applications.

Ligent was established in 2002 as a joint venture company with Hisense Optoelectronics. The parent company, Hisense Corporation, was founded in 1969 and today is a \$5 billion, 15,000 person global supplier of consumer electronics, IT software, white goods and professional telecom components.

Our management team is comprised of leaders from the telecommunications, semiconductor and investment banking industries including Molex, Nortel, Philips, Fujitsu, Marconi, Nanovation Technologies and the Shenyin & Wanguo Securities Company.

Our transceivers are designed in the U.S.A. and manufactured in China, a model that assures state of the art performance, the highest quality and the lowest cost.

Quality control processes such as SPC, ISO-9000 quality recognition, Telcordia GR-468 test programs, FDA and IEC laser safety, UL and CE product safety, extensive industry and government certification procedures and conservative designs assure our customers that the products delivered by Ligent have very low FIT Rates thereby assuring reliable service over the life of the device.

Our transceivers incorporate the feature sets incorporated in industry standard MSA documents and meet or exceed those requirements. Certain SFP

and 2x10 SFP transceiver products incorporate the SFF 8472 Revision 9.3 digital diagnostic feature set for monitoring transceiver performance in real time.

We focus on high volume, low cost transceiver, diplexer and triplexer products for telecom and datacom service covering Fast Ethernet, Gigabit Ethernet, Fibre Channel, SONET and PON applications. Our CWDM SONET and datacom product offering is one of the most extensive in the industry. Our PON products cover both CW and burst mode service.

On the pages of this catalog you will find a wide range of products covering:

- Burst Mode G-PON for OC-12/OC-48
- Burst Mode E/GE-PON
- CW Mode E/GE-PON
- Burst Mode B-PON for OC-3 / OC-12
- CW Mode B-PON for OC-3 and OC-12
- Fast Ethernet
- Gigabit Ethernet
- Gigabit Ethernet CWDM
- 1X and 2X Fibre Channel
- SONET for OC-3 through OC-48 single rate
- SONET for OC-3 through OC-48 multi rate

We are totally committed to our customers and endeavor to provide our customers with the best solutions, the lowest prices and the highest level of quality.



**Ligent Photonics Manufacturing Facility
Qingdao, China**

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APPLICATIONS

1062.5 Mb/sec or 2125 Mb/sec Fibre Channel data links
 Channel extenders and data storage networks
 High speed I/O file servers and storage networks
 LANs, SANs and remote SANs
 Host adopter and mass storage system interconnects
 Switch to switch interfaces and hub interconnects
 Distributed multi processing and bus extenders
 Telecom switches and router interconnects



PRODUCT DESCRIPTION AND FEATURES

Full duplex operation @ 1062.5 Mb/s or 2125 Mb/s
 850 nm VCSEL or 1310 nm F-P transmitter

High sensitivity PIN receiver

Package types

- 2x5 SFF LC duplex
- SFP LC duplex
- 1x9 dual SC package

Reach (model dependent)

- 550 m multi mode @ 1062.5 Mb/s
- 300 m multi mode @ 2125 Mb/s
- 10 km single mode @ 1062.5 Mb/s
- 10 km single mode @ 2125 Mb/s

Operating case temperature options

- Commercial 0°C to +70°C
- Extended -10°C to +80°C
- Industrial -40°C to +85°C

FC-PI 100/200-SM-LC-L or FC-PI 100 M5/M6 SN-I compliant

BER 10^{-12} (2^7-1 PRBS)

3.3V operation SFF and SFP

3.3V or 5V operation 1x9 DSC

8472 digital diagnostics (model dependent)

FDA / IEC Class 1 laser

RoHS compliant

FIBRE CHANNEL DUPLEX TRANSCEIVERS

P / N	Package	Diagnostics	Lambda (nm)	Laser	Mode	Reach	Data Rate (Mb/s)	Temp Options	Tx Output (dBm)	Rx Sensitivity (uW)	Detector	FC-PI Standard
LTC8501	2x5 SFF	MSA	850	VCSEL	MM	550 m*	1062.5	C	-10 to 0	31	PIN	100-M5/M6-SNI
LTC8503	2x5 SFF	MSA	850	VCSEL	MM	300 m*	2125	C	-10 to 0	49	PIN	200-M5/M6-SNI
LTC1301	2x5 SFF	MSA	1310	F-P	SM	10 km	1062.5	C, E, H	-9.5 to -3	15	PIN	100-SM-LCL
LTC1303	2x5 SFF	MSA	1310	F-P	SM	10 km	2125	C, E, H	-10 to -3	15	PIN	200-SM-LCL
LTD8501	SFP	MSA	850	VCSEL	MM	550 m*	1062.5	C	-10 to 0	31	PIN	100-M5/M6-SNI
LTD8503	SFP	MSA	850	VCSEL	MM	300 m*	2125	C	-10 to 0	49	PIN	200-M5/M6-SNI
LTD1301	SFP	8472	1310	F-P	SM	10 km	1062.5	C, E, H	-9.5 to -3	15	PIN	100-SM-LCL
LTD1303	SFP	8472	1310	F-P	SM	10 km	2125	C, E, H	-10 to -3	15	PIN	200-SM-LCL
LTS8502	1x9 DSC	MSA	850	VCSEL	MM	550 m*	1062.5	C, E, H	-9.5 to -4	15	PIN	100-M5/M6-SNI

*The transmission distance of multi mode transceivers is dependent upon the characteristic of the multi mode fiber applied in the data link.

APPLICATIONS

1250 Mb/sec Gigabit Ethernet data links
 Channel extenders and data storage networks
 High speed I/O file servers and storage networks
 LANs and remote SANs
 Host adopter and mass storage system interconnects
 Switch to switch interfaces and hub interconnects
 Distributed multi processing and bus extenders
 Telecom switches and router interconnects



PRODUCT DESCRIPTION AND FEATURES

Full duplex operation @ 1250 Mb/s

High performance transmitter

850 nm VCSEL

1310 nm F-P

1310 nm DFB

1550 nm DFB

High sensitivity PIN or APD receiver

2x5 SFF or SFP LC duplex receptacle package

Reach (model dependent)

550 m multi mode

10 km to 120 km single mode

Operating case temperature options

Commercial 0°C to +70°C

Extended -10°C to +80°C

Industrial -40°C to +85°C

IEEE 802.3z 1000BASE SX, LX or LH compliant

BER 10^{-12} (2^7-1 PRBS)

3.3V operation

8472 digital diagnostics (model dependent)

FDA / IEC Class 1 laser

RoHS compliant

GIGABIT ETHERNET DUPLEX TRANSCEIVERS

Part Number	Package	Diagnostics	Lambda (nm)	Laser	Mode	Reach	Temp Options	Tx Output (dBm)	Rx Sensitivity (dBm)	Detector	1000BASE Standard
LTC8502	2x5 SFF	MSA	850	VCSEL	MM	550 m*	C	-9.5 to 0	-17	PIN	SX
LTC1302	2x5 SFF	MSA	1310	F-P	SM	10 km	C, E, H	-11 to -3	-19	PIN	LX
LTC1314	2x5 SFF	MSA	1310	DFB	SM	40 km	C, E, H	-2 to 3	-23	PIN	LX
LTC1519	2x5 SFF	MSA	1550	DFB	SM	80 km	C	0 to 4	-23	PIN	LH
LTC1531	2x5 SFF	MSA	1550	DFB	SM	120 km	C	2 to 5	-31	APD	LH
LTD8502	SFP	MSA	850	VCSEL	MM	550 m*	C	-9.5 to 0	-17	PIN	SX
LTD1302	SFP	8472	1310	F-P	SM	10 km	C, E, H	-11 to -3	-19	PIN	LX
LTD1314	SFP	8472	1310	DFB	SM	40 km	C, E, H	-2 to 3	-23	PIN	LX
LTD1382	SFP	8472	1310	F-P	SM	10 km	C, E, H	-9.5 to -3	-19	PIN	LX
LTD1501	SFP	8472	1550	DFB	SM	80 km	C	-2 to 3	-27	APD	LH
LTD1508	SFP	8472	1550	DFB	SM	70 km	C	0 to 4	-23	PIN	LH
LTD1519	SFP	8472	1550	DFB	SM	80 km	C	0 to 4	-23	PIN	LH
LTD1531	SFP	8472	1550	DFB	SM	120 km	C	2 to 5	-31	APD	LH
LTD1533	SFP	8472	1550	DFB	SM	40 km	C	-2 to 3	-23	PIN	LX
LTD1534	SFP	8472	1550	DFB	SM	80 km	C, E, H	2 to 5.2	-28	APD	LH
LTD1593	SFP	MSA	1550	DFB	SM	40 km	C	-2 to 3	-23	PIN	LX

*The transmission distance of multi mode transceivers is dependent upon the characteristic of the multi mode fiber applied in the data link

APPLICATIONS

1250 Mb/sec Gigabit Ethernet data links
 Channel extenders and data storage networks
 High speed I/O file servers and storage networks
 LANs and remote SANs
 Host adopter and mass storage system interconnects
 Switch to switch interfaces and hub interconnects
 Distributed multi processing and bus extenders
 Telecom switches and router interconnects



PRODUCT DESCRIPTION AND FEATURES

Full duplex operation @ 1250 Mb/s

High performance transmitter

850 nm VCSEL

1310 nm F-P

1310 nm DFB

1550 nm DFB

High sensitivity PIN receiver

1x9 or GBIC duplex SC package

Reach (model dependent)

550 m multi mode

10 km to 80 km single mode

Operating case temperature options

Commercial 0°C to +70°C

Extended -10°C to +80°C

Industrial -40°C to +85°C

IEEE 802.3z 1000BASE SX, LX or LH compliant

BER 10^{-12} (2^7-1 PRBS)

Single +3.3 V or +5.0 V power supply (1x9)

Auto-select +3.3 V or 5.0 V power supply (GBIC)

FDA / IEC Class 1 laser

RoHS compliant

GIGABIT ETHERNET DUPLEX TRANSCEIVERS

P / N	Package	Diagnostics	Lambda (nm)	Laser	Mode	Reach	Temp Range	Tx Output (dBm)	Rx Sensitivity (dBm)	Detector	Standard 1000BASE
LTG8502	GBIC	MSA	850	VCSEL	MM	550 m*	C	-9.5 to 3	-17	PIN	SX
LTG1302	GBIC	MSA	1310	F-P	SM	10 km	C	-10 to -3	-19	PIN	LX
LTG1314	GBIC	MSA	1310	DFB	SM	40 km	C	-2 to 3	-22	PIN	LX
LTG1519	GBIC	MSA	1550	DFB	SM	80 km	C	-2 to 3	-22	PIN	LH
LTS8503	1x9	MSA	850	VCSEL	MM	550 m*	C, E, H	-9.5 to -4	-18	PIN	SX
LTS1307	1x9	MSA	1310	F-P	SM	10 km	C, E, H	-12 to -3	-19	PIN	LX
LTS1503	1x9	MSA	1550	DFB	SM	80 km	C, E, H	2 to 5.2	-28	PIN	LH

*The transmission distance of multi mode transceivers is dependent upon the characteristic of the multi mode fiber applied in the data link

APPLICATIONS

ATM and OC-48 SONET / SDH data links
 Rack to rack system interconnects
 Metro / Access networks
 Switch to switch interfaces and hub interconnects
 Buss or channel extenders
 Host adaptor interconnects
 Mass storage system interconnects
 Telecom switches and router interconnects



PRODUCT DESCRIPTION AND FEATURES

Full duplex operation @ 2488 Mb/s
 OC-48 / STM-16 single rate and multi rate models
 High performance transmitter
 1310 nm F-P
 1310 nm DFB
 1550 nm DFB
 High sensitivity PIN or APD receiver
 2x5 SFF or SFP LC duplex package
 8472 digital diagnostics (model dependent)
 2 km to 80 km reach (model dependent)

Operating case temperature options
 Commercial 0°C to +70°C
 Extended -10°C to +80°C
 Industrial -40°C to +85°C

OC-48 SR, IR-1, IR-2, LR-1, LR-2 and LR-3 compliant
 STM-16 I-16, S-16.1, L16.1, L-16.2 and L16.3 compliant
 BER < 1×10^{-10} (2^{23} - 1 NRZ PRBS)
 3.3 V operation
 FDA / IEC Class 1 laser
 RoHS compliant

OC-48 SONET / SDH DUPLEX TRANSCEIVERS

P / N	Package	Diagnostics	Lambda (nm)	Laser	Mode	Reach (km)	Temp Option	Tx Output (dBm)	Rx Sensitivity (dBm)	Detector	Standard SONET OC-48/SDH STM-16
LTC1304	2x5 SFF	MSA	1310	F-P	SM	2	C, E, H	-10 to -3	-18	PIN	SR-1 / I-16
LTC1305	2x5 SFF	MSA	1310	DFB	SM	15	C, E, H	-5 to 0	-18	PIN	IR-1 / S-16.1
LTC1306	2x5 SFF	MSA	1310	DFB	SM	40	C, E, H	-2 to 3	-28	APD	LR-1 / L-16.1
LTC1502	2x5 SFF	MSA	1550	DFB	SM	80	C	-2 to 3	-28	APD	LR-2 / L-16.2
LTC1503	2x5 SFF	MSA	1550	DFB	SM	40	C	-3 to 2	-18	PIN	LR-2 / L-16.2
LTD1304	SFP	8472	1310	F-P	SM	2	C, E, H	-10 to -3	-18	PIN	SR-1 / I-16
LTD1305	SFP	8472	1310	DFB	SM	15	C, E, H	-5 to 0	-18	PIN	IR-1 / S-16.1
LTD1306	SFP	8472	1310	DFB	SM	40	C, E, H	-2 to 3	-28	APD	LR-1 / L-16.1
LTD1326	SFP	8472	1310	DFB	SM	40	C, E, H	0 to 5	-21	PIN	LR-1 / L-16.1
LTD1394	SFP	MSA	1310	F-P	SM	2	C, E, H	-10 to -3	-18	PIN	SR-1 / I-16
LTD1395	SFP	MSA	1310	DFB	SM	20	C, E, H	-0.5 to 5	-20.5	PIN	IR-1 / S-16.1
LTD1502	SFP	8472	1550	DFB	SM	80	C	-2 to 3	-28	APD	LR-2 / L-16.2
LTD1503	SFP	8472	1550	DFB	SM	40	C	-3 to 2	-18	PIN	LR-2 / L-16.2
LTD1520	SFP	MSA	1550	DFB	SM	15	C	-10 to -5	-18	PIN	IR-2 / L-16.2
LTD1590	SFP	MSA	1550	DFB	SM	15	C	-10 to -5	-18	PIN	IR-2 / L-16.2

APPLICATIONS

ATM and OC-12 SONET / SDH data links
 Rack to rack system interconnects
 Metro / Access networks
 Switch to switch interfaces and hub interconnects
 Buss or channel extenders
 Host adaptor interconnects
 Mass storage system interconnects
 Telecom switches and router interconnects



PRODUCT DESCRIPTION AND FEATURES

Full duplex operation @ 622 Mb/s
 OC-12 / STM-4 single rate and multi rate models
 High performance transmitter
 1310 nm F-P
 1550 nm DFB
 High sensitivity PIN or APD receiver
 2x5 SFF or SFP LC duplex package
 1x9 SC duplex package
 8472 digital diagnostics (model dependent)
 2 km to 120 km reach (model dependent)

Operating case temperature options
 Commercial 0°C to +70°C
 Extended -10°C to +80°C
 Industrial -40°C to +85°C

OC-12 SR, IR-1, IR-2, LR-1, LR-2, VR-2 compliant
 STM-16 I-4, S4.1, S4.2, L4.1, L4.2, V4.2 compliant
 BER < 1×10^{-10} ($2^{23} - 1$ NRZ PRBS)
 3.3 V operation (SFF and SFP)
 5V operation (1x9)
 FDA / IEC Class 1 laser
 RoHS compliant

OC-12 SONET / SDH DUPLEX TRANSCEIVERS

P / N	Package	Diagnostics	Lambda (nm)	Laser	Mode	Reach (km)	Temp Option	Tx Output (dBm)	Rx Sensitivity (dBm)	Detector	Standard
LTC1308	2x5 SFF	MSA	1310	F-P	SM	15	C, E, H	-15 to -8	-28	PIN	IR-1/S-4.1
LTC1309	2x5 SFF	MSA	1310	F-P	SM	40	C, E, H	-3 to 2	-28	PIN	LR-1/L-4.1
LTC1313	2x5 SFF	MSA	1310	F-P	SM	20	C, E, H	-12 to -5	-28	PIN	IR-1/S-4.1
LTC1504	2x5 SFF	MSA	1550	DFB	SM	80	C	-3 to 2	-28	PIN	LR-2/L-4.2
LTC1595	2x10 SFF	MSA	1510	DFB	SM	15	C	-15 to -9	-28	PIN	IR-2/S-4.2
LTD1308	SFP	8472	1310	F-P	SM	15	C, E, H	-15 to -8	-28	PIN	IR-1/S-4.1
LTD1309	SFP	8472	1310	F-P	SM	40	C, E, H	-3 to 2	-28	PIN	LR-1/L-4.1
LTD1313	SFP	8472	1310	F-P	SM	20	C, E, H	-12 to -5	-28	PIN	IR-1/S-4.1
LTD1398	SFP	MSA	1310	F-P	SM	15	C, E, H	-15 to -8	-28	PIN	IR-1/S-4.1
LTD1399	SFP	MSA	1310	F-P	SM	40	C, E, H	-3 to 2	-28	PIN	LR-1/L-4.1
LTD1504	SFP	8472	1550	DFB	SM	80	C	-3 to 2	-28	PIN	LR-2/L-4.2
LTD1505	SFP	8472	1550	DFB	SM	40	C	-5 to 0	-28	PIN	LR-1/L-4.1
LTD1532	SFP	8472	1550	DFB	SM	120	C	2 to 5	-31	PIN	VR-2/V4.2
LTD1594	SFP	MSA	1550	DFB	SM	80	C	-3 to 2	-28	PIN	LR-2/L-4.2
LTS1309	1x9 DSC	MSA	1310	F-P	SM	40	C, E, H	-3 to 0	-28	PIN	LR-1/L-4.1
LTS1311	1x9 DSC	MSA	1310	F-P	SM	2	C, E, H	-12 to -8	-31	PIN	SR/I-4
LTS1312	1x9 DSC	MSA	1310	F-P	SM	15	C, E, H	-8 to -3	-31	PIN	IR-1/S-4.1
LTS1313	1x9 DSC	MSA	1310	F-P	SM	40	C, E, H	-3 to 0	-31	PIN	LR-1/L-4.1

APPLICATIONS

ATM and OC-3 SONET / SDH data links
 Rack to rack system interconnects
 Metro / Access networks
 Switch to switch interfaces and hub interconnects
 Buss or channel extenders
 Host adaptor interconnects
 Mass storage system interconnects
 Telecom switches and router interconnects



PRODUCT DESCRIPTION AND FEATURES

Full duplex operation @ 155 Mb/s
 OC-3 / STM-1 single rate and multi rate models
 High performance transmitter
 1310 nm LED, F-P or DFB
 1550 nm DFB
 High sensitivity PIN receiver
 2x5 SFF or SFP LC duplex package
 1x9 SC duplex package
 8472 digital diagnostics (model dependent)
 2 km to 140 km reach (model dependent)

Operating case temperature options
 Commercial 0°C to +70°C
 Extended -10°C to +80°C
 Industrial -40°C to +85°C

OC-3 SR, IR-1, LR-1, LR-2, VR-1 compliant
 STM-1 I-1, S1.1, L1.1, L1.2, V1.2 compliant
 BER < 1×10^{-10} (2^{23} - 1 NRZ PRBS)
 3.3 V operation (SFF and SFP)
 3.3V or 5V operation (1x9)
 FDA / IEC Class 1 laser
 RoHS compliant

OC-3 SONET / SDH DUPLEX TRANSCEIVERS

P / N	Package	Diagnostics	Lambda (nm)	Laser	Mode	Reach (km)	Temp Option	Tx Output (dBm)	Rx Sensitivity (dBm)	Detector	Standards
LTC1311	2x5 SFF	MSA	1310	F-P	SM	15	C, E, H	-15 to -8	-30	PIN	IR-1/S-1.1
LTC1312	2x5 SFF	MSA	1310	F-P	SM	40	C, E, H	-5 to 0	-34	PIN	LR-1/L-1.1
LTC1316	2x5 SFF	MSA	1310	LED	MM	2	C, E, H	-22 to -12	-30	PIN	SR/I-1
LTC1507	2x5 SFF	MSA	1550	DFB	SM	80	C	-5 to 0	-34	PIN	LR-2/L-1.2
LTD1311	SFP	8472	1310	F-P	SM	15	C, E, H	-15 to -8	-30	PIN	IR-1/S-1.1
LTD1312	SFP	8472	1310	F-P	SM	40	C, E, H	-5 to 0	-34	PIN	LR-1/L-1.1
LTD1316	SFP	MSA	1310	LED	MM	2	C, E, H	-22 to -12	-30	PIN	SR/I-1
LTD1325	SFP	8472	1310	DFB	SM	80	C, E, H	0 to +5	-35	PIN	LR-2/L1.2
LTD1391	SFP	MSA	1310	F-P	SM	15	C, E, H	-15 to -8	-30	PIN	IR-1/S-1.1
LTD1392	SFP	MSA	1310	F-P	SM	40	C, E, H	-5 to 0	-34	PIN	LR-1/L-1.1
LTD1506	SFP	8472	1550	DFB	SM	40	C	-10 to -5	-34	PIN	LR-1/L-1.1
LTD1507	SFP	8472	1550	DFB	SM	80	C	-5 to 0	-34	PIN	LR-2/L-1.2
LTD1535	SFP	8472	1550	DFB	SM	140	C, E, H	0 to +5	-36	PIN	VR-1/V1.2
LTD1597	SFP	MSA	1550	DFB	SM	80	C	-5 to 0	-34	PIN	LR-2/L-1.2
LTS1301	1x9 DSC	MSA	1310	F-P	SM	2	C, E, H	-12 to -8	-36	PIN	SR/I-1
LTS1302	1x9 DSC	MSA	1310	F-P	SM	15	C, E, H	-8 to -3	-36	PIN	IR-1/S-1.1
LTS1303	1x9 DSC	MSA	1310	DFB	SM	40	C, E, H	-3 to 0	-37	PIN	LR-1/L-1.1
LTS1316	1x9 DSC	MSA	1310	LED	MM	2	C	-20 to -14	-30	PIN	SR/I-1
LTS1321	1x9 DSC	MSA	1310	F-P	SM	2	C	-20 to -14	-32	PIN	SR/I-1
LTS1322 (5V)	1x9 DSC	MSA	1310	F-P	SM	2	C	-20 to -14	-32	PIN	SR/I-1

APPLICATIONS

ATM and OC-3 to OC-48 SONET / SDH CWDM data links
 Rack to rack system interconnects
 Metro / Access networks
 Switch to switch interfaces and hub interconnects
 Buss or channel extenders
 Host adaptor interconnects
 Mass storage system interconnects
 Telecom switches and router interconnects



PRODUCT DESCRIPTION AND FEATURES

OC-48 / STM-16 CWDM multi rate models
 OC-12 / STM-4 CWDM multi rate models
 OC-3 / STM-1 CWDM models
 High performance 1270 nm to 1610 nm DFB transmitters
 High sensitivity PIN or APD receiver
 2x5 SFF or SFP LC duplex package
 1x9 SC duplex package
 8472 digital diagnostics (SFP models)

40 km to 80 km reach (model dependent)
 0°C to +70°C operating case temperature
 $BER < 1 \times 10^{-10}$ (2^{23} - 1 NRZ PRBS)
 3.3 V operation (SFF and SFP)
 3.3V or 5V operation (1x9)
 FDA / IEC Class 1 laser
 RoHS compliant

SONET / SDH CWDM TRANSCEIVERS

SFF, SFP, 1x9 DSC

Lambda (nm)

P / N	Package	Diagnostics	Lowest	Highest	Data Rate (Mb/s)	Reach (km)	Tx Output (dBm)	Rx Sensitivity (dBm)	Detector	Application
LTC1511-WL	2x5 SFF	MSA	1470	1610	2488	40	-3 to +2	-18	PIN	OC-48
LTC1521-WL	2x5 SFF	MSA	1470	1610	2488	80	-2 to +3	-28	APD	OC-48
LTD1511-WL	SFP	8472	1470	1610	155 to 2670	40	0 to +5	-18	PIN	OC-48 MR
LTD1521-WL	SFP	8472	1470	1610	155 to 2670	80	0 to +5	-31	APD	OC-48 MR
LTD1611-WL	SFP	8472	1470	1610	622	40	-5 to 0	-28	PIN	OC-12
LTD1621-WL	SFP	8472	1470	1610	622	80	-5 to 0	-34	PIN	OC-12
LTD1811-WL	SFP	8472	1470	1610	125 to 155	80	-5 to 0	-34	PIN	OC-3 MR
LTS1571-WL	1x9 DSC	MSA	1270	1610	155	80	-5 to +2	-38	PIN	OC-3
LTS1621-WL	1x9 DSC	MSA	1270	1610	622	80	-5 to +2	-25	PIN	OC-12

MR = Multi Rate Transceiver, DSC = Duplex SC Receptacle

APPLICATIONS

Fibre Channel, Fast Ethernet or Gigabit Ethernet CWDM data links
 Rack to rack system interconnects
 Metro / access networks
 Switch to switch interfaces and hub interconnects
 Buss or channel extenders
 Host adaptor interconnects
 Mass storage system interconnects
 Telecom switches and router interconnects



PRODUCT DESCRIPTION AND FEATURES

Gigabit Ethernet single rate and multi rate CWDM models
 Fibre Channel 1X and 2X single rate and multi rate CWDM models
 High performance 1270 nm to 1610 nm DFB transmitter
 High sensitivity PIN or APD receiver
 2x5 SFF or SFP LC duplex package
 1x9 and GBIC SC duplex package
 8472 digital diagnostics (SFP models)
 40 km to 120 km reach (model dependent)

0°C to +70°C operating case temperature
 BER < 1×10^{-12} ($2^7 - 1$ NRZ PRBS)
 3.3 V operation (SFF and SFP)
 3.3V or 5V operation (1x9)
 3.3V or 5V auto select (GBIC)
 LTD5801 CWDM Tx / 850 nm Rx
 FDA / IEC Class 1 laser
 RoHS compliant

DATA COM CWDM TRANSCEIVERS

P / N	Package	Diagnostics	Lambda (nm)		Data Rate (Mb/s)	Reach (km)	Tx Output (dBm)	Rx Sensitivity (dBm)	Detector	Application
			Lowest	Highest						
LTC1711-WL	2x5 SFF	MSA	1270	1610	1250	40	-5 to 0	-20	PIN	Gigabit Ethernet
LTC1731-WL	2x5 SFF	MSA	1270	1610	1250	80	0 to +3	-24	PIN	Gigabit Ethernet
LTD1711-WL	SFP	MSA	1270	1610	1250	40	-5 to 0	-20	PIN	Gigabit Ethernet
LTD1731-WL	SFP	MSA	1270	1610	1250	80	-3 to +3	-24	PIN	Gigabit Ethernet
LTD1761-WL	SFP	8472	1270	1610	100 to 1250	40	0 to +5	-22	PIN	Gigabit Ethernet MR
LTD1781-WL	SFP	8472	1270	1610	100 to 1250	80	0 to +5	-24	PIN	Gigabit Ethernet MR
LTD1821-WL	SFP	8472	1270	1610	622 to 1250	80	0 to +5	-32	APD	Gigabit Ethernet MR
LTD1751-WL	SFP	SFP	1270	1610	622 to 2125	40	-3 to +2	-18	PIN	Fibre Channel MR
LTD1771-WL	SFP	8472	1270	1610	622 to 2125	80	0 to +5	-21	PIN	Fibre Channel MR
LTD2721-WL	SFP	8472	1270	1610	1250	120	-1 to +4	-31	APD	Gigabit Ethernet
LTD5801-WL	SFP	8472	1470	1610	1250	40	-3 to +2	-22	PIN	Gigabit Ethernet SW
LTG1831-WL	GBIC	MSA	1470	1610	1250	80	-4 to +2	-25	PIN	Gigabit Ethernet
LTG1832-WL	GBIC	MSA	1470	1610	1250	120	-1 to +4	-31	APD	Gigabit Ethernet
LTU1251-WL	1x9 DSC	MSA	1270	1470	1250	80	-5 to +2	-25	PIN	Gigabit Ethernet

MR = Multi-Rate Transceiver

SW = 850 nm Narrow Band Receiver

APPLICATIONS

Bidirectional point to point 155 Mb/s access networks
 Bidirectional point to point Fast Ethernet (125 Mb/s) data links
 Fiber to the Home, Curb, Office
 ATM, SONET / SDH / PDH / Fast Ethernet
 ITU-T G.983.1 and G.983.3 point to point bidirectional single fiber networks



PRODUCT DESCRIPTION AND FEATURES

125 Mb/s to 155 Mb/s bidirectional transceiver
 Single +3.3V power supply
 20 km or 40 km reach
 Available package configurations

- 2x5 SFF pigtail with SC/PC connector
- 2x5 SFF SC receptacle
- 1x9 SIL SC receptacle

 High performance transmitters

- 1310 nm F-P or DFB laser
- 1550 nm F-P or DFB laser

High sensitivity PIN/TIA receiver with limiter
 Operating case temperature options

- Commercial 0°C to +70°C
- Extended -10°C to +80°C
- Industrial -40°C to +85°C

 Cross talk <-30 dB
 BER < 1X10⁻¹⁰ (2²³ - 1 PRBS)
 FDA / IEC Class 1 laser
 RoHS compliant

BIDI 2X5 SFF TRANSCEIVER WITH SC/PC PIGTAIL

P / N	Package	Diagnostics	Tx Lambda (nm)	Laser	Rx Lambda (nm)	Reach (km)	Temp Options	Tx Output (dBm)	Rx Sensitivity (dBm)
LTB3301	2x5 SFF Pigtail	MSA	1310	F-P	1310	20	C, E, H	-14 to -8	-31
LTB3305	2x5 SFF Pigtail	MSA	1310	DFB	1310	40	C, E, H	-5 to 0	-31
LTB3501	2x5 SFF Pigtail	MSA	1310	F-P	1550	20	C, E, H	-14 to -8	-31
LTB3505	2x5 SFF Pigtail	MSA	1310	DFB	1550	40	C, E, H	-5 to 0	-31
LTB5301	2x5 SFF Pigtail	MSA	1550	F-P	1310	20	C	-14 to -8	-31
LTB5305	2x5 SFF Pigtail	MSA	1550	DFB	1310	40	C	-5 to 0	-31

BIDI 2x5 SFF TRANSCEIVER WITH SC RECEPTACLE

LTB3303	2x5 SFF SC	MSA	1310	F-P	1310	20	C, E, H	-14 to -8	-31
LTB3304	2x5 SFF SC	MSA	1310	DFB	1310	40	C, E, H	-5 to 0	-31
LTB3503	2x5 SFF SC	MSA	1310	F-P	1550	20	C, E, H	-14 to -8	-31
LTB3504	2x5 SFF SC	MSA	1310	DFB	1550	40	C, E, H	-5 to 0	-31
LTB5303	2x5 SFF SC	MSA	1550	F-P	1310	20	C	-14 to -8	-31
LTB5304	2x5 SFF SC	MSA	1550	DFB	1310	40	C	-5 to 0	-31

BIDI 1x9 TRANSCEIVER WITH SC RECEPTACLE

LTB3551	1x9 SC	MSA	1310	F-P	1550	20	C, E, H	-14 to -8	-33
LTB3552	1x9 SC	MSA	1310	DFB	1550	40	C, E, H	-5 to 0	-33
LTB5351	1x9 SC	MSA	1550	F-P	1310	20	C	-14 to -8	-33
LTB5352	1x9 SC	MSA	1550	DFB	1310	40	C	-5 to 0	-33

APPLICATIONS

Bidirectional point to point 155 Mb/s access networks
 Bidirectional point to point Fast Ethernet (125 Mb/s) data links
 Fiber to the Home, Curb, Office
 ATM, SONET / SDH / PDH / Fast Ethernet
 ITU-T G.983.1 and G.983.3 point to point bidirectional single fiber networks



PRODUCT DESCRIPTION AND FEATURES

125 Mb/s to 155 Mb/s bidirectional transceiver
 Single +3.3V power supply
 20 km or 40 km reach
 SFP package with simplex LC or SC receptacle
 8472 digital diagnostics (model dependent)
 High performance transmitters
 1310 nm F-P or DFB laser
 1490 nm DFB laser
 1550 nm F-P or DFB laser

Operating case temperature options
 Commercial 0°C to +70°C
 Extended -10°C to +80°C
 Industrial -40°C to +85°C
 High sensitivity PIN/TIA receiver
 BER < 1×10^{-10} (2^{23} - 1 PRBS)
 FDA / IEC Class 1 laser
 RoHS compliant

BIDI 2x10 SFP TRANSCEIVER WITH LC RECEPTACLE

P / N	Package	Diagnostics	Tx Lambda (nm)	Laser	Rx Lambda (nm)	Reach (km)	Temp Option	Tx Output (dBm)	Rx Sensitivity (dBm)	Detector	Standard
LTB3512	SFP	8472	1310	F-P	1510	20	H	-15 to -8	-32	PIN	G.983.1/3
LTB5312	SFP	8472	1550	F-P	1310	20	H	-15 to -8	-32	PIN	G.983.1/3

BIDI 2x10 SFP TRANSCEIVER WITH SC RECEPTACLE

LTB3506	SFP	MSA	1310	DFB	1490	20	E	-15 to -8	-32	PIN	G.983.1/3
LTB3507	SFP	MSA	1310	F-P	1550	20	C, H	-15 to -8	-32	PIN	G.983.1/3
LTB3516	SFP	MSA	1310	F-P	1550	40	E	-6 to 0	-33	PIN	G.983.1/3
LTB5306	SFP	MSA	1490	DFB	1310	20	E	-15 to -8	-32	PIN	G.983.1/3
LTB5307	SFP	MSA	1550	F-P	1310	20	E	-15 to -8	-32	PIN	G.983.1/3
LTB5316	SFP	MSA	1550	DFB	1310	40	E	-6 to 0	-33	PIN	G.983.1/3

APPLICATIONS

Bidirectional point to point 622 Mb/s access networks
 Fiber to the Home, Curb, Office
 ATM, SONET / SDH / PDH
 ITU-T G.983.1 and G.983.3 point to point bidirectional single fiber networks



PRODUCT DESCRIPTION AND FEATURES

622 Mb/s bidirectional transceiver

Single +3.3V power supply

15 km, 20 km or 40 km reach

Available package configurations

2x5 SFF pigtail with SC/PC connector

2x5 SFF SC receptacle

1x9 SIL SC receptacle

High performance transmitters

1310 nm F-P or DFB laser

1550 nm F-P or DFB laser

High sensitivity PIN/TIA receiver with limiter

Operating case temperature options

Commercial 0°C to +70°C

Industrial -40°C to +85°C

Cross talk <-30 dB

BER < 1X10⁻¹⁰ (2²³ - 1 PRBS)

FDA / IEC Class 1 laser

RoHS compliant

BIDI 2X5 SFF TRANSCEIVER WITH SC/PC PIGTAIL

P / N	Package	Diagnostics	Tx Lambda (nm)	Laser	Rx Lambda (nm)	Reach (km)	Temp Options	Tx Output (dBm)	Rx Sensitivity (dBm)
LTB3322	2x5 SFF Pigtail	MSA	1310	F-P	1310	20	C, E, H	-14 to -8	-26
LTB3332	2x5 SFF Pigtail	MSA	1310	DFB	1310	40	C, E, H	-5 to 0	-26
LTB3522	2x5 SFF Pigtail	MSA	1310	F-P	1550	20	C, E, H	-14 to -8	-26
LTB3532	2x5 SFF Pigtail	MSA	1310	DFB	1550	40	C, E, H	-5 to 0	-26
LTB5322	2x5 SFF Pigtail	MSA	1550	F-P	1310	20	C	-14 to -8	-26
LTB5332	2x5 SFF Pigtail	MSA	1550	DFB	1310	40	C	-5 to 0	-26

BIDI 2x5 SFF TRANSCEIVER WITH SC RECEPTACLE

LTB3321	2x5 SFF SC	MSA	1310	F-P	1310	20	C, E, H	-14 to -8	-26
LTB3331	2x5 SFF SC	MSA	1310	DFB	1310	40	C, E, H	-5 to 0	-26
LTB3521	2x5 SFF SC	MSA	1310	F-P	1550	20	C, E, H	-14 to -8	-26
LTB3531	2x5 SFF SC	MSA	1310	DFB	1550	40	C, E, H	-5 to 0	-26
LTB5321	2x5 SFF SC	MSA	1550	F-P	1310	20	C	-14 to -8	-26
LTB5331	2x5 SFF SC	MSA	1550	DFB	1310	40	C	-5 to 0	-26

BIDI 1x9 TRANSCEIVER WITH SC RECEPTACLE

LTB3553	1x9 SC	MSA	1310	F-P	1550	15	C, E, H	-14 to -8	-26
LTB5353	1x9 SC	MSA	1550	F-P	1310	15	C	-5 to 0	-26

APPLICATIONS

Bidirectional point to point Gigabit Ethernet access networks
 Fiber to the home, curb, office
 ATM, SONET / SDH / PDH



PRODUCT DESCRIPTION AND FEATURES

1250 Mb/s Gigabit Ethernet CW mode bidirectional transceiver
 Single 3.3V power supply
 10 km or 40 reach (model dependent)
 Available package options
 2x5 SFF pigtail package with SC connector
 SFP SC receptacle package
 Bidirectional transceiver configuration options
 1310 nm Tx 1490 nm Rx
 1310 nm Rx 1490 nm Tx

1310 nm Tx 1550 nm Rx
 1310 nm Rx 1550 nm Tx
 High performance transmitters
 1310 nm F-P or DFB laser
 1490 nm DFB laser
 1550 nm DFB laser
 High sensitivity PIN/TIA receiver
 FDA / IEC Class 1 laser
 RoHS compliant

BIDI SFP TRANSCEIVER

P / N	Package	Diagnostics	Tx Lambda (nm)	Laser	Rx Lambda (nm)	Reach (km)	Temp Options	Tx Output (dBm)	Rx Sensitivity (dBm)
LTB3509	SFP	MSA	1310	F-P	1490	10	E	-9 to -3	-20
LTB3510	SFP	MSA	1310	F-P	1550	10	E	-9 to -3	-20
LTB3514	SFP	MSA	1310	DFB	1550	40	E	-3 to 0	-20
LTB5309	SFP	MSA	1490	DFB	1310	10	E	-9 to -3	-20
LTB5310	SFP	MSA	1550	DFB	1310	10	E	-9 to -3	-20
LTB5314	SFP	MSA	1550	DFB	1310	40	E	-3 to 0	-20
LTB3450	2x5 SFF	MSA	1310	F-P	1490	10	C, E, H	-9 to -3	-20
LTB3452	2x5 SFF	MSA	1490	DFB	1310	10	C, E, H	-9 to -3	-20

APPLICATIONS

Bidirectional point to multi point 155 Mb/s and 622 MB/s B-PON access networks
 Fiber to the home, curb, office
 ATM, SONET / SDH / PDH
 PON downstream transceiver for OLT



PRODUCT DESCRIPTION AND FEATURES

155Mb/s / 622 Mb/s burst mode bidirectional transceiver
 1490 nm Tx 1310 nm Rx (OLT service)
 622Mb/s / 622 Mb/s burst mode bidirectional transceiver
 1310 nm Tx 1490 nm Rx (ONU service)
 Single 3.3V power supply
 10 km or 20 reach (model dependent)
 Available package options
 2x5 SFF pigtail with SC connector
 2x10 SFF pigtail with SC connector

High performance transmitters
 1310 nm F-P laser
 1490 nm DFB laser
 High sensitivity PIN/TIA or APD/TIA receiver
 ITU-T G.983.1 and ITU-T G.983.3 compliant
 BER < 1X10⁻¹⁰ (2²³ - 1 NRZ PRBS)
 -40°C to +85°C case temperature
 FDA / IEC Class 1 laser
 RoHS compliant

B-PON ONU BURST MODE TRANSCEIVERS

P / N	Package	Diagnostics	Reach	Transmitter				Receiver			
				Rate (Mb/s)	Lambda (nm)	Laser	Output (dBm)	Rate (Mb/s)	Lambda (nm)	Sensitivity (dBm)	Detector
LTB3431	2x10 SFF	MSA	10 km	622	1310	F-P	-5 to +2	622	1490	-28	PIN
LTB3432	2x5 SFF	MSA	20 km	622	1310	F-P	-1 to +3	622	1490	-28	PIN

B-PON OLT BURST MODE TRANSCEIVERS

LTB3447	2x10 SFF	MSA	20 km	622	1490	DFB	0 to +4	155	1310	-33	APD
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APPLICATIONS

Bidirectional point to multi point 1250 Mb/s E-PON / GE-PON access networks
 Fiber to the home, curb, office
 ATM, SONET / SDH / PDH
 PON downstream transceiver for OLT
 PON upstream transceiver for ONT



PRODUCT DESCRIPTION AND FEATURES

1250 Mb/s burst mode transceiver

1310 nm Tx 1490 nm Rx (ONU service)

1310 nm Rx 1490 nm Tx (OLT service)

Single 3.3V power supply

10 km or 20 reach (model dependent)

Available package options

2x5 SFF pigtail with SC connector

2x5 SFF SC receptacle

2x10 SFF pigtail with SC connector

2x10 SFF SC receptacle

High performance transmitters

1310 nm F-P or DFB laser

1490 nm DFB laser

High sensitivity PIN/TIA or APD/TIA receiver

IEEE 802.3ah compliant

BER 10^{-12} (2⁷-1 PRBS)

-40°C to +85°C case temperature

FDA / IEC Class 1 laser

RoHS compliant

E-PON / GE-PON ONU BURST MODE TRANSCEIVER

P / N	Package	Diagnostics	Service	Mode	Transmitter			Receiver			
					Lambda (nm)	Laser	Output (dBm)	Mode	Lambda (nm)	Sensitivity (dBm)	Detector
LTB3416	2x5 SFF Pigtail	MSA	PX-10U ONU	Burst	1310	F-P	-1 to +4	CW	1490	-25.5	PIN
LTB3421	2x5 SFF Pigtail	MSA	PX-10U ONU	Burst	1310	F-P	-1 to +4	CW	1490	-25.5	PIN
LTB3424	2x5 SFF Pigtail	MSA	PX-20U ONU	Burst	1310	DFB	-1 to +4	CW	1490	-29	APD
LTB3482	2x5 SFF Receptacle	MSA	PX-10U ONU	Burst	1310	F-P	-1 to +4	CW	1490	-25.5	PIN
LTB3487	2x5 SFF Receptacle	MSA	PX-20U ONU	Burst	1310	DFB	-1 to +4	CW	1490	-29	APD
LTB3480	2x10 SFF Pigtail	MSA	PX-10U ONU	Burst	1310	F-P	-1 to +4	CW	1490	-25.5	PIN
LTB3488	2x10 SFF Pigtail	MSA	PX-20U ONU	Burst	1310	DFB	-1 to +4	CW	1490	-29	APD
LTB3481	2x10 SFF Receptacle	MSA	PX-10U ONU	Burst	1310	F-P	-1 to +4	CW	1490	-25.5	PIN
LTB3489	2x10 SFF Receptacle	MSA	PX-20U ONU	Burst	1310	DFB	-1 to +4	CW	1490	-29	APD
LTE3401	SFP	MSA	PX-10U ONU	Burst	1310	F-P	-1 to +4	CW	1490	-25.5	PIN
LTE3402	SFP	MSA	PX-20U ONU	Burst	1310	DFB	-1 to +4	CW	1490	-29	APD

E-PON / GE-PON OLT BURST MODE TRANSCEIVERS

LTB3418	2x5 SFF Pigtail	MSA	PX-10D OLT	CW	1490	DFB	-3 to +2	Burst	1310	-24	PIN
LTB3423	2x5 SFF Pigtail	MSA	PX-20D OLT	CW	1490	DFB	+2 to +7	Burst	1310	-27	APD
LTB3486	2x5 SFF Receptacle	MSA	PX-20D OLT	CW	1490	DFB	+2 to +7	Burst	1310	-27	APD
LTB3484	2x10 SFF Pigtail	MSA	PX-10D OLT	CW	1490	DFB	-3 to +2	Burst	1310	-24	PIN
LTB3422	2x10 SFF Pigtail	MSA	PX-20D OLT	CW	1490	DFB	+2 to +7	Burst	1310	-27	APD
LTB3485	2x10 SFF Receptacle	MSA	PX-20D OLT	CW	1490	DFB	+2 to +7	Burst	1310	-27	APD
LTE4301	SFP	MSA	PX-20D OLT	CW	1490	DFB	-3 to +2	Burst	1310	-24	PIN
LTE4302	SFP	MSA	PX-20D OLT	CW	1490	DFB	+2 to +7	Burst	1310	-27	APD

APPLICATIONS

Bidirectional point to multi point 1244/2488 Mb/s G-PON Class B / B+ access networks
 Fiber to the home, curb, office
 ATM, SONET / SDH / PDH
 PON downstream transceiver for OLT

**PRODUCT DESCRIPTION AND FEATURES**

1244 Mb/s / 2488 Mb/s burst mode transceiver
 1310 nm Tx 1490 nm Rx (ONU service)
 1310 nm Rx 1490 nm Tx (OLT service)

Single 3.3V power supply
 10 km or 20 reach (model dependent)

Available package options

2x5 SFF pigtail with SC connector
 2x5 SFF SC receptacle
 2x10 SFF pigtail with SC connector
 2x10 SFF SC receptacle
 SFP

High performance transmitters

1310 nm F-P or DFB laser
 1490 nm DFB laser

High sensitivity PIN/TIA or APD/TIA receiver

ITU-T G.984.2 Class B or Class B+

8472 digital diagnostics (model dependent)

BER < 1×10^{-10} (2^{23} - 1 NRZ PRBS)

-40°C to +85°C case temperature

FDA / IEC Class 1 laser

RoHS compliant

G-PON ONU BURST MODE TRANSCEIVERS

Part Number	Package	Diagnostics	Reach	Data Rate Mb/s	Transmitter			Receiver			
					Lambda (nm)	Laser	Output (dBm)	Data Rate Mb/s	Lambda (nm)	Sensitivity (dBm)	Detector
LTB3464	2x5 SFF Pigtail	MSA	10 km	1244	1310	F-P	0.5 to +5	2488	1490	-21	PIN
LTB3465	2x5 SFF Pigtail	MSA	20 km	1244	1310	DFB	0.5 to +5	2488	1490	-28	APD
LTB3664	2x5 SFF Receptacle	MSA	10 km	1244	1310	F-P	0.5 to +5	2488	1490	-21	PIN
LTB3665	2x5 SFF Receptacle	MSA	20 km	1244	1310	DFB	0.5 to +5	2488	1490	-28	APD
LTB3666	2x10 SFF Pigtail	MSA	10 km	1244	1310	F-P	0.5 to +5	2488	1490	-21	PIN
LTB3467	2x10 SFF Pigtail	MSA	20 km	1244	1310	DFB	0.5 to +5	2488	1490	-28	APD
LTB3668	SFP	MSA	10 km	1244	1310	F-P	0.5 to +5	2488	1490	-21	PIN
LTB3669	SFP	MSA	20 km	1244	1310	DFB	0.5 to +5	2488	1490	-28	APD

G-PON OLT BURST MODE TRANSCEIVERS

LTB3477	2x10 SFF Pigtail	MSA	20 km	2488	1490	DFB	+1.5 to +5	1244	1310	-29	APD
LTB3677	SFP	MSA	20 km	2488	1490	DFB	+1.5 to +5	1244	1310	-29	APD

APPLICATIONS

155 Mb/s to 2488 Mb/s Passive optical network s (PON)
 Full service access networks
 Fiber-to-the-home (FTTH) or fiber-to-the-business (FTTB)
 PON upstream transceiver



PRODUCT DESCRIPTION AND FEATURES

Triplexer B-PON / E-PON / GE-PON and G-PON ONT ONU

1310 nm Upstream Burst Mode F-P or DFB Digital Tx
 1490 nm Downstream CW Mode PIN or APD Digital Rx
 1550 nm Downstream Video Rx
 2x2 housing with SC fiber pigtail and choice of RF interface
 8472 digital diagnostics (model dependent)
 3.3V Digital Tx and Rx
 5.0V / 12V Video Rx
 -40°C to +85°C case temperature
 FDA / IEC Class 1 laser
 RoHS compliant

Diplexer G-PON ONT ONU

1310 nm Upstream Burst Mode F-P or DFB Digital Tx
 1490 nm Downstream CW Mode PIN or APD Digital Rx
 2x2 housing with SC fiber pigtail
 8472 digital diagnostics (model dependent)
 3.3V Digital Tx and Rx
 -40°C to +85°C case temperature
 FDA / IEC Class 1 laser
 RoHS compliant

Triplexer ONU												
P / N	ONU	Reach	DDM	1310 nm BM Tx				1490 nm CW Mode Rx			1550 nm Video	
				Laser	Data Rate (Mb/s)	Output (dBm)	Detector	Data Rate (Mb/s)	Sensitivity (dBm)	Monitor	BW (MHz)	RF Out (dBmV)
LTY9601	B-PON	20 km	8472	F-P	622	2 to +3	PIN/TIA	622	-28	Rx_SD	47 to 870	14
LTY9610	B-PON	20 km	8472	F-P	155	2 to +3	PIN/TIA	622	-28	Rx_SD	47 to 870	14
LTY9401	E-PON	20 km	8472	F-P	1250	-2 to +3	PIN/TIA	1250	-24	Rx_SD	47 to 870	14
LTY9775	G-PON	20 km	8472	DFB	1244	0.5 to +5	APD/TIA	2488	-28	Rx_SD	47 to 870	17
LTY9774	G-PON	10 km	8472	F-P	1244	-1 to +4	PIN/TIA	2488	-20	Rx_SD	47 to 870	17

Diplexer ONU												
P / N	ONU	Reach	DDM	1310 nm BM Tx				1490 nm CW Mode Rx			1550 nm Video	
				Laser	Data Rate (Mb/s)	Output (dBm)	Detector	Data Rate (Mb/s)	Sensitivity (dBm)	Monitor	BW (MHz)	RF Out (dBmV)
LTY9765	G-PON	20 km	8472	DFB	1244	0.5 to +5	APD/TIA	2488	-28	Rx_SD	N/A	N/A
LTY9764	G-PON	10 km	8472	F-P	1244	-1 to +4	PIN/TIA	2488	-20	Rx_SD	N/A	N/A

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