Ver. 2.7en

WPA4300-FM02 Series

C-Band DWDM Full Function

Pre EDFA Module

Technical Specification

CONTENT

1.0 PRODUCT DESCRIPTION

Huatai WPA4300-FM02 series with 70 × 90 × 15mm MSA compact package, is a digital control circuit with DWDM full function preamplifier module. Products using the most excellent optical performance, the most advanced electronic control technology and comprehensive software features, has a wide operating wavelength range, low noise, excellent gain flatness characteristics and transient characteristics. Suitable for C-Band 44 or 88 waves DWDM system applications.

WPA4300-FM02 has two kinds of function versions are available:

1. Standard version: provides a fixed gain control mode (FGA), the pump current control mode (ACC)

2. Enhanced version: In addition to the standard version with the control functions, increasing the variable gain control mode (VGA, AGC), Variable output power control mode (VPA, APC).

WPA4300-FM02 enhanced version, for DWDM systems, providing a flexible, high-performance, low-cost networking applications.

2.0 PRODUCT FEATURE

- With Digital Control Electronics (Full Function)
- 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)
- Excellent Transient feature
- Low noise figure.
- Standard RS232 communication interface.
- MSA compact package (70×90×15mm)
- Low power consumption,Wide operating temperature range
- Excellent P/P ratio in area.

3.0 MAIN APPLICATION

- 44 channels DWDM system
- Metropolitan and access networks
- Optical Add/Drop and Cross-Connects
- FTTx PON

4.0 Software Function monitoring and alarm

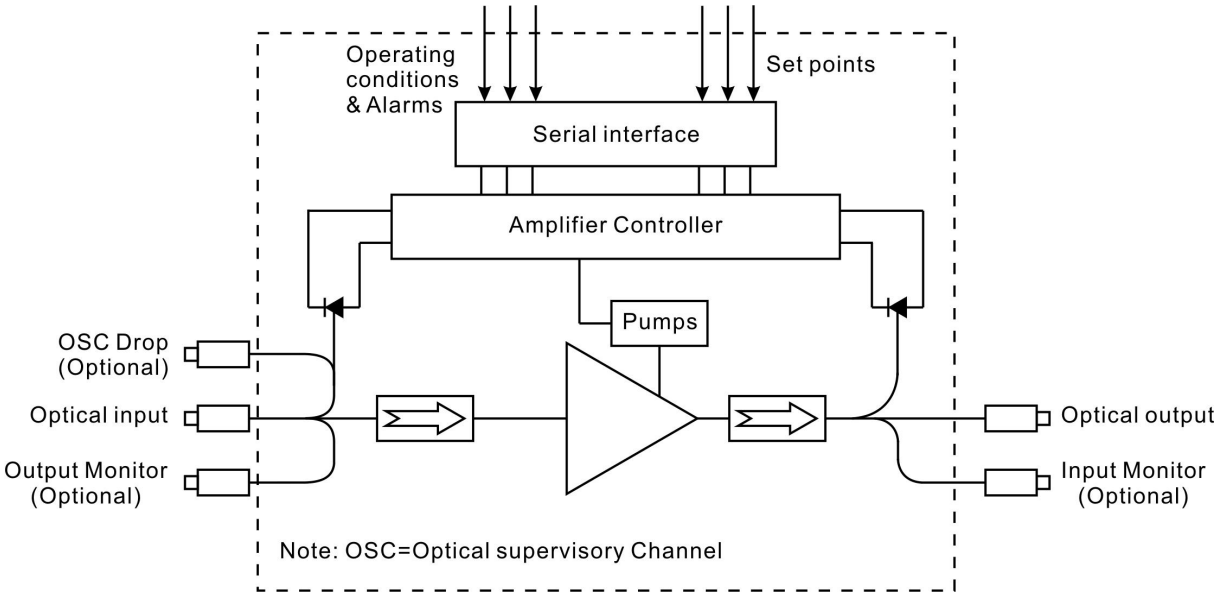
Function, Monitoring, Alarm		Standard version	Enhanced version
Functions	In-Service Firm ware Upgrades	√	√
	Auto Shut Down	√	√
	Fixed Gain Mode (FGA)	√	√
	Variable Gain Control Mode (VGA, AGC)	×	√
	Variable output power control mode (VPA, APC)	×	√
	Pump Current Control Mode (ACC)	√	√
	Pump Maximum Working Current limit Protection	√	√
Monitors	Total input power	√	√
	Total output power	√	√
	Pump status	√	√
	Chassis temperature	√	√
Alarms	Loss-of-signal alarm	√	√
	Chassis temperature alarm	√	√
	Pump temperature alarm	√	√
	Pump bias alarm	√	√

5.0 Technique index

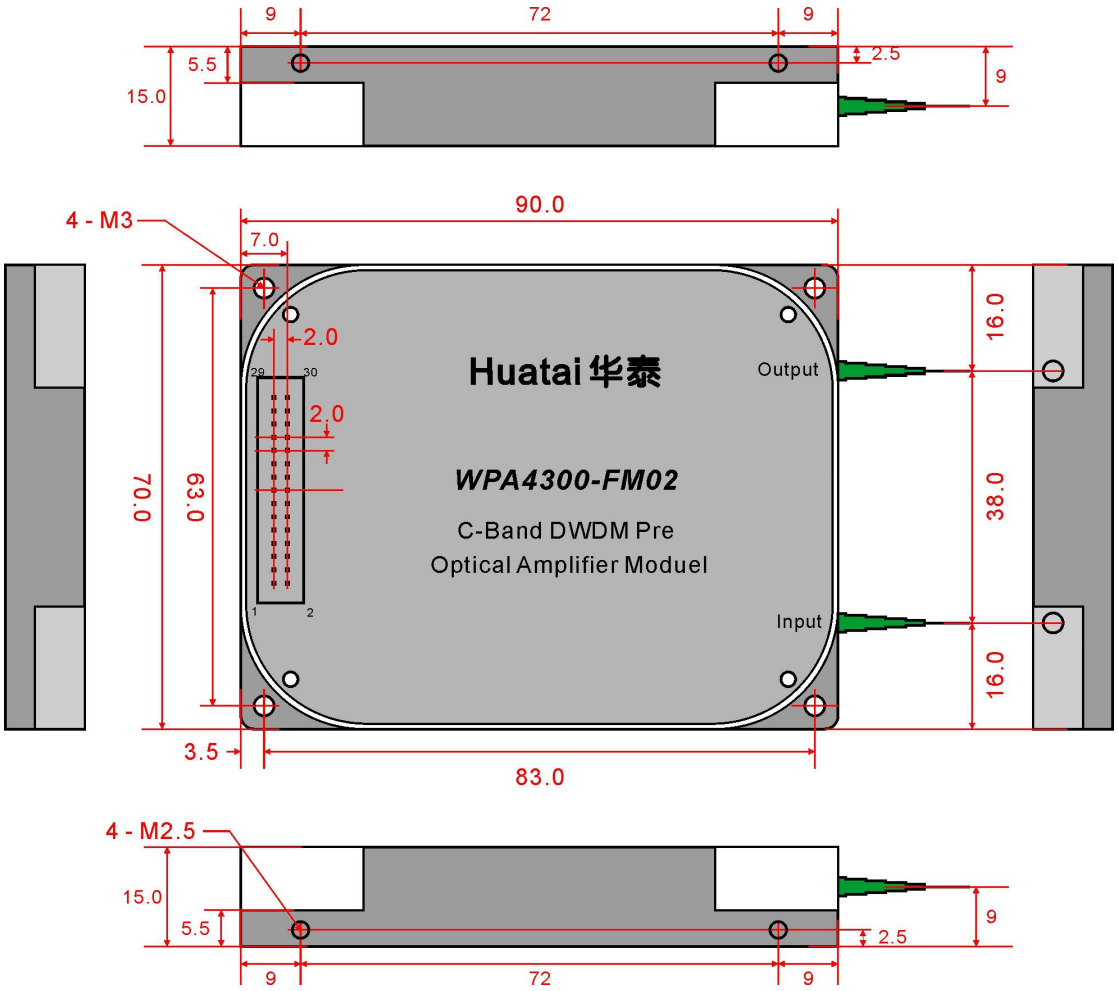
Performance			Index			Supplement
			Min.	Typ.	Max.	
Optical feature	Work wavelength range(λ)	(nm)	1529.16		1563.86	ITU 88CH
	No. of Working channel	(CH)	1	44		
	Input optical power range (Pi)	(dBm)	-36			
	Saturation output optical power (Po)	(dBm)		14		Customer selection
	Variable output power range	(dB)	-6		0	Enhanced version
	Signal gain	(dB)	13		36	Customer selection
	Variable gain range	(dB)	-12		0	Enhanced version
	Gain flatness	(dB)		0.7	1.0	Value of Peak to Peak
	Noise figure	(dB)		5.0		Max output, max gain
	Polarization dependence gain	(dB)			0.3	
	Polarization mode dispersion	(ps)			0.3	
	Polarization dependence loss	(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	
Transient feature	Transient suppression time	(μs)			700	
	Transient Overshoot	(dB)	-1.5		+1.5	16dB Add/Drop
	Transient gain changes	(dB)	-0.5		+0.5	16dB Add/Drop
General feature	Communication interface		RS232			
	Fiber type		Coming SMF-28™ or equivalent			
	Pigtail buffer diameter	(μm)		900		

	Pigtail length	(mm)		1000		
	Power supply	(V)	3.1	3.3	3.5	
	Power consumption	(W)		2.0	10	
	Working temp.	(°C)	-5		+70	
	Storage temp.	(°C)	-40		+85	
	Working relative humidity	(%)	+5		+95	
	Size (W)×(D)×(H)	(mm)	70×90×15			

6.0 Functional diagram



7.0 Dimensions



8.0 Electrical 30-Pin Assignments

Pin	Definition	Pin	Definition
1	+3.3V	2	+3.3V
3	NC	4	NC
5	GND	6	GND
7	Upper computer receive	8	Upper computer transmit
9	GND	10	GND
11	NC	12	NC
13	Amplifier switch (enable) input, (low level enable)	14	NC
15	NC	16	NC
17	NC	18	NC
19	NC	20	NC
21	GND	22	GND
23	NC	24	NC
25	GND	26	GND
27	NC	28	NC
29	+3.3V	30	+3.3V

9.0 PRODUCT SERIES

Model	Saturation power	Signal gain	Gain flatness	The Function Version Monitor	Monitor optical port mode	OSC Optical port mode
WPA4314-G □□-FM02	14dBm	14、17、20、24、27、30、33、36 dB	<1.0dB	1, FG: Standard version (FGA) 2, VG: Enhanced Version (VGA)	1, M00: Without monitoring 2, MO: With output monitoring	1、O00: Without OSC 2、OD: OSC / Drop
WPA4318-G □□-FM02	18dBm					

10.0 ORDER INFORMATION

WPA 4 3 □□ – G□□ – FM 02 – □□ – □□ / □□ – M□□ – O□□

DWDM Pre EDFA Moduel	Operation wavelength		Product type		Stauration power		Gain		Module type		Module size number		The Function Version		Connncrtor		Connncrtor		Monitor options		OSC options	
	4	C-Band 44 or 88 CH	3	PA	14	14dBm	14	14dB	FM	Full Function Module	02	70×90×15mm	FG	Standard Version FGA	SP	SC/UPC	05	0.5m	M00	Without monitor	O00	Without OSC
					18	18dBm	17	17dB							SA	SC/APC	08	0.8m				
							20	20dB			04	100×130×22mm	VG	Enhanced Version VGA	LP	LC/UPC	10	1.0m	MO	With output monitor	OA	OSC /Drop
							22	22dB							LA	LC/APC						
							24	24dB			05	125×150×22mm			FP	FC/UPC						
							27	27dB							FA	FC/APC						
							30	30dB														
							33	33dB														
							36	36dB														