# **Ultra-High Precision Guide Plate Laser Drilling**





### Ultra-High Precision Laser Drilling

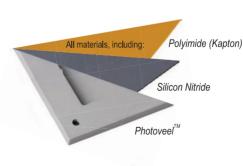
Tight pitch	< 5 µm web
Hole size	< 20 µm
Corner radii	< 3 µm
Higher hole count	> 100,000 holes
Hole shapes	Square, round, elliptical, rectangular, asymmetrical
Range of materials	Ceramics, polymers, glass

Range of materials

Zero Degree Taper Holes

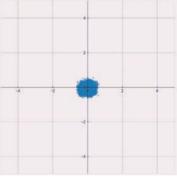
100 µm

LASERS

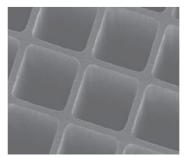


Hole positional accuracy 1 µm 50,000 hole part - position error

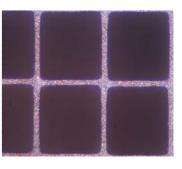
Highly Accurate Repeatability



**Tight Corner Radius** < 3 µm corner radius achievable



5 µm Narrow Land



## Machine Learning - Productivity Benefits

Oxford Lasers have built a machine learning system that provides a closed feedback loop in the manufacturing of Guide Plates. From initial design through to measurement of positional accuracy we have shown that with the use of AI we can enhance productivity and performance each time a plate is produced.



From our origins as a spin-out from Oxford University in 1977, we are always innovating to provide industry and academia with highprecision laser-based solutions. For nearly 50 years, our in-depth knowledge of photonics, optics and industry has ensured that our customers harness the advantage of advanced, high-precision laser technologies.

www.oxfordlasers.com | enquiries@oxfordlasers.com

#### Headquarters

**USA Office** 

Oxford Lasers Ltd. 8 Moorbrook Park Didcot, Oxfordshire OX11 7HP United Kingdom +44 (0) 1235 810088

Oxford Lasers Inc. 2 Shaker Road, Unit A101 Shirley, MA 01464 USA +1 800 222 3632 (Toll free) +1 978 425 0755





