Technical Specifications TS001_01_00_0909

BOSA PHASE

High Resolution Optical Complex Spectrum Analyzer

Optical Complex Spectrum Analyser	
Wavelength Range	1528 nm -1565 nm
Reference Frequency(3)	Fr1= 312MHz ± 50MHz Fr2= 1.25 GHz ± 0.25 GHz
Reference Power	>- 10dBm
Optical Power Measurement Range(4)	-58 dBm to +10dBm
Phase Measurement Repeatability	± 1° (+10 dBm to -30 dBm)
Measurement Refresh Time(5)	2s
Pattern Length (6)	R/Fr

High Resolution Optical Spectrum Analyser	
Optical Resolution (@3dB)	80fm (10MHz @1550nm)
Wavelength Range	1528 nm -1565 nm
Span Range	1 pm to complete wavelength range
Wavelength Accuracy	+/-2pm (@1550nm)
Dynamic Range	>80dB
Close-in Dynamic Range	>40dB @±0.33pm (filter width @ 40dB depth) >60dB @±0.44pm (filter width @ 60dB depth)
Power Range	+10 to -70dBm
Maximum Safe Total Input Power	+20 dBm
Sensitivity (1)	-70dBm/0.1pm
Power Accuracy (2)	±1.5 dB
Polarization Dependence	±0.5 dB
Measurement time	1s for 10 nm

(1) Sensitivity is defined as signal value > 6x RMS noise value, after averaging, polarization control and with *Lock Trace* on.

(2) Valid for any wavelength and power value (polarization dependence included). Valid for measurements made with polarization control, in high sampling rate mode and averaging. For 1σ (63 % of the cases) typical value: ±1 dB.

(3) Reference frequency must be the same as the pattern repetition frequency

(4) Optical power of spectrum components to obtain accurate measurement of phase

(5) Measuring 80 GHz span w/o polarization control, independent of the number of spectrum components under measurement.

(6) Where R is the transmission bit rate (bits/second) and Fr is the pattern repetition frequency (Hz)

These specs are subject to change without further notice. Check out the latest status in www.aragonphotonics.com.

Examples of Analysed Transmission Rates R (*)				
Transmission rate R	**2.5 Gb/s (±0.401)**	**10Gb/s (±1.603)**	**25 Gb/s (±4.006)**	**40 Gb/s (±6.410)**
Nominal Pattern Length (Fr2)	2 bits	8 bits	20 bits	32 bits
Nominal Pattern Length (Fr1)	8 bits	32 bits	80 bits	128 bits

(*) Other transmission rates R can be analyzed following the relation R/Fr