

WLA4200-FM05 Series
C-Band DWDM Line EDFA Module

Technical Specification

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1.0 PRODUCT DESCRIPTION

Huatai WLA4200-FM05 series is a gain flatness line EDFA Module which is specifically designed for C-Band 44 channels optic transmission system. It adopts the most excellent optical performance, the most advanced electronic control technology and the most complete software functionalities; it is featured with wide working wavelength range, low noise and excellent gain flatness. WLA4200-FM05 is mainly installed in middle of transmission line, replacing the traditional relay, to compensate the optical power loss in the line and extend the optical signal transmission distance.

WLA4200-FM05 adopts the world's top class pump laser; advanced electronic circuit and low consumption design, greatly reduced the heat power consumption of complete equipment. Perfect APC, ACC and ATC control, ensures the long life and high reliability work of pump laser. RS232 offer serial communication. The laser will switch off automatically if optical power is missing, which offers security protection for the laser.

WLA4200-FM05 adopts 125×150×20mm chassis size; signal unit +5VDC power supply.

2.0 PRODUCT FEATURE

- Wide working wavelength: 1529.16~1563.86nm
- Accord with the communication technology requirements of 44 channels DWDM system
- Excellent gain flatness feature (GF<1.0dB)
- Low noise figure
- Standard RS232 communication interface
- Low power consumption
- Excellent P/P ratio in area

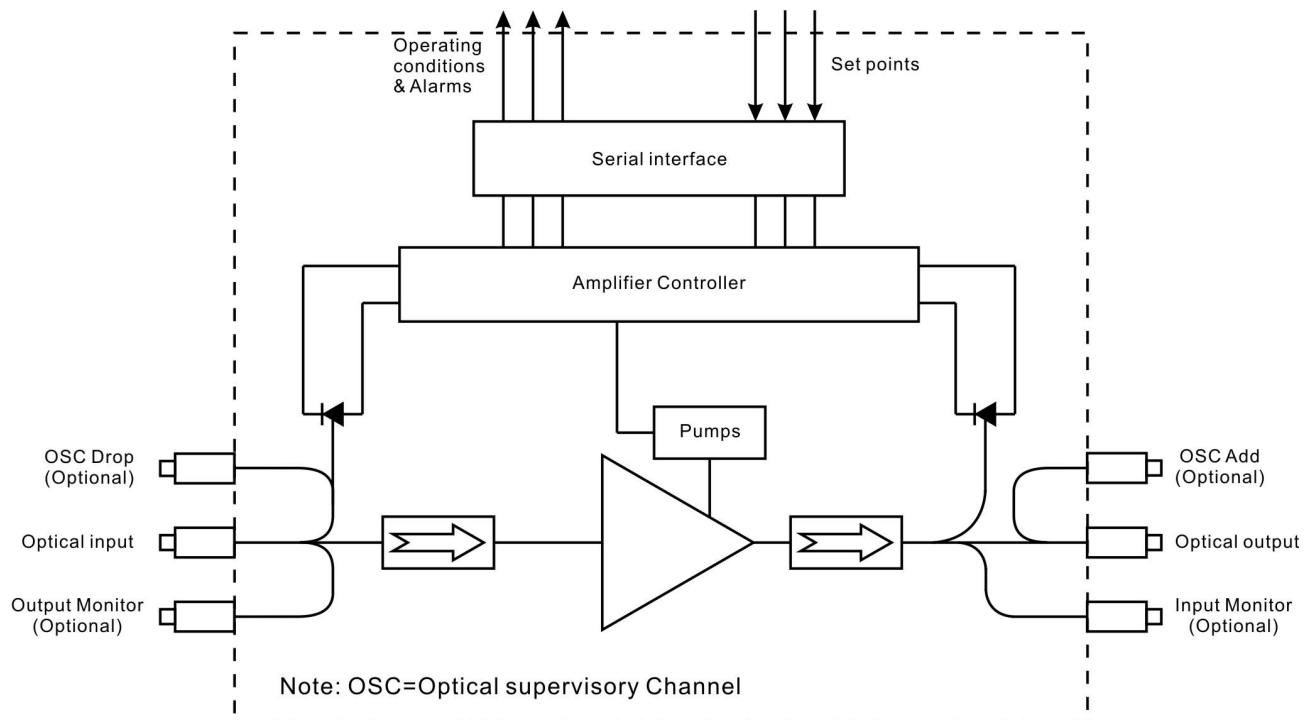
3.0 MAIN APPLICATION

- 44 channels DWDM system
- Long distance trunk network
- MAN or access network
- All kinds of SDH/PDH transmission system
- FTTx PON

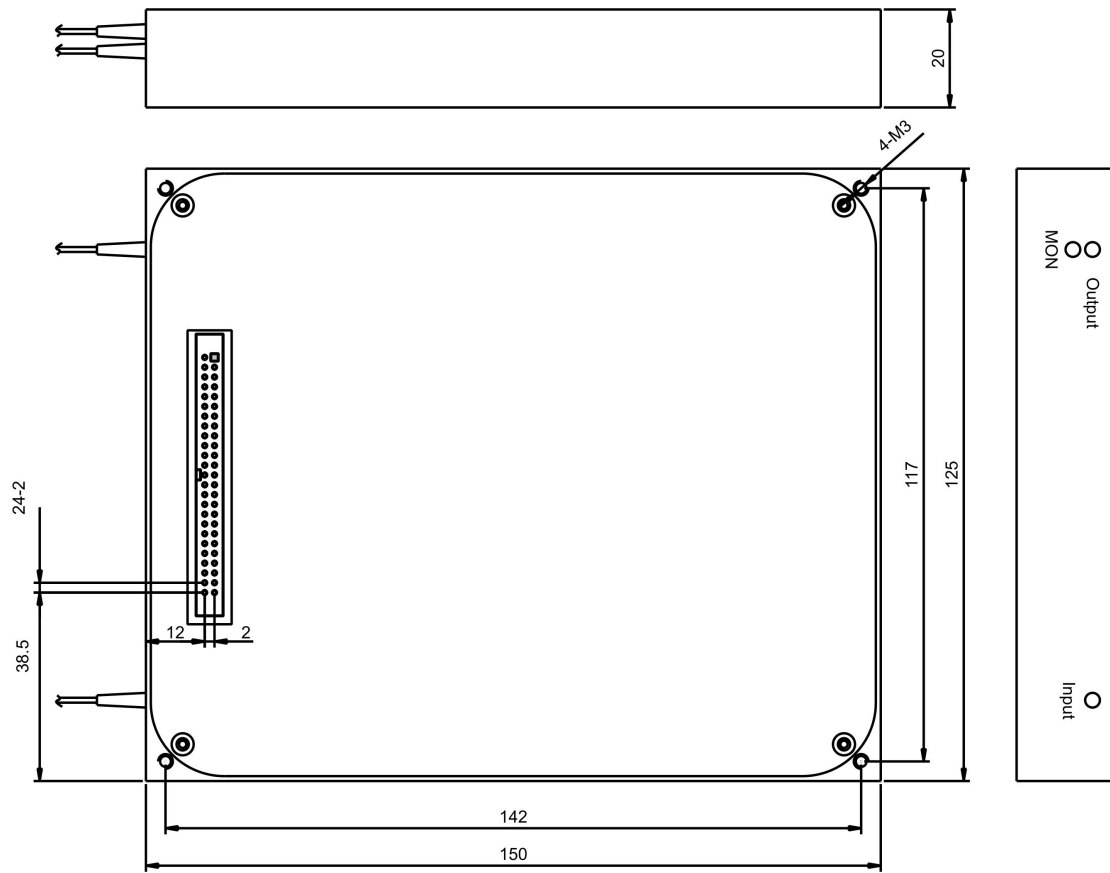
4.0 TECHNICAL INDEX

Performance		Index			Supplement	
		Min.	Typ.	Max.		
Optical feature	Work wavelength range(λ)	(nm)	1529.16		1563.86	ITU 88CH
	No. of Working channel	(CH)	1	44		
	Input optical power range(P_i)	(dBm)	-25		-10	
	Maximum output optical power (P_o)	(dBm)	13		23	
	Gain flatness	(dB)		0.7	1.0	Value of Peak to Peak
	Noise figure	(dB)		5.0		Max output, max gain
	Polarization dependence gain (PDG)	(dB)			0.3	
	Polarization mode dispersion (PMD)	(ps)			0.3	
	Polarization dependence loss (PDL)	(dB)			0.3	
	Input/output optic isolation	(dB)	30			
	Pump leakage power	(dBm)			-30	
	Echo loss	(dB)	45			UPC
			55			APC
Wavelength range of optic management channel	(nm)	1500	1510	1520		
General feature	Communication interface		RS232			
	Fiber type		Coming SMF-28™ or equivalent			
	Pigtail buffer diameter	(μ m)		900		
	Pigtail length	(mm)		1000		
	Power supply	(V)	+4.75	+5	+5.25	
	Power consumption	(W)			30	
	Working temp.	(°C)	-5		+70	
	Storage temp.	(°C)	-40		+85	
	Working relative humidity	(%)	+5		+95	
Size (W)×(D)×(H)	(mm)	125×150×20				

5.0 OPTICAL/ELECTRICAL SCHEMATIC



6.0 MODULE CHASSIS SIZE



7.0 Electrical Pin Assignments

Pins	Description	Pins	Description
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	Reserved (do not connect)	12	Output reflection alarm
13	Ground	14	Resent input
15	Serial input	16	Serial output
17	Pump current alarm	18	Stage 1 input LOS alarm
19	Ground	20	Ground
21	Reserved (do not connect)	22	Reserved (do not connect)
23	Reserved (do not connect)	24	Reserved (do not connect)
25	Ground	26	Reserved (do not connect)
27	Stage 2 input LOS alarm	28	Ground
29	Stage 2 output/Gain alarm	30	Ground
31	Ground	32	Ground
33	Case temperature alarm	34	Stage 1 output / Gain alarm
35	Pump 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

8.0 PRODUCT SERIES

Model	Max. output optical power (dBm)	Gain flatness (dB)	Working wavelength (nm)	Optical port monitoring mode	OSC Optical port mode
WLA4213-FM05-M00-O00	≥13	<1.0	1529.16~1563.86nm ITU 88CH	Without	Without
WLA4217-FM05-M00-O00	≥17	<1.0			
WLA4218-FM05-M00-O00	≥18	<1.0			
WLA4219-FM05-M00-O00	≥19	<1.0			
WLA4220-FM05-M00-O00	≥20	<1.0			
WLA4221-FM05-M00-O00	≥21	<1.0			
WLA4223-FM05-M00-O00	≥23	<1.0			

Note: 1), Optical port monitoring mode options:

- 1, MO (With output monitoring optical port)
- 2, MI (With input monitoring optical port)
- 3, MIO (With input and output monitoring optical port)

2), OSC optical port mode of optical management channel:

- 1, OD (OSC/Drop)
- 2, OA (OSC/Add)
- 3, ODA (OSC/Drop & Add)

9.0 ORDERING INFORMATION

WLA 4 2 □□ - FM 05 / □□ - M□□ - □□□

C-Band DWDM Line EDFA Module	Operation wavelength		Product type		Stauration power		Module type		Module size number		Connector		Monitoring optical port options		OSC optical port options	
	4	C-Band (1528~1564)	2	Line amplifier(LA)	13	13dBm	FM	Full function module	05	125 × 150 × 20mm	SP	SC/UPC	M00	Without optical port monitoring	O00	Without OSC
					17	17dBm					SA	SC/APC			OD	OSC/Drop
					18	18dBm					LP	LC/UPC	MO	With output optical port monitoring	OA	OSC/Add
					19	19dBm					LA	LC/APC				ODA
					20	20dBm					FP	FC/UPC	MI	With input optical port monitoring		
					21	21dBm					FA	FC/APC				
					23	23dBm							MIO	With input,output optical port detection		