



## ED5219LGT Series

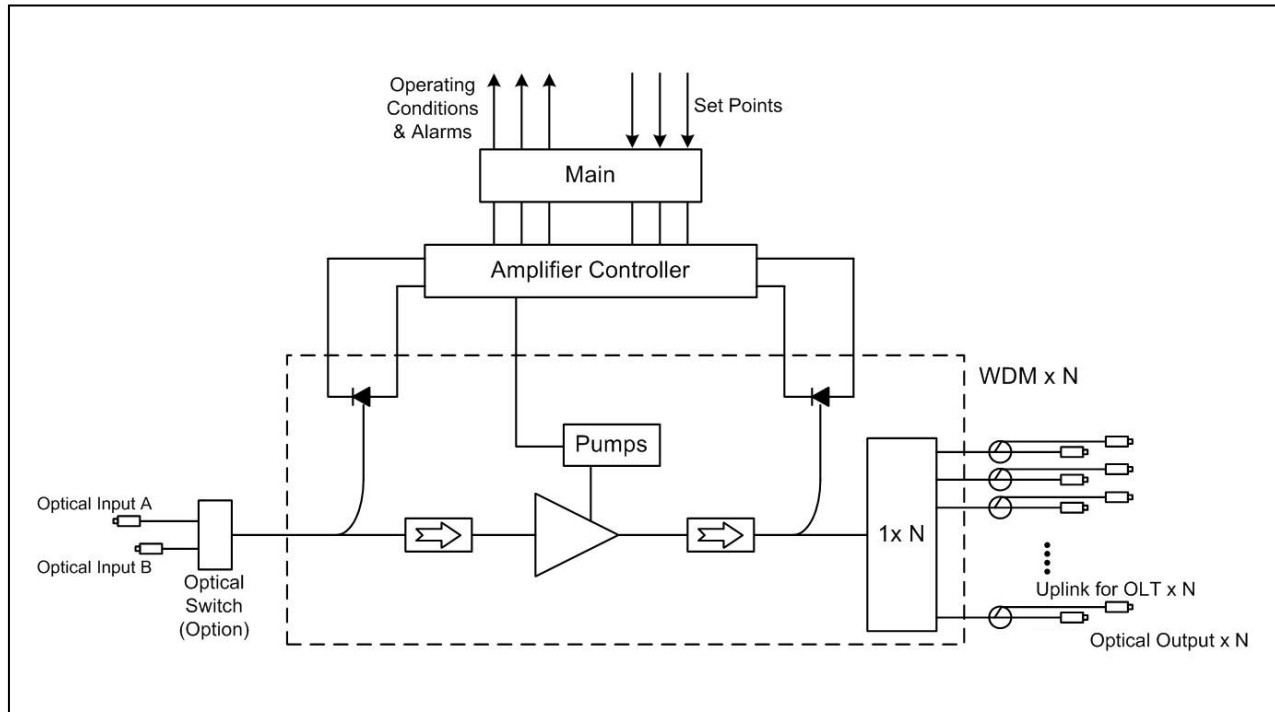
### GPON EDFA with WDM for IP(OLT) Wavelengths Multiple Optical Outputs

The ACI ED5219LGT series is a high-power multi-ports EDFA optical booster with gain spectrum bandwidth from 1545 to 1563 nm for HFC network. It is designed for the amplification of 1550 nm single channel or multi-channel wavelengths (ITU wavelength) with WDM for IP (OLT) signal overlay. It has WDM devices integrated for combing GPON (IP) signals of wavelengths 1310 nm (upstream) & 1490 nm (downstream) with 1550 nm broadcasting signal in the same fiber. ED5219LGT series is also specially designed with ruggedized components for operation in the temperature range from -5°C to +65°C which is suitable for both indoor and outdoor cabinet environment. The monitoring, alarm functions and system information are provided with real time display on the front LCD panel and web browser. RJ45 interfaces for SNMP management is also available, and RS232 interface for remote control is also available (option). It provides fully front-panel access functions including power supply connections on the front panel. It is 1 RU in height and by using a mounting adaptor, it works for 19" racks and can be installed vertically or horizontally in the cabinet.

#### Features

- Operation temperature range: -5°C to +65°C (for outdoor cabinet environment).
- All front panel access.
- Works for 19" 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		ED5219LGT Series EDFA with WDM				
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION		NOTES	
<b>Absolute Maximum Ratings</b>			Value Min.	Value Max.		
<b>Operating Case Temperature</b>		°C	-5	65		
<b>Storage Case Temperature</b>		°C	-40	80		
<b>Electrostatic discharge(ESD)</b>	C=100pf, R=1.5R Human body model	V	0	1000		
<b>Relative humidity</b>	Non condensing	%	0	95		
<b>Power Consumption</b>	8 ports 16 ports	Watt	-	38 48		
<b>Environmental condition</b>			Min.	Typ.	Max.	
<b>Operation Case Temperature</b>		°C	-5	-	65	
<b>Operation Humidity</b>		%RH	0	-	95	Without Condensation
<b>Storage Case Temperature</b>		°C	-40	-	80	
<b>Storage Humidity</b>		%RH	0	-	95	Without Condensation
<b>Each Port Output Power</b>	@ 25°C	dBm	19	-	-	For 19dBm Model

# Specifications

ACI		ED5219LGT Series EDFA with WDM				
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION			NOTES
<b>Optical Specifications</b>			Min.	Typ.	Max.	
<b>Optical Wavelength (broadcasting)</b>	In vacuum	nm	1545	-	1563	
<b>Total Input Power</b>		dBm	-10	-	+10	
<b>Saturated Output Power</b>	@ Pin ≥ -5 dBm @ λ <sub>OP</sub> = 1550 nm	dBm	Pout	Pout +0.3	Pout +1	
<b>Output Power Stability</b>		dB	-0.5	-	0.5	
<b>Noise Figure @ Pin=0dBm</b>	@ 1550 nm	dB	-	-	5.5	
<b>Polarization Dependent Gain</b>		dB	-	-	0.4	
<b>Polarization Mode Dispersion</b>		ps	-	0.1	-	
<b>Return Loss</b>	All ports	dB	50	-	-	
<b>Output Isolation</b>		dB	40	-	-	
<b>Residual Pump LD Power</b>	970 to 980 nm	dBm	-	-	-30	
<b>ASE Side Mode Suppression</b>	With 1550 nm input	dBm			-30	
<b>Number of Output Ports</b>		pcs	-	8 16	-	
<b>Each Port Output Power</b>	@ 25°C	dBm	19	-	-	For 19dBm Model
<b>Mechanical Specifications</b>						
<b>Dimension</b>		mm	439 x 258 x 44			19" 1RU, Depth≤249mm
<b>Power Supply</b>	Dual power module	V	Min. 30	Typ. 48	Max. 72	
<b>Power Consumption</b>	8 ports 16 ports	Watt	38 48			
<b>Pump Laser Switch</b>			Key Switch			
<b>Air Flow Direction</b>			Left to Right			Note 1
<b>LED Indicators</b>			Pump Laser Status			
<b>User Interface</b>			RJ45, RS232 (Option)			
<b>Optical Connector</b>	1550 nm input		SC/APC (standard)			
	GPON input		SC/APC (standard), LC/PC (option)			
	Combined out		SC/APC (standard), LC/APC (option)			
<b>Heat Dissipation</b>		W	< 16 W (for 8 ports) < 22 W (for 16 ports)			
<b>Weight</b>		Kg	6			

Note 1 : The air flow direction of ED5219LGT is shown below



ACI		ED5219LGT Series EDFA with WDM				
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION			NOTES
<b>Built-in WDM Specification</b>			Min.	Typ.	Max.	
<b>Transmission Band</b>		nm		1550 1490		Downstream
<b>Reflection Band</b>		nm		1310		Upstream
<b>Insertion loss:</b> <b>Transmission Band</b> <b>Reflection Band</b>		dB			0.8 0.6	
<b>Polarization Dependent Loss</b>		dB			0.1	
<b>Polarization Mode Dispersion</b>		ps			0.1	
<b>Isolation</b>		dB	40			
<b>PON signal pass-through when EDFA is turned off</b>		nm		1490 1310		
<b>Maximum Power</b>	WDM Max. Power Endurance	dBm			26	
<b>Built-in Optical Switch</b>						
<b>Number of inputs</b>	Main (A)			2		
<b>Insertion Loss</b>	≤	dB			1.0	
<b>Switching Time</b>	≤	second			0.5	
<b>Switching Mode:</b>						
Switching to secondary input when 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						
<b>Configuration and Management</b>						
<b>Constant Output</b>	@ variable optical input: -10 to +10 dBm					
<b>Output adjustable range</b>	16 to 19 dBm					
<b>Configuration method</b>	Through button panel and web interface					
<b>Management method</b>	By Web interface with 10 / 100 Mbps Ethernet port and SNMP					
	Settable threshold of switching					
	MIB file document available for third party integration					
<b>Managed Information</b>	Input power, output power, power supply status, bias current of pump laser, laser temperature					
	Alarm threshold setting for: input power, output power, bias current of pump laser, laser temperature					

# Part Number Ordering Matrix

## ACI ED5219LGT Series EDFA Configuration Sheet

Customer: \_\_\_\_\_

Created By: \_\_\_\_\_ Order Date: \_\_\_\_\_

### ORDERING MATRIX

2017/1/22

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

10  **CONTROL INTERFACE**

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

12-13  **OUTPUT PORT**

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

14-15  **OUTPUT POWER (per port)**

	Adjustable (Less 3dBm range)
13: 13 dBm	A3 = 13dBm
14: 14 dBm	A4 = 14dBm
15: 15 dBm	A5 = 15dBm
16: 16 dBm	A6 = 16dBm
17: 17 dBm	A7 = 17dBm
18: 18 dBm	A8 = 18dBm
19: 19 dBm	A9 = 19dBm
20 = 20dBm	B0 = 20dBm
21 = 21dBm	B1 = 21dBm
22 = 22dBm	B2 = 22dBm
23 = 23dBm	B3 = 23dBm

17  **MAIN POWER**

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

18  **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)

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

- 0 = None
- 1 = Redundant

20  **PM Code** (Determined by Tway PM)

16  **OPTICAL CONNECTOR :**

	1550nm-Input	OLT-Input	Output
1	SC/APC	SC/APC	SC/APC
2	SC/APC	LC/APC	LC/APC
3	SC/APC	w/o WDM	SC/APC
4	Determined by Product Management		

### NOTES:



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