



ED5219LXGT Series

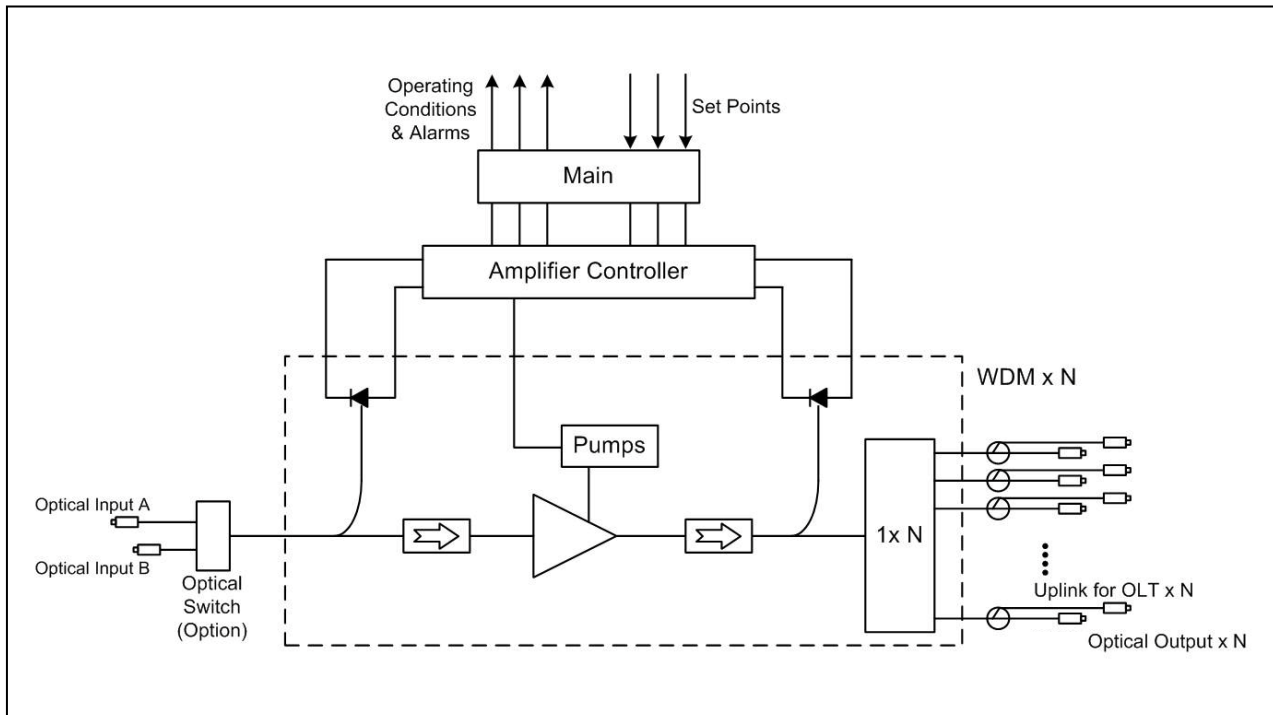
XGPON/GPON EDFA with WDM Multiple Optical Outputs

ACI ED5219LXGT-16 series is a low noise, high performance, FTTP high power, multi-ports optical amplifier with gain spectrum band of 1545 to 1563 nm. Each output port for optical amplifier has built-in well-performed CWDM. Every external up-link optical port of optical amplifier can connect with OLT PON port very conveniently. Each 1550 nm output optical port multiplexes with 1310/1490 nm (GPON) or 1270 nm/1577 nm (XGPON) data stream in order to reduce the quantity of components and improve the performance index and reliability of the system. It also has a built-in 2x1 optical switch for 1550 nm input back up redundancy. ACI ED5219LXGT-16 optical amplifier can be compatible with any FTTP PON Technology. It offers a flexible and low-cost solution for three-wavelength integration in a Fiber to the Home network.

Features

- Operation temperature range: -5°C to +65 °C (for outdoor cabinet environment).
- All front panel access.
- Works for 19" rack and can be mounted horizontally or vertically.
- A high performance optical output driver circuit and laser TEC to provide a highly reliable EDFA.
- A Built-in microprocessor allows the unit to monitor the system parameters.
- LED indicator on the front panel shows the Laser diode on/off status.
- LCD display on the front panel shows the monitor parameters.
- Support SNMP for network management.
- Optical Switch for 1550 nm signal source redundancy. (Option)

Block Diagrams



Specifications

ACI		ED5219LXGT Series EDFA with XGPON WDM				
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION		NOTES	
Absolute Maximum Ratings			Value Min.	Value Max.		
Operating Case Temperature		°C	-5	65		
Storage Case Temperature		°C	-40	80		
Electrostatic discharge(ESD)	C=100pf , R=1.5R Human body model	V	0	1000		
Relative Humidity	Non condensing	%	0	95		
Power Consumption	8 ports 16 ports	Watt	-	38 48		
Environmental Condition			Min.	Typ.	Max.	
Operation Case Temperature		°C	-5	-	65	
Operation Humidity		%RH	0	-	95	Without Condensation
Storage Case Temperature		°C	-40	-	80	
Storage Humidity		%RH	0	-	95	Without Condensation
Each Port Output Power		dBm	-	-	19	

Specifications

ACI ED5219LXGT Series EDFA with XGPON WDM						
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION			NOTES
Optical Specifications			Min.	Typ.	Max.	
Optical Wavelength (broadcasting)	In vacuum	nm	1545	-	1563	
Total Input Power		dBm	-10	-	+10	
Saturated Output Power	@ Pin ≥ -5 dBm @ λ _{OP} = 1550 nm	dBm	Pout	Pout +0.3	Pout +1	
Output Power Stability		dB	-0.5	-	0.5	
Noise Figure @ Pin=0dBm	@1550 nm	dB	-	-	5.5	
Polarization Dependent Gain		dB	-	-	0.4	
Polarization Mode Dispersion		ps	-	0.1	-	
Return Loss	All ports	dB	50	-	-	
Output Isolation		dB	40	-	-	
Residual Pump LD Power	970 to 980 nm	dBm	-	-	-30	
ASE Side Mode Suppression	With 1550 nm input	dBm			-30	
Number of Output Ports		pcs	-	8 16	-	
Each Port Output Power		dBm	-	-	19	
Mechanical Specifications						
Dimension		mm	443 x 249 x 43			19" 1RU, Depth≤249mm
Power Supply	Dual power module	V	Min. 30	Typ. 48	Max. 72	
Power Consumption	8 ports 16 ports	Watt	65 75			
Pump Laser Switch			Key Switch			
Air Flow Direction			Left to Right			Note 1
LED Indicators			Pump Laser Status			
User Interface			RJ45, RS232 (Option)			
Optical Connector	1550nm input		SC/APC (standard)			
	XGPON/GPON input		SC/APC (standard), LC/PC (option)			
	Combined out		SC/APC (standard), LC/APC (option)			
Heat Dissipation		W	< 16 W (for 8 ports) < 22 W (for 16 ports)			
Weight		Kg	6			

Note 1 : The air flow direction of ED5219LXGT is shown below



PARAMETERS	CONDITIONS	UNITS	SPECIFICATION			NOTES
Built-in WDM Specification			Min.	Typ.	Max.	
Transmission Band		nm		1550 1490 1577		Downstream
Reflection Band		nm		1310 1270		Upstream
Insertion loss:		dB			0.8	
Polarization Dependent Loss		dB			0.1	
Polarization Mode Dispersion		ps			0.1	
Isolation		dB	40			
PON signal pass-through when EDFA is turned off		nm		1310 1490 1270 1577		
Maximum Power	WDM Max. Power Endurance	dBm			26	
Built-in Optical Switch						
Number of inputs	Main (A)			2		
Insertion Loss	≤	dB			1.0	
Switching Time	≤	second			0.5	
Switching Mode:						
Switching to secondary input occurs when the main input is below predefined level						
Automatic back to main input when main input is turned on again						
When both main and secondary inputs are below the threshold, the EDFA selects the higher input						
Signal pass through when equipment is down						

Part Number Ordering Matrix

ACI ED5219LXGT Series EDFA Configuration Sheet

Customer: _____

Created By: _____ Order Date: _____

ORDERING MATRIX

2018/3/28

Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
PART NUMBER	E	D	5	2	1	9	L	X	G	T		—									

11 **CONTROL INTERFACE**

- 0: None (Default)
- 1: SNMP (RJ45)
- 2: RS232

17 **PON INPUT**

- 1 = GPON
- 2 = XGPON
- 3 = XGPON+GPON

13~14 **OUTPUT PORT**

- 01: 1 output port
- 02: 2 output ports
- 04: 4 output ports
- 08: 8 output ports
- 16: 16 output ports

19 **MAIN POWER**

- 1: 110/220 VAC (100~240 VAC)(Default)
- 2: Dual 110/220 VAC (100~240 VAC)
- 3: Dual -48 VDC

15~16 **OUTPUT POWER (per port)**

- | | |
|-------------------------|-------------------|
| 13: 13 dBm | Adjustable |
| 14: 14 dBm | A3 = 13dBm |
| 15: 15 dBm | A4 = 14dBm |
| 16: 16 dBm | A5 = 15dBm |
| 17: 17 dBm | A6 = 16dBm |
| 18: 18 dBm | A7 = 17dBm |
| 19: 19 dBm | A8 = 18dBm |
| Single port only | A9 = 19dBm |
| 20 = 20dBm | B0 = 20dBm |
| 21 = 21dBm | B1 = 21dBm |
| 22 = 22dBm | B2 = 22dBm |
| 23 = 23dBm | B3 = 23dBm |

20 **POWER CORD SETS**

- 0 = None
- 1 = North America
- 2 = International / Europe
- 3 = Japan
- 4 = Australia
- 5 = Argentina
- 6 = DC Wire Set. (AWG14) with Lugs type terminal, Black Negative (-), Red Positive (+)
- 7 = DC power connector (DB2 type) with wire terminal, Black Negative (-), Red Positive (+)
- 8 = DC power connector (DB2 type) with wire terminal, Red Negative (-), Black Positive (+)
- 9 = DC Wire Set. (AWG14) with Lugs type terminal, Red Negative (-), Black Positive (+)
- X = Custom - (Determined by product management)

21 **OPTICAL SWITCH FOR 1550nm SOURCE REDUNDANCY**

- 0 = None
- 1 = Redundant

18 **OPTICAL CONNECTOR :**

	1550nm-Input	GPON OLT-Input	XGPON OLT-Input	Output
1	SC/APC	NA	SC/APC	SC/APC
2	SC/APC	NA	LC/UPC	LC/APC
3	SC/APC	SC/APC	SC/APC	SC/APC
4	SC/APC	LC/UPC	LC/UPC	LC/APC
5	Determined by Product Management			

NOTES:



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