VOA500 series · Standard type multi-way voltage-controlled optical attenuator

Technical performance

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CONTENT

1.0 PRODUCT DESCRIPTION

Huatai VOA500 series assemble multi high-resolution electricity controlled optical attenuators into 1RU or 3D housing, mainly applied to optical adjustment and automatic equilibrium in DWDM system's and multi-channel network and optical amplify network.

VOA500 is a standard type product. Each attenuator with an attenuation value of monitoring. RS232 and RJ45 provide serial communication and SNMP network interface. LCD on the front panel provides every work parameter and fault alarm of the whole unit. All the optical port can install on the front panel or back panel.

2.0　PRODUCT FEATURE

- High efficiency space，1RU casing can contain16ways optical attenuator.

- High resolution, ≤0.1dB

- High-accuracy optical input and output power monitor and display.

- Attenuation range 20dB, 30dB, 35dB, 40dB, 45dB optional

- Equipment power has three attenuation states to choose from

- Low insertion loss

- Low wavelength dependence loss

- Low polarization dependence loss

- Front panel LCD displays working status and parameters

- Completed RS232 and SNMP

- Excellent P/P ratio in this area

3.0　MAIN APPLICATION

- DWDM system, power adjustment and automatic equalization in multi-channel.

- Power control into narrowband wavelength division multiplexers (WDMs) and configurable networks.

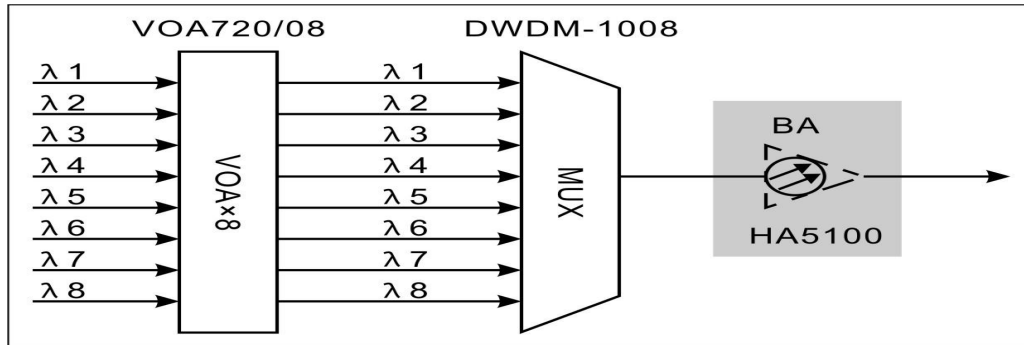- In Lab

4.0   TECHNICAL INDEX

Performance		Index			Supplement
		Min.	Typ.	Max.	
Optical feature	Operating wavelength range (nm)	1200		1620	
	Optimum operating wavelength range (nm)	1525		1575	
	Resolution (dB)			0.1	
	Minimum attenuation (dB)		0.7	1.2	
	Attenuation Range (dB)	20			VOA520
		30			VOA530
		35			VOA535
		40			VOA540
		45			VOA545
	Attenuation setting accuracy (dB)	-.0.2		+0.2	
	Attenuation monitor accuracy (dB)	-0.2		+0.2	
	Tuning speed (ms)		20		
	Polarization mode dispersion (ps)			0.1	
	Polarization dependence gain (dB)			0.2	
	Polarization dependence loss (dB)			0.3	
	Wavelength dependence ripple (dB)			0.2	
	Temperature-related attenuation (dB)			0.15	
	Power handling (mW)			500	
	Return loss (dB)	-50			PC
	Power attenuation state		Keep	ATT/Keep	K grade

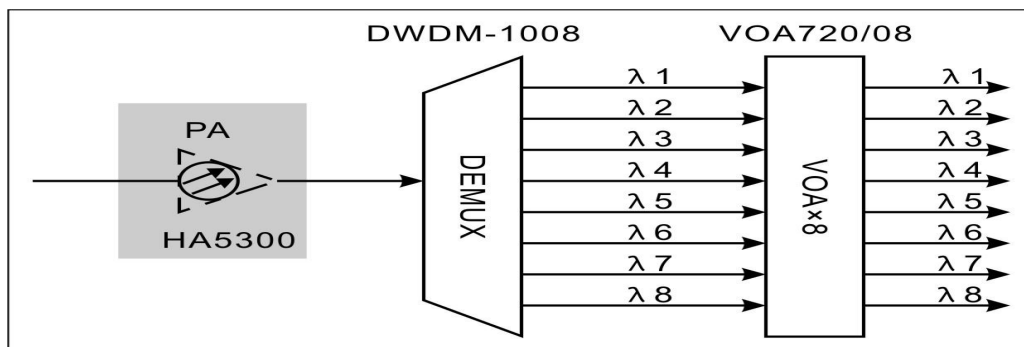|			Open		ATT/Min	O grade
	(with unit powered off)		Closed		ATT≥40dB	C grade
General feature	SNMP network management interface		RJ45			
	Series interface		RS232			
	Power supply	(V)	90		265	220VAC
			30		72	-48VDC
	Power consume	(W)			50	
	Operating temp.	(°C)	0		65	
	Storage temp.	(°C)	-40		80	
	Relative humidity	(%)	5		95	
	Size (W)×(D)×(H)	(")	19×14.5×1.75			1RU (19")
			19×11×1.75			
			12.4×15.4×5.25			3D (12.4", desk-type)

5.0 APPLICATION LEGEND

The application of VOA500 used in DWDM system:
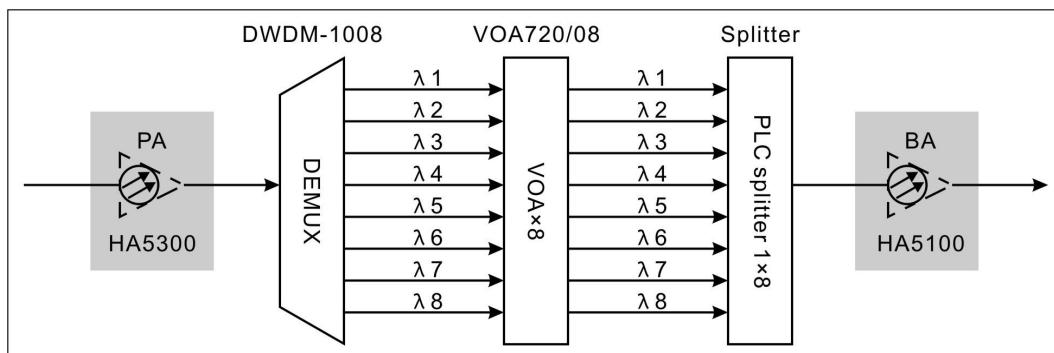
5.1 Multiplexing:

5.2 Demultiplexing

5.3 Line:

6.0   PRODUCT SERIES

Mode	Attenuate range	Attenuator value	Power down attenuate status	Peak working wavelength	Electronic interface
VOA520/01-KC	20dB	1 way	Keep original set attenuate status	C-Band 1525~1575nm	RS232, RJ45, SNMP
VOA520/04-KC		4 way			
VOA520/08-KC		8 way			
VOA520/16-KC		16 way			
VOA535/01-KC	35dB	1 way	Keep original set attenuate status	C-Band 1525~1575nm	RS232, RJ45, SNMP
VOA535/04-KC		4 way			
VOA535/08-KC		8 way			
VOA535/16-KC		16 way			
VOA540/01-KC	40dB	1 way	Keep original set attenuate status	C-Band 1525~1575nm	RS232, RJ45, SNMP
VOA540/04-KC		4 way			
VOA540/08-KC		8 way			
VOA540/16-KC		16 way			
VOA530/01-CC	30dB	1 way	Closed，turn off, Maximum attenuate	C-Band 1525~1575nm	RS232, RJ45, SNMP
VOA530/04-CC		4 way			
VOA530/08-CC		8 way			
VOA530/16-CC		16 way			
VOA540/01-CC	40dB	1 way	Closed，turn off, Maximum attenuate	C-Band 1525~1575nm	RS232, RJ45, SNMP
VOA540/04-CC		4 way			
VOA540/08-CC		8 way			
VOA540/16-CC		16 way			
VOA530/01-OC	30dB	1 way	Open，turn on，Minimum attenuate	C-Band 1525~1575nm	RS232, RJ45, SNMP
VOA530/04-OC		4 way			
VOA530/08-OC		8 way			
VOA530/16-OC		16 way			

7.0 MODEL EXPLANATION

VOA 5 □□ / □□ – □ □ – 1U – F / SA – 22

Product series	Product type		Range of attenuation		Number of attenuator		Power-down attenuation state		Optimized working wavelength		Exterior		Optical port position		Connector		Power supply	
Drive-by-wire adjustable attenuator	7	High degree of accuracy, top-class, with input & output power monitor, automatic control mode, RS232, SNMP	20	20dB	01	1 way	K	To keep the original settings attenuation	C	C-Band	1U	19" 1RU	F	Front panel	FA	FC/APC	22	220VAC
			30	30dB	04	4 ways			L	L-Band	2U	19" 2RU	B	Back panel	FP	FC/UPC	11	110VAC
			35	35dB	08	8 ways	O	Normally open, small amount of attenuation	O	O-Band	3D	Desk-type			SA	SC/APC	48	-48VDC
	5	Standard type, with decrement monitoring, RS232, SNMP	40	40dB	16	16 ways					ML	Modulator			SP	SC/UPC		
			45	45dB			C	Normally closed, large of amount of attenuation			OEM	Appearance user customized			LA	LC/APC		
	3	Utility-type, without monitor, RS232													LP	LC/UPC		