

Unrivaled precision



The sturdiness of our design has been proven even under extreme conditions such as freefall dropping experiments or in air-borne applications (LIDAR). The absence of movable parts ensures our most valued advantages, e.g. high-speed measurements of pulsed and continuous lasers.

— Picture courtesy: DLR Institute of Atmospheric Physics

The HighFinesse/Ångstrom wavelength meters are the unsurpassed high-end instruments for wavelength measurement of pulsed or continuous laser sources. They deliver the superb absolute and relative accuracy required by cutting-edge scientific research, as well as industrial and medical applications. The unmatched precision of the WS8 series and all of our other wavemeters is achieved by using non-moving, temperature controlled Fizeau-interferometers in a unique geometric configuration.

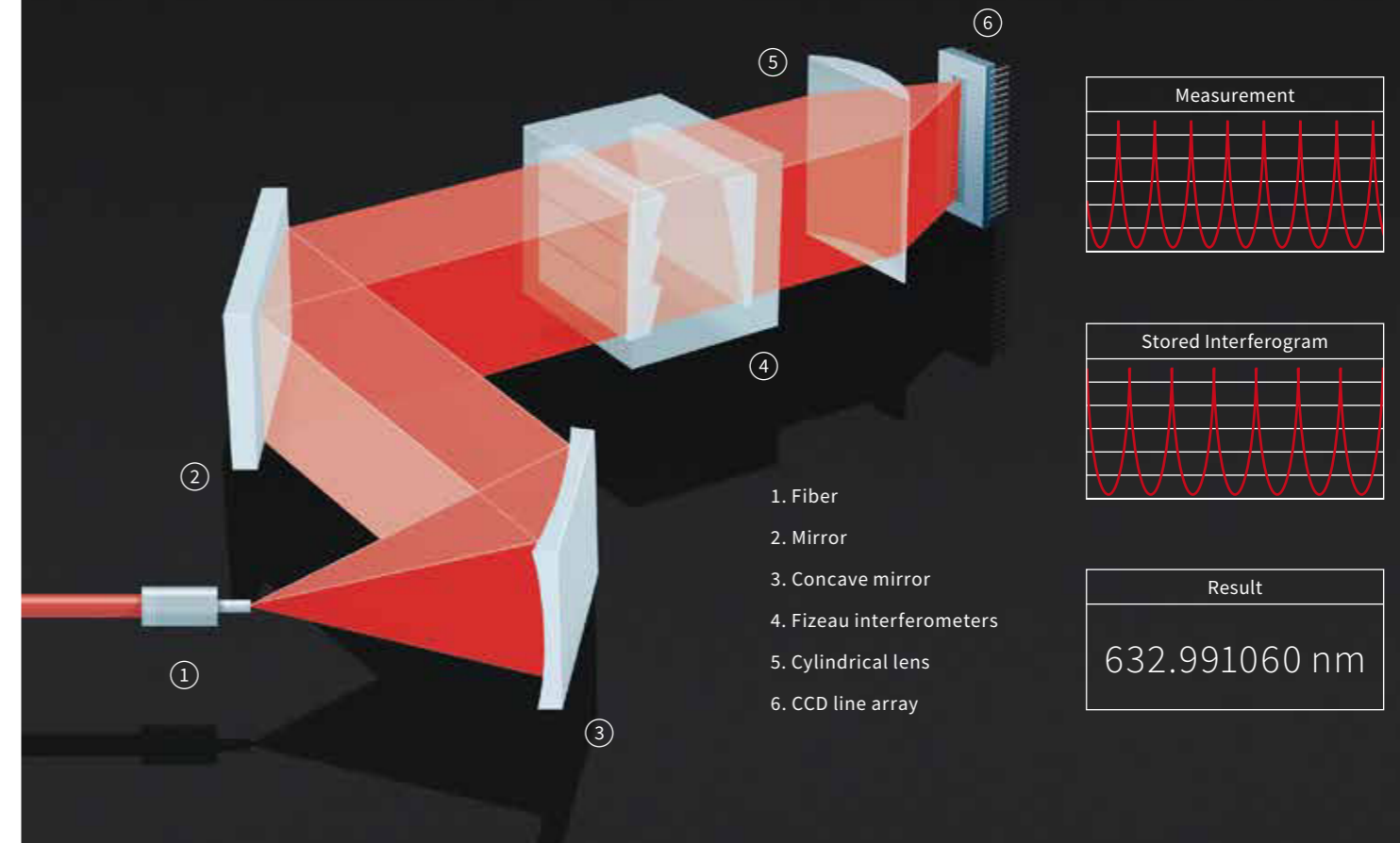
The wavelength meters are connected to the PC via a USB interface and are ready for use as soon as the software delivered with the device is installed. A compact, thermally insulated housing holds the optical elements as well as the electronics. The design enables the integration of additional options, allowing customized solutions to specific applications even years after purchase.

Enter a new world of accuracy!



Fizeau based interferometers

The optical unit consists of Fizeau-based interferometers which are read out by photodiode arrays. We achieve remarkable high accuracy and stability by using exclusive, non-moving optics.



The light is coupled into the device via a fiber and then collimated by a mirror, before entering the solid-state Fizeau-interferometers. The interference pattern is imaged by a cylindrical lens onto CCD photodiode arrays. This recorded pattern is transferred to your computer via a high-speed USB connection which allows data acquisition rates of up to 50 kHz.

The software fits and compares the pattern to a previously recorded calibration to calculate the wavelength. One significant advantage of our Fizeau-based wavelength meters,

compared with other available instruments, is the absence of mechanical moving parts. This ensures the high reliability of accuracies up to 2 MHz (absolute) and ensures the outstanding robustness HighFinesse wavelength meters are noted for. The design enables the precise measurement of not only continuous lasers, but also pulsed laser sources, which broadens the application range even further.

Another key benefit is the simplicity of our wavelength meters. Simply connect the USB cable and run the program supplied. That's all it takes!