

WaveShaper Specifications

		New: S-band					New: Extended L-band			
Model		100A	500A	1000A, 4000A	16000A	1000A/SP(1)	1000A/L, 4000A/L	1000A/S, 4000A/S	1000A/X, 4000A/X	1000A/XL, 4000A/XL
Optical Ports	Port Configurations	1x1		1x1 (1000) 1x4 (4000)	1x19, 4x16, 8x12, 10x10	1x1	1x1 (1000) 1x4 (4000)			
Filter Control	Operating Frequency Range	191.1 THz to 196.46 THz (1526.0 nm to 1568.7 nm)				191.250 THz to 196.275 THZ (1527.4 nm to 1567.5 nm)	186.2 THz to 191.05 THZ (1569.2 nm to 1610.0 nm)	196.2 THz to 204.2 THZ (1468.0 nm to 1528.0 nm)	187.275 THz to 196.275 THZ (1527.4 nm to 1600.8 nm)	182.8 THz to 191.316 THZ (1567.0 nm to 1640.0 nm)
	Filter Bandwidth	10 GHz – 1 THZ (0.08 – 8 nm)	10 GHz – 5.36 THZ (0.08 – 42.7 nm)			10 GHz - 5 THZ (0.08 nm - 40 nm)	10 GHz – 4.85 THZ (0.08 – 40.8 nm)	20 GHz - full range (0.16 nm - full range)		
	Filter Shape	Band-pass, Gaussian	Arbitrary							
	Frequency Setting Resolution	±1 GHz (±8 pm)								
	Frequency Setting Accuracy	±2.5 GHz (±20 pm)						± 5 GHz		
	Bandwidth Setting Resolution	±1 GHz (±8 pm)								
	Bandwidth Setting Accuracy	±5 GHz (±40 pm)						± 10 GHz		
	Bandwidth Setting Repeatability	±2.5 GHz (±20 pm)						± 5 GHz		
	Group Delay Control Range	n/a		-25 ps to +25 ps				-15 ps to +15 ps		
	Attenuation Control Range	n/a	0 to 35 dB							
	Attenuation Setting Resolution	n/a	0.01 dB	0.1 dB	0.01 dB					
Attenuation Setting Accuracy	n/a	±1.0 dB from 0 to 10 dB, ±10 % from 10 to 30 dB								
Settling Time	<500 ms									
Loss and Dispersion	Insertion Loss	< 5 dB					< 7 dB	< 6.5 dB	< 7 dB	
	Insertion Loss Non-Uniformity	0.7 dB				0.7 dB (2)	1 dB			
	Polarization Dependent Loss (PDL)	0.4 dB			n/a	0.4 dB	0.8 dB			
	Differential Group Delay (DGD)	< 0.5 ps			n/a	< 0.5 ps				
	Return Loss	>25 dB								
Optical Power (3)	Max Total Input Optical Power	+27 dBm								
	Max Optical Power per 50 GHz channel	+13 dBm								
Environment	Operating Temperature	Bench-top / Rack-mount instrument: 15 to 35°C Module: 15 to 55°C with airflow of min 1 m / sec across top of module								
	Operating Humidity	10 to 90%								
Electrical	Communications Interface	Ethernet (GbE), USB 2.0								
	Power Consumption	<50 VA								
Mechanical	Connector Interface	FC/APC	FC/UPC, FC/APC	LC/APC	FC/APC					
	Dimensions, weight	Bench-top: 241 mm x 88 mm x 316 mm, 3.8 kg Module: 220 mm x 140 mm x 37 mm, 0.8 kg								

Note 1: Measured on signal in slow axis

Note 2: Specification is valid over the frequency range of 187.0 to 191.05 THz. From 186.35 to 191.05 THz the insertion loss non-uniformity is 1.0 dB max.

Note 3: Optical signals with spectral components below 600 nm must be avoided.