A Visionary Optical Design Company Built on Innovation

As a forward-looking **optical design company**, Yighen Ultra Precision is not only redefining how optical components are manufactured — we're setting new benchmarks in precision, efficiency, and performance. Since our founding in 2021, we've combined deep technical knowledge with cutting-edge innovation to become a trusted partner for industries ranging from consumer electronics to aerospace and biomedical imaging.

At the core of our success lies a commitment to continuous R&D and intellectual property development. Our growing portfolio of over 36 **patents** reflects our leadership in ultra-precision machining and error-compensating technologies that address long-standing industry challenges.

Breakthrough Technologies Behind Our Manufacturing Excellence

One of our most significant innovations is the **ultrasonic-assisted ultra-precision single-point diamond turning (SPDT)** technology. This proprietary method allows us to directly machine hard materials like steel without nickel plating — eliminating common defects such as shrinkage and residual stress found in traditional injection molding. Additionally, our **dynamic error compensation algorithm** enhances machining accuracy by automatically adjusting for thermal drift, tool wear, and material inconsistencies. As a result, we reduce trial-and-error cycles, shorten production time by up to four weeks, and extend mold life by three times — delivering faster, more cost-effective results for our clients.

Recognized for Excellence: Awards and Industry Impact

Our technological breakthroughs have earned international recognition, including the **Bronze Prize at the Second Guangdong-Hong Kong-Macao Greater Bay Area Postdoctoral Innovation and Entrepreneurship Competition**. These accolades affirm our position as a rising leader in advanced optical manufacturing. But beyond patents and awards, what truly sets us apart is our team.

Yighen's engineering team consists of PhDs and master's degree holders from top global institutions, specializing in **optical design, ultra-precision machining, and materials science**. Their expertise ensures every project meets the highest standards of performance, reliability, and compliance.Based in Singapore, our **Nano Machining Center** houses industry-leading equipment such as the **NanoTech 650 FG**, enabling nanometer-level surface finishes even on complex freeform optics. We're backed by strategic investors like **Inno Angel Fund and Hou Tian Capital**, and closely aligned with **Xiaomi's broader ecosystem**, allowing us to scale rapidly and serve global markets.

The Future of Optical Innovation Starts Here

At Yighen Ultra Precision, we believe that true innovation comes from combining deep technical knowledge with relentless curiosity. As we continue to expand our patent portfolio and invest in next-generation solutions, we remain dedicated to empowering our clients with optical technologies that lead the future.

Yighen Ultra Precision is a leading optical design and ultra-precision machining company founded in 2021 with a mission to redefine the boundaries of optical engineering. Our core expertise lies in the design and fabrication of high-performance optical components using cutting-edge technologies like ultrasonic-assisted single-point diamond turning and proprietary dynamic error compensation algorithms.

With a state-of-the-art Nano Machining Center based in Singapore and strategic partnerships across Asia, Yighen delivers precision optics for industries ranging from consumer electronics and medical imaging to aerospace and augmented reality (AR). Supported by top-tier

investors like Inno Angel Fund and Hou Tian Capital, we are rapidly expanding our global footprint while maintaining rigorous standards of quality and innovation.

Our dedicated R&D team, composed of PhDs and master's degree holders from world-class institutions, continuously pushes the envelope in optical theory and manufacturing techniques. From micro-optical structures for endoscopes to next-generation AR lenses powered by Symmetry Theory and Columnar Waveguide Theory, Yighen is at the forefront of optical innovation.