

Technical Specifications

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| General Specifications | |
| type of instrument | fiber optics based confocal microscope for transmission measurements |
| sensor head specifics | 2 independent fiber-coupled low temperature compatible aspheric objectives for ultimate stability |
| Confocal Unit | |
| configuration | one fiber-coupled LT objective for excitation, one fiber-coupled LT objective for detection |
| key benefits | ultra-stable longterm transmission measurements & independent wavelengths for excitation & detection |
| pinhole configuration | pinhole provided by single mode fiber core |
| pinhole size | dependent on fibers, typically 3 .. 9 μm mode field diameter |
| compatible LT-objective | LT-IWDO, LT-LWDO (see accessory section for more information) |
| Illumination | |
| excitation wavelength range | limited to wavelength range of single mode fiber, default 650 nm (others on request) |
| illumination port specification | FC/ APC-connector for single mode fiber |
| Detection | |
| detection mode | e.g. transmission, reflection, luminescence, fluorescence |
| detection wavelength range | limited to wavelength range of single mode fiber, default: 650 nm (others on request) |
| detection port specification | FC/ APC-connector for single mode fiber |
| Sample Positioning | |
| total travel range | independent degrees of freedom for both LT-objectives 5 x 5 x 5 mm ³ (open loop) with fixed sample |
| step size | 0.05..3 μm @ 300 K, 10..500 nm @ 4 K |
| fine scan range | 50 x 50 μm^2 @ 300 K, 30 x 30 μm^2 @ 4 K (open loop) |
| sample holder | Ti plate with aperture of 8 mm in diameter with integrated heater and calibrated temperature sensor |
| Suitable Operating Conditions | |
| temperature range | 1.5 K..300 K (dependent on cryostat); mK compatible setup available on request |
| magnetic field range | 0..15 T+ (dependent on magnet) |
| operating pressure | designed for He exchange gas (vacuum compatible version down to 1E-6 mbar on request) |
| Suitable Cooling Systems | |
| titanium housing diameter | 47 mm |
| bore size requirement | designed for a 2" (50.8 mm) cryostat/magnet bore |
| compatible cryostats | attoDRY1000/1100/2100, attoLIQUID1000/2000 (attoLIQUID3000/5000 on request) |
| Compatibility with Electronics | |
| scan controller and software | ASC500 basic (for detailed specifications please see attoCONTROL section) |
| laser | LDM600 laser/detector module (for detailed specifications please see attoCONTROL section) |
| Options and Upgrades | |
| closed loop upgrade for coarse positioners | incl. for both objectives |

