

GPON OLT

Optical Module

- ✔ OLT-GSFP-B+
- ✔ OLT-GSFP-C+
- ✔ OLT-GSFP-C++
- ✔ OLT-GSFP-C+++



Product Features

- Compatible con la aplicación IEEE 802.3ah 1000BASE-PX20+/PX20++ GEAPON
 - Aplicado a GPON OLT para un sistema GPON bidireccional de fibra única
 - SFP, conector SC único, interfaz de diagnóstico digital compatible con SFF-8472
 - Indicación de intensidad de señal de recepción digital en ráfaga (RSSI)
 - Fuente de alimentación de 3.3V única.
 - Temperatura de operación de -10~70°C para uso comercial
- Cumplimiento con RoHS-6

Calificaciones máximas absolutas

Parametros	Unit	Min.	Typical	Max.
Fuente de alimentación	V	0		4.2
Temperatura ambiente de almacenamiento	°C	-40		85
Temperatura de operación del gabinete	°C	-10		70
Humedad relativa de operación	%	5		95
Umbral de daño del receptor	dBm	0		

Condición de funcionamiento

Parameter	Unit	Min.	Typical	Max.
Fuente de alimentación	V	3.1	3.3	3.5
Temperatura de operación del gabinete para C-temp	°C	-10		70
Humedad relativa de operación	%	5		95
(TX/RX)	Gbit/s		1.25	

Características OLT-B+

Todo el rendimiento se especifica en condiciones y temperatura de trabajo completas.

Parameter	Unit	Min.	Typical	Max.
Transmitter				
TX Central Wavelength	nm	1480	1490	1500
Spectral Width (-20dB)	nm			1
Side Mode Suppression Ratio (SMSR)	dB	30		
Mean Launched Power	dBm	1.5		5
Mean Launched Power (TX Off)	dBm			-45
Extinction Ratio	dB	8.2		
Optical Return Loss Tolerance	dB	-12		
Transmitter and dispersion Penalty	dB			1
Transmitter Mask(PRBS2 ²³ -1 @2.488G)	Compliant With ITU-T G.984.2			
Receiver				
Receive Wavelength	nm	1290	1310	1330
Sensitivity (PRBS2 ²³ -1 @1.244G,ER=10,BER<10 ⁻¹⁰)	dBm			-28
Overload (PRBS2 ²³ -1 @1.244G,ER=10,BER<10 ⁻¹⁰)	dBm	-8		
Receiver Burst Mode Dynamic Range	dB	15		
Damage Threshold for Receiver	dBm	5		
SD Assert Level	dBm			-30
SD De-assert Level	dBm	-45		
SD Hysteresis	dB	0.5		6
WDM Filter isolation to 1550nm	dB	38		
WDM Filter isolation to 1650nm	dB	35		
Electrical Interface Characteristics				
Data Input Swing Differential/TX	mV	200	-	2000
Data Output Swing Differential/RX	mV	400		1600
Date Differential Impedance	Ω	90	100	110
LVTTL Output High	V	2.4		V _{cc}
LVTTL Output Low	V	0		0.4
LVTTL Input High	V	2.0		V _{cc} +0.3
LVTTL Input Low	V	0		0.8
Timing Characteristics				
Guard Time (T _g)	ns	25.6		
Reset Pulse Width (T _r)	ns			12.8
Reset Delay (T _{rd})	ns			12.8
Receiver Preamble Time (T _p)	ns			140
SD Assert Time (T _{SDA})	ns			100
SD De-assert Time (T _{SDD})	ns			12.8
RSSI Trigger Delay (T _{td})	ns	25		
RSSI Trigger Pulse Width (T _w)	ns	500		
Internal I2C Delay (T _{wait})	us			500

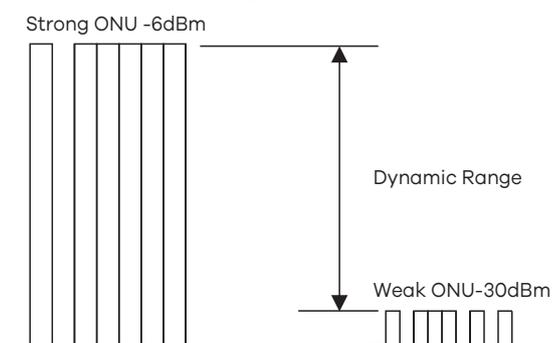
Características OLT-C+

Parameter	Unit	Min.	Typical	Max.
GSFP-OLT-C+				
TX Central Wavelength	nm	1480	1490	1500
Spectral Width (-20dB)	nm			1
SMSR	dB	30		
Mean Launched Power	dBm	2		7
Mean Launched Power (TX Off)	dBm			-39
Extinction Ratio(Note 1)	dB	9		
TX Total Jitter	UI			0.43
Rise/Fall Time (20%-80%)	ps			260
RIN _{is} OMA	dB/Hz			-115
Optical Return Loss Tolerance	dB			-12
Transmitteranddispersion Penalty(20km G.652)	dB			2.3
TX Optical Eye Mask		Compliant With IEEE Std 802.3ah™-2004		
Receive Wavelength	nm	1260	1310	1360
Sensitivity (Note 2)	dBm			-30
Overload	dBm	-6		
Receiver Threshold Settling Time	ns			250
RX Dynamic Range(Note 3)	dBm	-30		-6
LOS-Deassert	dBm			-31
LOS-Assert	dBm	-45		
SD Hysteresis	dB	0.5		6
Receiver Reflectance	dB			-12
Electrical Interface Characteristics				
Power Supply Current	mA			300
Data Input Differential Swing	mV	200		1600
Data Differential Impedance	Ω	90	100	110
TTL Input -Low	V	0		0.8
TTL Input -High	V	2.0		Vcc
TTL Output -Low	V	0		0.4
TTL Output -High	V	2.4		Vcc
Data Output Differential Swing	mV	400		1600
Los Assert Time	ns			500
Los Deassert Time	ns			500

Note1: Measured with PRBS 2⁷-1 test pattern @1.25Gbps, Low Pass Filter is on.

Note2: Measured with a PRBS 2⁷-1 test pattern @1.25Gbps and ER=10dB, BER =10⁻¹²,

Note3: RX Dynamic Range Definition



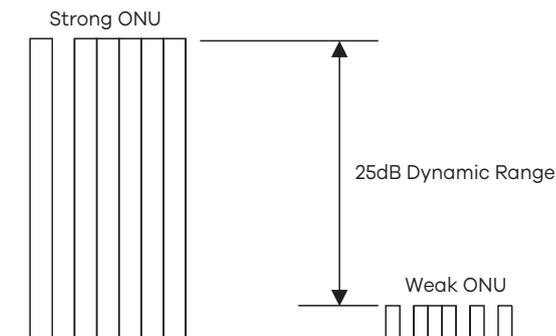
Características OLT-C++

Parameter	Unit	Min.	Typical	Max.
GSFP-OLT-C++				
TX Central Wavelength	nm	1480	1490	1500
Spectral Width (-20dB)	nm			1
SMSR	dB	30		
Mean Launched Power	dBm	5		8
Mean Launched Power (TX Off)	dBm			-39
Extinction Ratio(Note 1)	dB	9		
TX Total Jitter	UI			0.43
Rise/Fall Time (20%-80%)	ps			260
RIN_{IS}OMA	dB/Hz			-115
Optical Return Loss Tolerance	dB			-12
Transmitter and dispersion Penalty(20km G.652)	dB			2.3
TX Optical Eye Mask		Compliant With IEEE Std 802.3ah™ -2004		
Receive Wavelength	nm	1260	1310	1360
Sensitivity (Note 2)	dBm			-33
Overload	dBm	-6		
Dynamic Rang	dB	25		
Receiver Threshold Settling Time	ns			250
RX Dynamic Range(Note 3)	dBm	-30		-6
LOS-Deassert	dBm			-34
LOS-Assert	dBm	-45		
SD Hysteresis	dB	0.5		6
Receiver Reflectance	dB			-12
Electrical Interface Characteristics				
Power Supply Current	mA			300
Data Input Differential Swing	mV	200		1600
Data Differential Impedance	Ω	90	100	110
TTL Input -Low	V	0		0.8
TTL Input -High	V	2.0		Vcc
TTL Output -Low	V	0		0.4
TTL Output -High	V	2.4		Vcc
Data Output Differential Swing	mV	400		1600
Los Assert Time	ns			500
Los Deassert Time	ns			500

Note1: Measured with PRBS 2⁷-1 test pattern @1.25Gbps, Low Pass Filter is on.

Note2: Measured with a PRBS 2⁷-1 test pattern @1.25Gbps and ER=10dB, BER <10⁻¹²,

Note3: RX Dynamic Range Definition



GEAPON OLT Optical Module

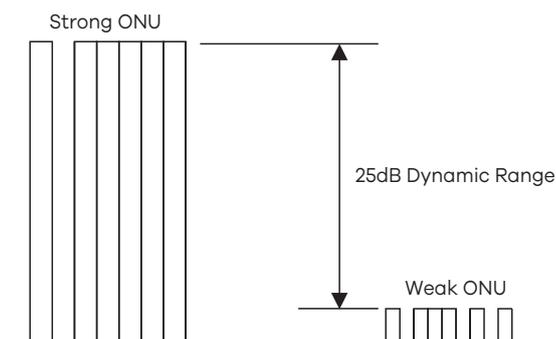
Características GBIC OLT-C+++

Parameter	Unit	Min.	Typical	Max.
GSFP-OLT-C+++				
TX Central Wavelength	nm	1480	1490	1500
Spectral Width (-20dB)	nm			1
SMSR	dB	30		
Mean Launched Power	dBm	6		9
Mean Launched Power (TX Off)	dBm			-39
Extinction Ratio(Note 1)	dB	9		
TX Total Jitter	UI			0.43
Rise/Fall Time (20%-80%)	ps			260
RIN_{is}OMA	dB/Hz			-115
Optical Return Loss Tolerance	dB			-12
Transmitter and dispersion Penalty(20km G.652)	dB			2.3
TX Optical Eye Mask		Compliant With IEEE Std 802.3ah™ -2004		
Receive Wavelength	nm	1260	1310	1360
Sensitivity (Note 2)	dBm			-33
Overload	dBm	-6		
Dynamic Rang	dB	25		
Receiver Threshold Settling Time	ns			250
RX Dynamic Range(Note 3)	dBm	-30		-6
LOS-Deassert	dBm			-34
LOS-Assert	dBm	-45		
SD Hysteresis	dB	0.5		6
Receiver Reflectance	dB			-12
Electrical Interface Characteristics				
Power Supply Current	mA			300
Data Input Differential Swing	mV	200		1600
Data Differential Impedance	Ω	90	100	110
TTL Input -Low	V	0		0.8
TTL Input -High	V	2.0		Vcc
TTL Output -Low	V	0		0.4
TTL Output -High	V	2.4		Vcc
Data Output Differential Swing	mV	400		1600
Los Assert Time	ns			500
Los Deassert Time	ns			500

Note1: Measured with PRBS 2⁷-1 test pattern @1.25Gbps, Low Pass Filter is on.

Note2: Measured with a PRBS 2⁷-1 test pattern @1.25Gbps and ER=10dB, BER <10⁻¹²,

Note3: RX Dynamic Range Definition



GEAPON OLT Optical Module

Modelo	Descripción
OLT-GSFP-B+	GPON OLT B+, 20 km, TX 1490 nm 2,488 Gbps, RX 1310 nm 1,244 Gbps, formato SFP factor, receptáculo SC/UPC, 0-70 °C comercial-Temperatura
OLT-GSFP-C+	Módulo OLT SFP, estándar PX 20+, enlace descendente 1,25 G/enlace ascendente 1,25 G, longitud de onda TX 1490 nm, longitud de onda RX 1310 nm, interfaz SC
OLT-GSFP-C++	Módulo OLT SFP, estándar PX 20++, enlace descendente 1.25G/uplink 1.25G, longitud de onda de transmisión 1490nm, longitud de onda de recepción 1310nm, interfaz SC
OLT-GSFP-C+++	Módulo OLT SFP, estándar PX 20++, enlace descendente 1.25G/uplink 1.25G, longitud de onda TX 1490nm, longitud de onda RX 1310nm, interfaz SC