Let's break new ground for diagnostics.
Precision down to the last detail

Achieving something new requires having deep insight. So if you are looking to develop new treatment approaches, you first need to have precise diagnoses. And experts are working on this using a number of methods. With specialty glass, they can reach higher degrees of accuracy in many diagnostic areas.

The goal of today’s diagnostics is to achieve fast and precise results while keeping the process cost-efficient. The key is having a high-quality basic material as well as a partner who can support a wide range of applications.

Specialty glass for biotech and life sciences is a standout material packed with versatility: glass wafers can be up to 30 micrometers (μm) thin, yet are still very pliant. The latest production technology provides accurate edges and structures. Thanks to a high transparency and a low autofluorescence, substrate materials such as BOROFLOAT 33® and the new D 263® bio are taking diagnostic applications a major step forward. Flexible light guides made up of high purity PURAVIS® optical glass fibers as well as innovative light sources ensure that objects are precisely illuminated.
Moving biomolecules to bind
Razor-thin coatings are evenly applied under cleanroom conditions, transforming the glass wafers into substrates for microarrays. Thanks to the coatings, DNA, proteins or cells have the unique ability to adhere to the SCHOTT NEXTERION® substrates. Their task is to bind certain biomolecules from the sample – blood or other fluids for example – on exact, designated spots. To achieve strong results for analysis, it is critical that the biomolecules wanted both specifically and uniformly adhere to the substrate. Thus, only an exact and homogeneous coating can ensure precise and, more importantly, reproducible results.

Light is not always simply light
When it comes to clinical diagnoses, light is another key to prediction accuracy and to making progress in analytical quality. The solution: a fiber optic multi-branch device with several light guides, which is fed from a LED light source and can move quickly back and forth. These flexible light guides are very resistant against rapid movement. The clou: a light source with long-term stability – one that delivers the same light in the required wavelength. SCHOTT is the only supplier worldwide offering a sensor technology that can monitor the wavelength, and, if needed, can make readjustments.

Flowing into the future
In tomorrow’s world, SCHOTT glass wafers will come with increasingly complex 3D structures and turn into micro-fluidic flow cells, for example. This innovation allows for many individual biomolecules to be analyzed down to the last detail in a very short timeframe. These micro-labs, or lab-on-a-chip, will pave the way for new breakthroughs in diagnostics.

What’s your next milestone?
Discover more: schott.com/diagnostics