

5V MSA EDFA Datasheet

Features

- Input VOA to adjust the input power I2C control interface
- APC/AGC operation
- LOS function
- Transient control
- Power limiting function to prevent receiver overload
- Two power monitoring points (input/output)
- 1M Laser Safety Specification compliance

Version History

Date	Version	Description
2024/12/27	1.0	Initialize

Order Information

Part Number	Description	Code
WZEDFA-EM-LAC962521-LC/UPC	-	-
WZEDFA-EM-LAC963521-LC/UPC		
WZEDFA-EM-LAC961414-LC/UPC		
WZEDFA-EM-LAC961821-LC/UPC		

Functional Diagram

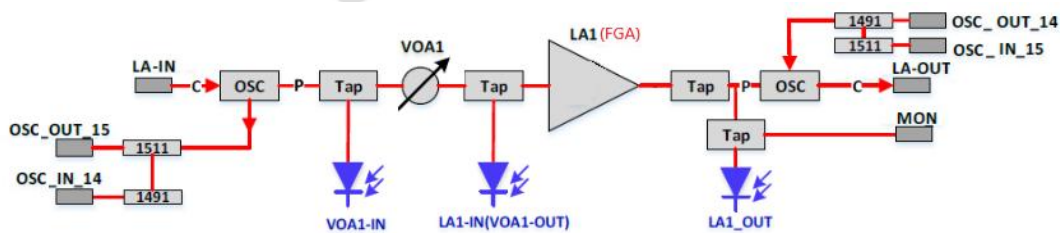


Figure1 Functional Diagram

Operation/Storage Temperature and Humidity

Parameter	Specification	Unit	Note
Operating case temperature	-5 ~ 55	°C	
Operation Humidity	5~85	%RH	
Storage Temperature	-40 ~ +85	°C	
Storage Humidity	5~95	%RH	

Optical Characteristics

Parameter	Min	Typ	Max	Units	Comments
Wavelength range	1528		1567	nm	Input/output
Operation mode	APC/AGC/ACC				
Number of channels	1		48	chs	
Input/Output Remnant Pump			-30	dB	
Input/Output Return loss	40			dB	@pump off
PMD			0.4	Ps	
PDG			0.4	dB	

WZEDFA-EM-LAC962521-LC/UPC

Parameter	Min	Typical	Max	Unit	Note
Booster, MAX Output=21dBm.					
Input power range	-28		-4	dBm	@VOA=0dB
	-18		6	dBm	@VOA=10dB
Output Power(Signal) range	-3		21	dBm	
Gain Range		25		dB	Fixed Gain
Settable tilt		0			
Gain accuracy	-0.5		0.5		
Gain flatness		1.0	1.5	dB	@VOA Base=0dB
			2.0	dB	@VOA=0~10dB
Noise Figure			6.5	dB	@-4G25, 25°C
Input LOS for pump off		-30		dBm	

WZEDFA-EM-LAC963521-LC/UPC

Parameter	Min	Typical	Max	Unit	Note
Booster, MAX Output=21dBm					
Input power range	-35		-14	dBm	@VOA=0dB
	-25		-6	dBm	@VOA=8dB
Output Power(Signal) range	0		21	dBm	
Gain Range		35		dB	Fixed Gain
Settable tilt		0			
Gain accuracy	-0.5		0.5		
Gain flatness		1.0	1.5	dB	@VOA Base=0dB
			2.0	dB	@VOA=0~8dB
Noise Figure			6.5	dB	@-14G35, 25°C
Input LOS for pump off		-37		dBm	

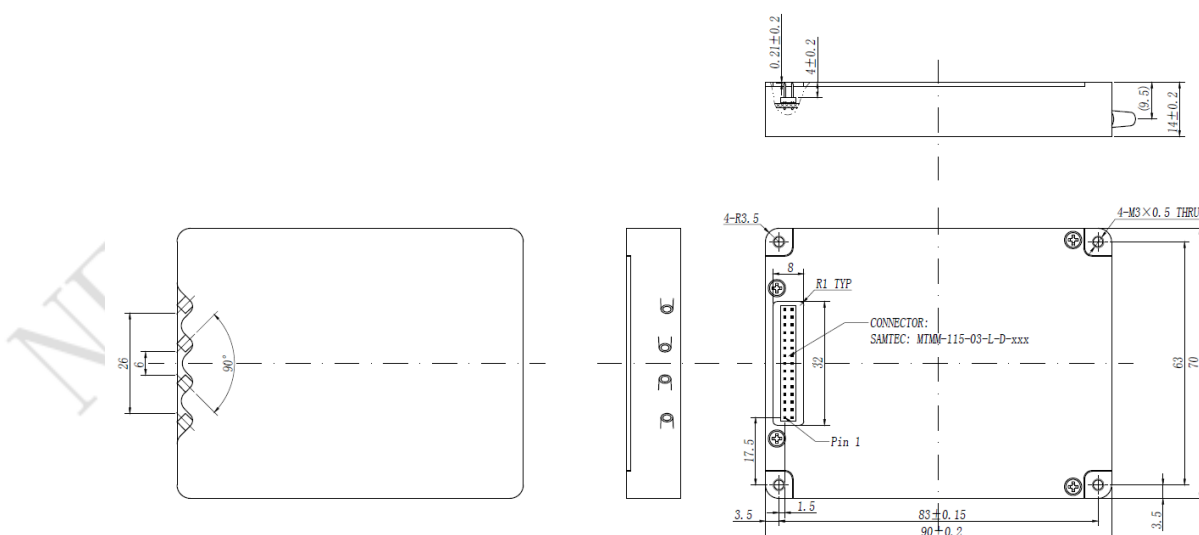
WZEDFA-EM-LAC961414-LC/UPC

Parameter	Min	Typical	Max	Unit	Note
Booster, MAX Output=14dBm.					
Input power range	-35		0	dBm	@VOA=0dB
Output Power(Signal) range	-21		14	dBm	
Gain Range		14		dB	Fixed Gain
Settable tilt		0			
Gain accuracy	-0.5		0.5		
Gain flatness		1.0	1.5	dB	@VOA Base=0dB
Noise Figure			6.5	dB	@0G14, 25°C
Input LOS for pump off		-37		dBm	

WZEDFA-EM-LAC961821-LC/UPC

Parameter	Min	Typical	Max	Unit	Note
Booster, MAX Output=21dBm.					
Input power range	-30		3	dBm	@VOA=0dB
Output Power(Signal) range	-12		21	dBm	
Gain Range		18		dB	Fixed Gain
Settable tilt		0			
Gain accuracy	-0.5		0.5		
Gain flatness		1.0	1.5	dB	@VOA Base=0dB
Noise Figure			6	dB	@3G18, 25°C
Input LOS for pump off		-32		dBm	

Mechanical Dimension Part



Electrical requirement

Pin Functionality

Pin	Function	Pin	Function
1	+5V Input power supply	2	+5V Input power supply
3	NC	4	NC
5	GND	6	GND
7	RS232 Rx	8	Serial Output RS 232 Tx (LV TTL)
9	GND	10	GND
11	NC	12	RESET input,(active Low)
13	Pump shut down Input (active high)	14	Output power mute input,(active high)
15	Case temperature alarm, (active high)	16	Common alarm,(active High)
17	Pump temperature alarm H/w pin (active high)	18	Pump bias alarm,(active high)
19	Loss of input alarm, (active high)	20	Loss of output alarm,(active high)
21	NC	22	NC
23	NC	24	NC
25	GND	26	GND
27	NC	28	NC
29	+5V Input power supply	30	+5V Input power supply

Power Supply Characteristics and Operating Rating

Supply	Min	Typ	Max	Unit
Digital Supply Voltage	4.5		5.5	V
Power Dissipation			10	W