

CE VGA EDFA Datasheet

Features

- 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-BEC153323-LC/UPC	-	-
WZEDFA-EM-BEC102323-LC/UPC		

Operation/Storage Temperature and Humidity

Parameter	Specification	Unit	Note
Operating case temperature	-5 ~ 70	°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 power detection accuracy			+/-0.5	dB	
Settable input LOS threshold	-40	-36	-10	dBm	
LOS threshold hysteresis		2		dB	
Output power range	-3		23	dBm	

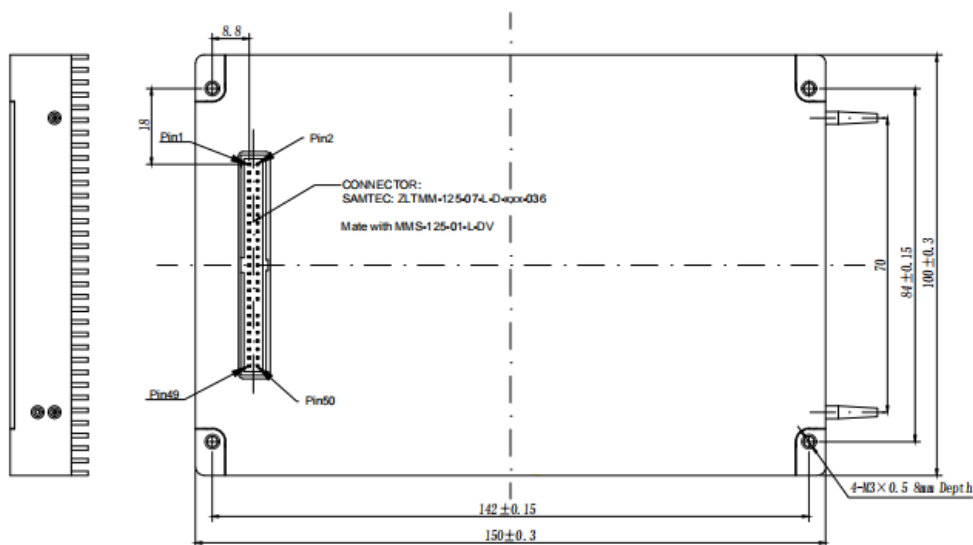
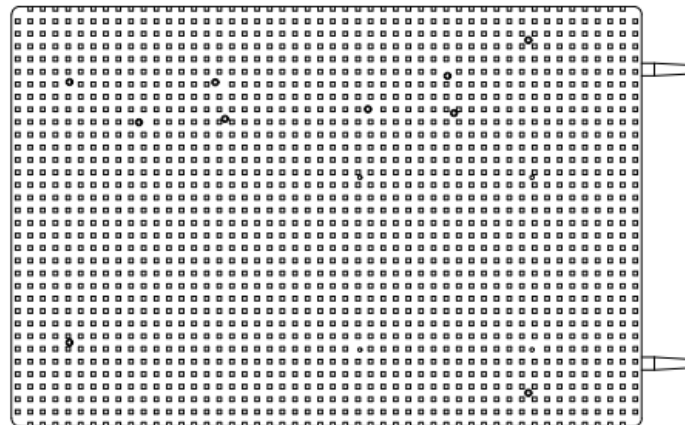
WZEDFA-EM-BEC153323-LC/UPC

Parameter		Min	Typical	Max	Unit	Note
Gain Range		15		30	dB	Tilt=0dB. Gain is Psig - Pin. Where Psig is Pout - Pase.
Extended Gain range		30		33		Need not meet the tilt requirement, but ripple must be under 2.0 dB. Please mention gain spectrum behaviour
Gain Setting Accuracy				+/- 0.5	dB	Tilt=0dB @1
Settable tilt		-5		2	dB	Positive tilt for G below 28dB. All performance parameters are specified for operation at nominal tilt set point. @1
Gain Ripple@ normal gain range			0.8	1.0	dB	For temperature 20-55C @tilt:0
			1.7	2.1	dB	For temperature 20-55C @tilt:-5
				1.3	dB	For all temperature ranges @tilt:0
				2.4	dB	For all temperature ranges @tilt:-5
Noise figure	G≥30dB			5.5	dB	At tilt=0dB: Pin=-7; Gain=30
				6.5	dB	At tilt=-5dB: Pin=-7; Gain=30
	G≥27dB			5.9	dB	At tilt=0dB: Pin=-4; Gain=27
				6.9	dB	At tilt=-5dB: Pin=-4; Gain=27
	G≥24dB			6.0	dB	At tilt=0dB: Pin=-1; Gain=24
				7.1	dB	At tilt=-5dB: Pin=-4; Gain=27
	G≥21dB			6.8	dB	At tilt=0dB: Pin=-2; Gain=21
				8.0	dB	At tilt=-5dB: Pin=-4; Gain=27
	G≥18dB			8.3	dB	At tilt=0dB: Pin=5; Gain=18
				9.5	dB	At tilt=-5dB: Pin=-4; Gain=27
	G≥15dB			10.7	dB	At tilt=0dB: Pin=8; Gain=15
				12	dB	At tilt=-5dB: Pin=8; Gain=15

WZEDFA-EM-BEC102323-LC/UPC

Parameter		Min	Typical	Max	Unit	Note
Gain Range		10		20	dB	Tilt=0dB. Gain is Psig - Pin. Where Psig is Pout - Pase.
Extended Gain range		20		23		Need not meet the tilt requirement, but ripple must be under 2.0 dB. Please mention gain spectrum behaviour
Gain Setting Accuracy				+/- 0.5	dB	Tilt=0dB @1
Settable tilt		-5		2	dB	Positive tilt for G below 28dB. All performance parameters are specified for operation at nominal tilt set point. @1
Gain Ripple@ normal gain range			0.7	1.0	dB	For temperature 20-55C @titl:0
			1.5	1.8	dB	For temperature 20-55C @titl:-5
				1.3	dB	For all temperature ranges @tilt:0
				2.1	dB	For all temperature ranges @tilt:-5
Noise figure	G≥20dB			5.9	dB	At tilt=0dB: Pin=3; Gain=20
				7.7	dB	At tilt=-5dB: Pin=3; Gain=20
	G≥18dB			6.5	dB	At tilt=0dB: Pin=5; Gain=18
				8.2	dB	At tilt=-5dB: Pin=5; Gain=18
	G≥15dB			7.4	dB	At tilt=0dB: Pin=8; Gain=15
				9.0	dB	At tilt=-5dB: Pin=8; Gain=15
	G≥13dB			8.5	dB	At tilt=0dB: Pin=10; Gain=13
				10.2	dB	At tilt=-5dB: Pin=10; Gain=13
	G≥10dB			11.5	dB	At tilt=0dB: Pin=13; Gain=10
				12.8	dB	At tilt=-5dB: Pin=13; Gain=10

Mechanical Dimension Part



Electrical requirement

Pin Functionality

Pin	Function	Pin	Function
1	Power Supply	2	Power Supply
3	Power Supply	4	Power Supply
5	Power Supply	6	Power Supply
7	Ground	8	Ground
9	Ground	10	Ground
11	N/C	12	Reserved, Low Level
13	Ground	14	Reset Input
15	Serial Input	16	Serial Output
17	Pump Current Alarm	18	Input LOS Alarm
19	Ground	20	Ground
21	N/C	22	N/C
23	N/C	24	N/C
25	Ground	26	N/C
27	Output Reflection Alarm	28	Ground
29	Output/Gain Alarm	30	Ground
31	Ground	32	Ground
33	Case Temperature Alarm	34	Reserved, Low Level
35	Pumps Temperature Alarm	36	PIN is absent.(Polarization Key)
37	Amplifier Disable Input	38	Output Power Mute Input
39	I2C SCL(optional)	40	I2C SDA (Optional)
41	Ground	42	Ground
43	Ground	44	Ground
45	Power Supply	46	Power Supply
47	Power Supply	48	Power Supply
49	Power Supply	50	Power Supply

Power Supply Characteristics and Operating Rating

Supply	Min	Typ	Max	Unit
Digital Supply Voltage	4.5		5.5	V
Power Dissipation		25	35	W