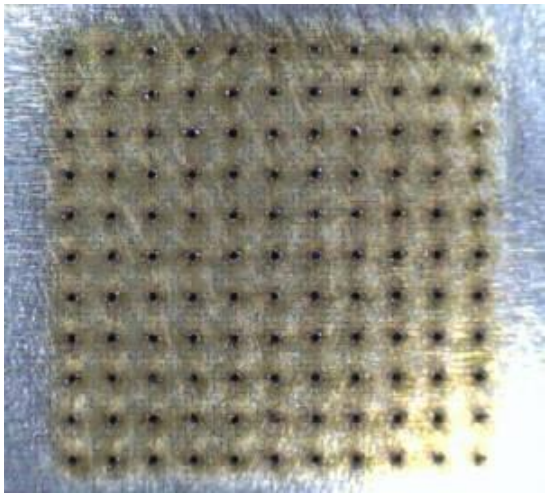
Drilling

Drilling Stainless Steel

Our redENERGY range of pulsed Lasers can be used for a wide range of precision drilling applications in thin <1mm materials.

The high beam quality offered by the EP Laser means that spot sizes of <30microns can be achieved resulting in very fine holes, while the H-Type Laser with its higher pulse energy and peak power can drill larger holes. These Lasers use a percussion drilling technique where multiple pulses are used to drill a single hole with each pulse removing only a small amount of material.

As an example, using this technique, drilling rates of circa 400 holes per second can be achieved in 200µm thick stainless steel and silicon with 38µm diameter. For wider holes different precision drilling techniques with precision beam steering can be used and for thicker materials techniques require the focal point to move through the material during drilling.



Application Parameters

Type	G4 20W EP-Z
Power	20W
M^2	<1.6
Beam Ø	8mm
Scanner/Lens	10mm/163mm F-theta
Energy	WF0 0.55mJ @ 35kHz