

CA9038 DWDM OPTICAL SPECTRUM ANALYZER

(Multi-Channel 50 GHz/100 GHz DWDM/AWG/Interleaver/WSS/OPM
Passive optical components automatic test equipment)

Technical Specifications v1.00

March, 2011

(Preliminary)



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UC INSTRUMENTS' CA9038 DWDM OPTICAL SPECTRUM ANALYZER is a fast, accurate and flexible test solution for characterizing the wavelength dependence of passive optical components. The CA9038 system consists of: a tunable laser source, a PDL control module, a control module, and 8 ~ 48 channel detector modules and application software.

With a ± 0.005 nm absolute wavelength accuracy over the whole 1527 ~ 1567 nm range, a high sweep speed of 40 nm per 1.5 second, the CA9038 provides the maximum economical performance available. The CA9038 can be applied to the measurement of any passive fiberoptic device with up to 128 output channels at each measurement station. Such devices include couplers, splitters, isolators, WDM, DWDM, attenuators, switches, fiber Bragg gratings, waveguide devices, wavelength lockers, gain flatteners and interleavers, AWG, WSS, OPM.

The CA9038 system also provide a 1527-1610 nm laser sweep system option per customers special request.

Features

- Reduce production cost;
- ± 0.002 nm absolute wavelength accuracy;
- High speed scanning (up to 40 nm per 1.5 second) over 1527 ~ 1567 nm;
- 8 CH/16 CH/ 32 CH/48 CH detectors option for multichannel channel testing;.
- Flexible easy-to-use software;
- High accuracy, high optical power, multi-channel testing capability.

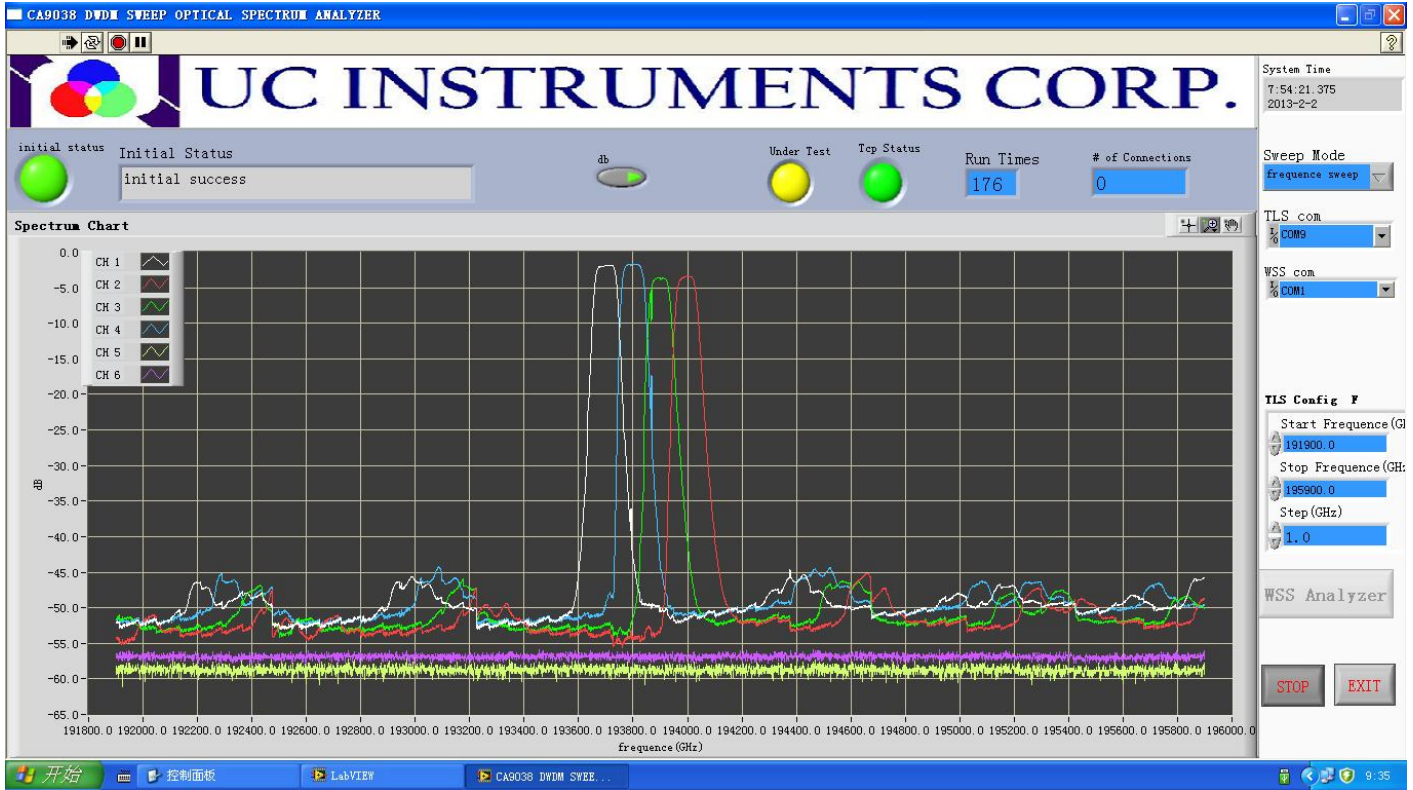
Applications

- 50 GHz/100 GHz Passive optical components and fiber characterization in lab and manufacturing environments.
- High accuracy, resolution and full profile data provide comprehensive feedback

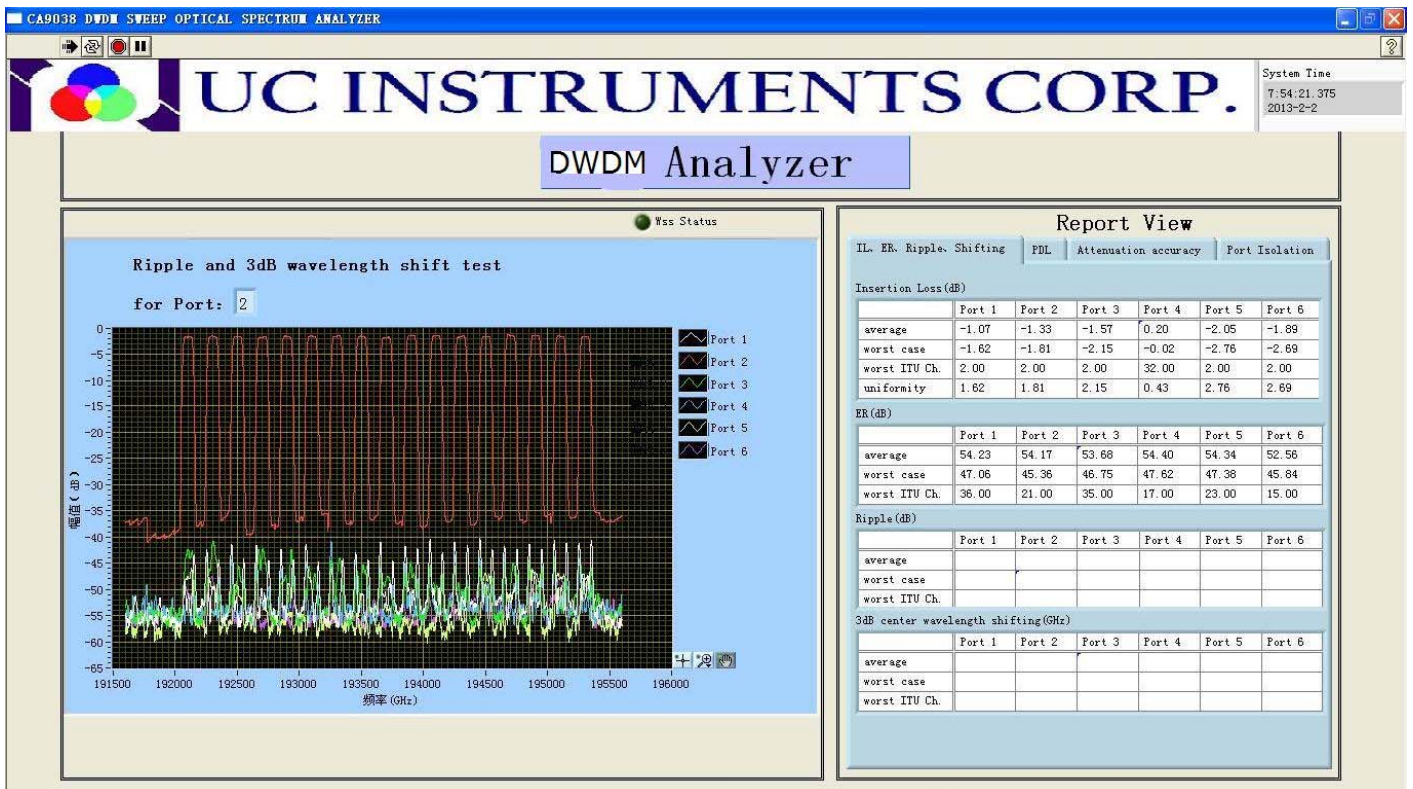
Specifications:

Model #	CA9038
Tunable Laser Source	
Wavelength range	1527.00 to 1567.00 nm
Output Power	≥ 20 mW
Wavelength resolution	1.0 pm
Absolute wavelength accuracy	± 10 pm, typ. < 5 pm
Relative wavelength accuracy	± 5 pm, Typ. ± 2 pm
Wavelength repeatability	± 3 pm, typ. ± 1 pm
Wavelength stability (typ., 24 hrs at constant temperature)	$\leq \pm 5$ pm
Tuning speed	40 nm per 1.5 second with 10 nm resolution
Power stability	$< \pm 0.1$ dB, 24 hours.
Power repeatability	± 0.05 dB
Power linearity	± 0.3 dB
Power fiatness versus wavelength	0.3 dB; typ., 0.05dB.
Side-mode Suppression ritio	≥ 40 dBc
Relative intensity noise(RIN. Typ.)	< -135 dB
Power Meter	
Wavelength Range	850 nm to 1620 nm
Channel Numbers	8, 16, 32, 48 chanel selectable
Power Measurement Range	+13 dBm to -70 dBm
Power Accuracy	$< \pm 4\%$
Power repeatability	< 0.1 dB
PDL controler	
PDL measurement accuracy	± 0.05 dB (0~ 20 dB device Insertion Lose) ± 0.10 dB (20~ 40 dB device Insertion Lose)
PDL measurement repeatability	$< \pm 0.02$ dB
PDL measurement resolution	0.01 dB
Sweep Function	
Sweep Mode	Fast Spectrum Sweep
Resolution	1 PM
Accuracy	5 PM,
Power Display	Peak Power Display
Center Wavelength Fuction	3 dB Down Center Wavelength Display
Power Adaptor Power	AC 100 - 240 V $\pm 10\%$, 48 - 66 Hz, 100 VA max.
Display	PC Interface.
Environmental Storage temperature Operating temperature Humidity	-40 ° C to +80 ° C 0 ° C to +45 ° C $< 95\%$ R.H. from 0 ° C to +45 ° C
Work Environmental	-10 ° C to +70 ° C 0 ° C to +45 ° C $< 95\%$ R.H. from 0 ° C to +45 ° C
Dimensions	Standard 4U Rack
Weight	20.0 lbs

Software Interface:



100 GHz DWDM testing interface



Data Report

UC INSTRUMENTS' Test and Measurement Support, Services and Assistance

UC INSTRUMENTS provides high performance, high value, low cost, affordable test and measurement instruments solution for our customers. Our extensive support sources can help you choose right UC INSTRUMENTS' products for your application and apply them successfully. Every instruments and system we sell a global warranty. All of our instruments with at least 18 months factory warranty.

Our Promise

All of UC INSTRUMENTS' test and measurement instruments and system will met its advertised performance and functionality. When you select UC INSTRUMENTS' products, we can verify if it is work properly, help with products operation, and provides the basic measurement assistance for the use of special capabilities.

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