



ACION 3958G

GPON Integrated EDFA

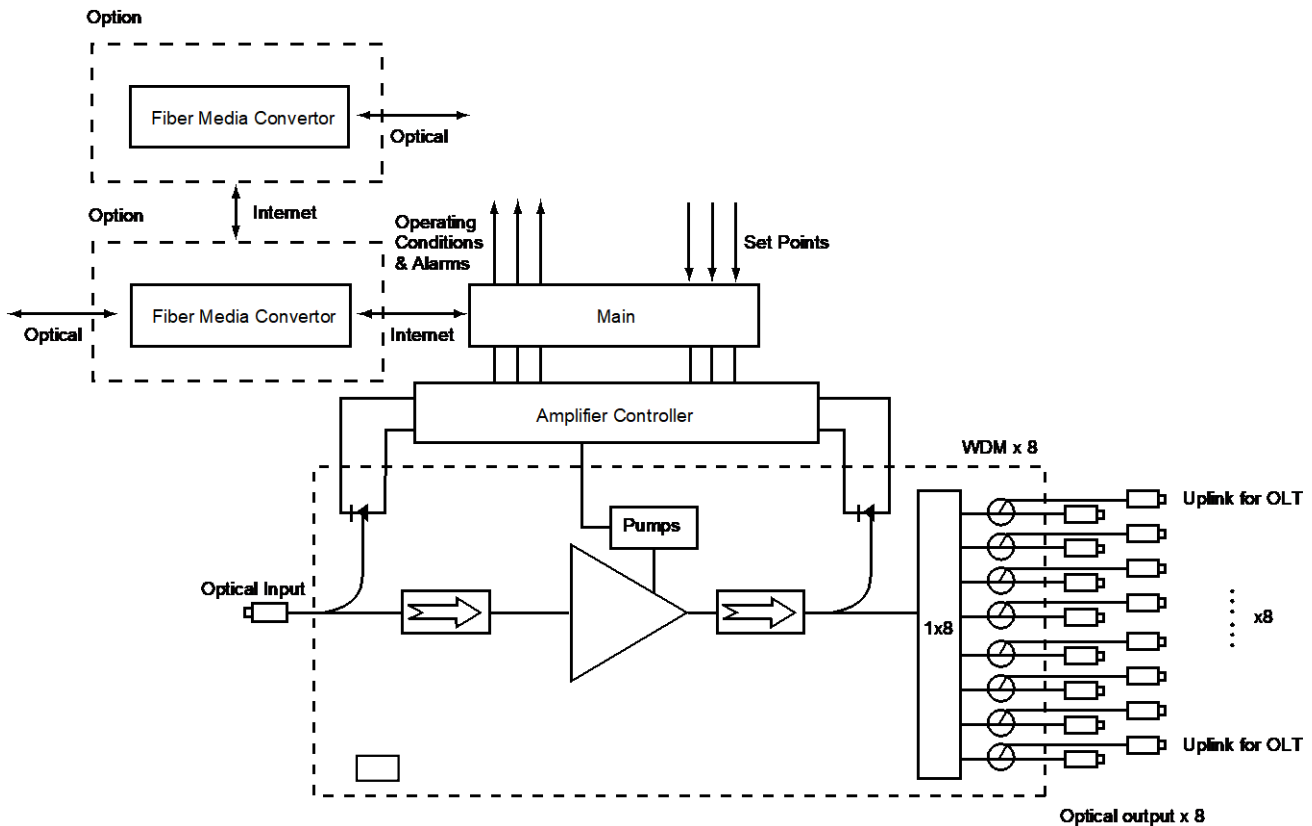
8 Output Ports with GPON WDM

The ACION 3958G EDFA is an outdoor EDFA with 8 output ports operated on constant output power mode. It is a single channel EDFA designed to amplify optical signal in the wavelength range from 1540 to 1560 nm. The ACION 3958G EDFA has a maximum total output power of 18 dBm. It also has WDM devices integrated for combing GPON (IP) signals of wavelength 1310 (upstream) and 1490 (downstream) with 1550 broadcasting signal in the same fiber. The monitoring, alarm functions and system information are provided with real time display on the front LCD panel and LED indicators. Optional RJ45 interfaces for SNMP management is available.

Features

- ◆ A high performance optical output driver circuit and laser TEC provides a highly reliable EDFA
- ◆ A Built-in microprocessor allows the unit to monitor the system parameters
- ◆ Built in WDM for GPON signal integration
- ◆ LED indicator on the front panel shows the alarm status.
- ◆ LCD display on the front panel shows the system parameters
- ◆ Supports firmware upgrade download
- ◆ Operating temperature: -20°C to +65°C (Standard)

Block Diagram



Specifications

ACI			ACION 3958G Single Channel EDFA 8 Output Ports with GPON WDM		
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION		NOTES
Absolute Maximum Ratings			Value Min.	Value Max.	
Operating Housing Temp.		°C	-20	+65	
Electrostatic Discharge(ESD)	C=100pf , R=1.5R Human body model	V	0	1000	
Relative Humidity	Non condensing	%	5	95	
Current Draw	Line Power (110~220V)	A	-	0.8	
	Cable Power (40~90V)		-	1.1	
Power Consumption	Line Power	Watt	-	35	
	Cable Power		-	35	
Input Power Factor	Line Power	%	50	-	
	Cable Power		60	-	

PARAMETERS	CONDITIONS	UNITS	SPECIFICATION			NOTES
Environmental condition			Min.	Typ.	Max.	
Operation Housing Temp.		°C	-20	-	+65	
Operation Humidity		%RH	5	-	95	Without Condensation
Storage Case Temperature		°C	-40	-	+85	
Storage Humidity		%RH	5	-	95	Without Condensation
Optical Specifications			Min.	Typ.	Max.	
Optical Wavelength	In vacuum	nm	1540	-	1560	
Optical Wavelength (GPON / IP)	In vacuum	nm	1270	1310	1350	Pass Through
			1480	1490	1505	
Output Power After WDM		dBm	18.0			Each Port
Total Input Power	@ $\lambda_{OP}=1550\text{nm}$	dBm	-5	-	+8	
Saturated Output Power	@ $P_{in} \geq -5 \text{ dBm}$ @ $\lambda_{OP}=1550\text{nm}$	dBm	Pout	Pout +0.3	Pout +1	
Output Power Variation		dB	-0/+1 (for the specified operational wavelength and input power range)			Wavelength
Output Power Stability	Over λ_{OP}	dB	-	-	1.0	
Noise Figure @ $P_{in}=0\text{dBm}$		dB	-	-	5.5	
ASE Side Lobe Suppression	1540~1565nm with 1550nm 0dBm Input signal	dBm			-30	
PDG	Over λ_{OP}	dB	-	-	0.5	
PMD	Over λ_{OP}	ps	-	-	0.5	
Return Loss	All ports	dB	4 5	-	-	
Insertion loss (IP wavelength)	@1310nm & 1490nm	dB			1.0	
Output Isolation		dB	4 5	-	-	
Pump Laser Used		-	-	2	-	
Residual Pump LD Power	970 ~ 980 nm	dBm	-	-	-30	
Control Mode		-	-	APC, ATC	-	
Built-in 1550 nm Broadcasting Test Port						
Built-in Optical Receiver	For 1550nm Test Port	-	Optical Receiver For EDFA Monitoring			Output of EDFA for 1550nm signal testing
Optical Receiver Input		dBm	-6 to 0			
Electrical Output Level	Manual Adjustable	$\text{dB}\mu\text{V}$	≥ 70			
CNR Performance		dB	≥ 47			
Test Point Connector		-	F5 3/8 Inch female			
Output Impedance		Ω	75			

PARAMETERS	CONDITIONS	UNITS	SPECIFICATION			NOTES
Built-in WDM Specifications			Min.	Typ.	Max.	
Transmission band	For GPON signal	nm		1550		Downstream
Reflection band				1310,1490		Upstream
Insertion loss: Transmission band	≤	dB			0.8	
Reflection band					0.6	
PDL	≤	dB			0.1	
PMD		ps			0.1	
Isolation		nm	40			
PON signal pass-through when EDFA is turned off		nm		1310,1490		
Maximum power	Max.	dBm			26	
Mechanical Specifications						
Interface	Standard		LCD Display			
	Optional		Network Management (SNMP)			Note 1
Dimension	H x W x D	In.	9.5 x 15.9 x 9.5			
Weight		Kg	10.7			Without Power Cable
Power Supply	Line Power	V	100~240VAC, 50/60Hz			
	Cable Power		40~90VAC			
Output Ports			8			
Input Port			1			
Water Proof			IP67			
Surge Protection	Combo Wave		6KV			
Pump Laser Switch			Key Switch			
LED Indicators			Pump Laser, Power, Input, Output, System			
LCD Display			4x20 / Web Page			
User Interface			RJ45			
Optical Connector	Standard		SC/APC			

Note 1: Choose 'ONE SNMP or TWO SNMP (for cascaded link) for network monitoring.

Part Number Configuration Sheet

ACION 3958 Configuration Sheet

Customer: _____

Created By: _____ Order Date: _____

ORDERING MATRIX

2017/3/1

Position		1	2	3	4	5	6	7	8	9	10
PART NUMBER	A3958				—						

- | | |
|--|--|
| <p>1 <input type="checkbox"/> GPON Bypass Option
G = with WDM for GPON Bypass
- = without WDM</p> <p>2-3 <input type="checkbox"/> <input type="checkbox"/> Output Power
18 = 18 dBm</p> <p>5 <input type="checkbox"/> Optical Input/Output Connector
1 = LC/APC
2 = LC/UPC</p> <p>6 <input type="checkbox"/> Network Management
0 = None
1 = SNMP (Media Converter)
2 = SNMP (Media Converter x2 for cascade)</p> <p>7 <input type="checkbox"/> HOU SING TYPE
0 = Standard (Aluminum)</p> | <p>8 <input type="checkbox"/> Power Supply
Cable Power
1 = 40~90VAC</p> <p><u>Line Power (100~240VAC)</u>
2 = North America
3 = International / Europe
4 = Japan
5 = Australia
6 = Argentina
X = Custom - (Determined by product management)
Y = Y Type Connector</p> <p>9 <input type="checkbox"/> Material Restrictions
0 = None</p> <p>10 <input type="checkbox"/> Operating Temperature
0 = -20°C ~ +65°C</p> |
|--|--|

NOTES:



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