

GPON SFP ONU Optical Module

CLGPONU-LA-B+

Product Features:

- Support ITU-T G.984.2/G.984.5 GPON Networks application
- Single fiber bi-directional data links with asymmetric 1.244Gbps Tx and 2.488Gbps Rx
- 1310nm burst-mode transmitter with DFB laser
- 1490nm continuous-mode receiver
- 2-wire interface for integrated digital diagnostic monitoring
- Transmitter burst on
- Receiver state indication (optional RX_SD or Rx_LOS)
- SFP package with LC/APC connector
- Single +3.3V power supply
- Operation case temperature -40~85°C for industrial and -10~70°C for commercial
- SFF-8472 compliance
- RoHS6 compliance

Functional Characteristics

The following tables list the performance specifications for the various functional blocks of the module.

Table 1 – Optical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Transmitter						
TX Central Wavelength	λ_c	1290	1310	1330	nm	
Spectral Width (-20dB)	$\Delta\lambda$			1	nm	
Side Mode Suppression Ratio	SMSR	30			dB	
Mean Launched Power		0.5	2.5	5	dBm	
Mean Launched Power (TX Off)				-40	dBm	
Extinction Ratio	ER	10			dB	
Optical Return Loss Tolerance		-15			dB	
Transmitter and dispersion Penalty	TDP			1	dB	
Transmitter Mask (PRBS 2^23-1)	Compliant With ITU-T G.984.2					
Receiver						
Receive Wavelength	λ_c	1480	1490	1500	nm	
Sensitivity				-28	dBm	ER=8.2dB, BER<10^-10, PRBS 2^23-1
Overload		-3			dBm	ER=8.2dB, BER<10^-10, PRBS 2^23-1
Loss of Signal De-Assert Level				-35	dBm	
Loss of Signal Assert Level		-39			dBm	
LOS Hysteresis		0.5		6	dB	
WDM Filter Isolation		25			dB	To 1441~1450nm & 1530~1539nm
WDM Filter Isolation		36			dB	To 1250~1441nm & 1539~1625nm

Table 2 – Electrical and Timing Characteristics

Recommended Operating Conditions						
Storage Temperature		-40		85	°C	
Operating Case Temperature (C-temp)	T _c	0		70	°C	
Operating Case Temperature (I-temp)	T _c	-40		85	°C	
Power Supply Voltage	V _{cc}	3.15	3.3	3.45	V	
Supply Current	I _{cc}		200	400	mA	
Bit Rate for Tx			1.244		Gbps	
Bit Rate for Rx			2.488		Gbps	
Electrical Interface Characteristics						
Data Input Swing Differential / TX		200	-	2000	mV	
Data Output Swing Differential / RX		400		1600	mV	
Data Differential Impedance	Z _{diff}	90	100	110	Ω	
LVTTL Output High		2.4		V _{cc}	V	
LVTTL Output Low		0		0.4	V	
LVTTL Input High		2.0		V _{cc} +0.3	V	
LVTTL Input Low		0		0.8	V	
Timing Characteristics						
Turn On Time at Burst Mode (TON)				12.8	ns	
Turn Off Time at Burst Mode (TOFF)				12.8	ns	
TX-SD Assert Time (TTXSD_ON)				100	ns	
TX-SD De-assert Time (TTXSD_OFF)				100	ns	
LOS Assert Time (TLOSA)				100	us	
LOS De-assert Time (TLOSD)				100	us	

Ordering Information

Table 3 - Ordering Information

Part No.	Description
CLGPONU-LA-B+	GPON SFP ONU, B+, 1.244Gbps Tx 1310nm, 2.488Gbps Rx 1490nm, Rx_LOS signal high active when loss of input signal, SFP form-factor, LC/APC connector, Tx_Burst LVTTL-I transmitter burst control, active low for transmitter on

CONTACT:

Email: sales@c-light.com <https://www.c-light.com>