

Why choose ceramics laser drilling services?

We deliver ultra-high precision ceramics laser drilling services. Due to their unique properties, ceramics are leading materials in communications and a top choice among many of our customers. Processing methods, applying our unique femtosecond laser capabilities, enable us to offer market-leading services.

Why should you use a custom laser drilling system?

With our custom laser drilling system, we can provide high-precision and reliable drilling of ceramics for various applications, including aerospace, medical, and electronics industries. Our system uses advanced laser technology, allowing us to drill holes in ceramics with high accuracy and repeatability.

What is laser scribing in ceramics?

Laser drilling of ceramics allows production of the smallest hole diameters (for example, <math><75\text{ }\mu\text{m}</math> in LTCC with high aspect ratios). The main features of the processing are ultrafine structures and high-quality edge structures. In laser scribing, a 20-50 μm deep kerf is first cut in the ceramic material.

What is laser cutting of ceramics?

In laser cutting of ceramics, a continuous kerf is created, e.g., as an opening, contour cut, or hole. Laser drilling of ceramics allows production of the smallest hole diameters (for example, <math><75\text{ }\mu\text{m}</math> in LTCC with high aspect ratios). The main features of the processing are ultrafine structures and high-quality edge structures.

What is percussion laser drilling?

Percussion laser drilling is a focused beam of firing pulses (energy) at a single location on a work-piece. Pulse by pulse, the laser ablates material from the hole through the process of melting and vaporizing. The smallest, repeatable hole diameter is about 50% of the actual beam diameter (20 μm) with controlled taper.

What is MLT laser drilling?

MLT laser drilling processes utilize various wavelengths including ultraviolet (UV), infra-red (IR), or hybrid (both UV and IR) depending on the hole diameter and material selection. Hole quality is subjective to the criteria of the design's form, fit, and function. Process time or cost may also determine the level of quality required.

We are ceramic specialists and have been supplying precision laser cut ceramic substrates for over 35 years. Across the team, we have over 125 years" experience in laser cutting, drilling and scribing of high purity alumina ceramic ...

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Lenox Laser has pioneered the laser drilling service industry for aerospace, optics, semiconductors, and pharmaceutical (CCIT and calibrated leaks.) Skip to content About

Oxford Laser have a wide variety of lasers available for laser drilling. These range from ultrafast picosecond and femtosecond lasers through to nanosecond and longer pulsed lasers. This allows us to select not only the best laser pulse length, but ...

Laser trimming of passive or active components, typically resistors, has become an indispensable tool for the production of microelectronic devices where high precision and performance is required. Laserod has provided laser trimming systems and services to scores of customers for nearly forty years.. Simply described, the laser trimming process modifies the value of a ...

Laser drilling ceramic is a sophisticated process that leverages high-intensity laser beams to drill precise holes in ceramic materials. The main functions of this technology include creating intricate patterns, enabling the assembly of complex components, and facilitating the integration of ceramics in various industries. Technological ...

High flexibility and high speeds are the big benefits of laser technology when it comes to drilling of blind and through holes. As with cutting, there are two different laser processes for micro drilling: fusion drilling with pulsed lasers and external gas support, and vaporization-induced melt ejection as realized with q-switched solid-state lasers, for instance. ...

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This document provides general guidelines and considerations for the laser drilling and machining of fired ceramic substrates typically used in the manufacture of microelectronic circuits and multichip modules. The specifications and tolerances given here will generally produce the MOST COST EFFECTIVE design approach. Tighter tolerances may be ...

Laser drilling can be used to produce 10um and larger diameter holes in most any material including metals, ceramics, plastics, silicon, rubbers, and glass. MLT laser drilling processes ...

We deliver ultra-high precision ceramics laser drilling services. No cracking, accurate taper control, high aspect ratio - from a few micrometers to tens of millimeters at a very competitive price.

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Laserod employs a full array of lasers in every pulse width and wave length to drill micro holes, vias, buried vias, blind vias, hole arrays, and specialized portals as small as a few microns with submicron positional tolerances in a variety of materials including polymers, metals, ceramics, glass, PCBs, and even diamonds.

We offer a wide range of precision laser services and laser systems from hole drilling to micron specs to large scale machines integral in jet engine fabrication. Select Your Capability. Serving Many Industries. Over more than 40 years, for a number of different industries, we've pioneered innovative laser applications including resistor trimming, thin-film etching, and medical device ...

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