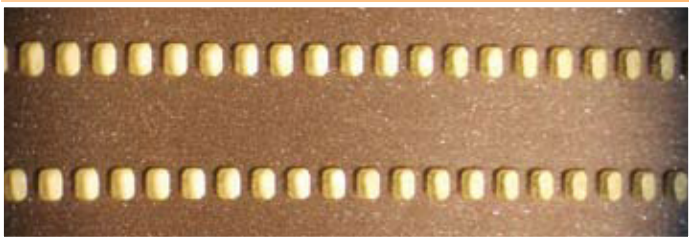


New cutting SOLUTIONS

LPT has recently acquired custom equipment with improved, state of the art, high speed laser cutting technology. Markets keep demanding that features become smaller and closer together. With our new laser capability, LPT can provide leading edge technology to accommodate these demands.

The new laser technology allows higher cutting speeds without sacrificing quality. This equipment was custom fabricated for LPT to not only produce parts at higher speeds but to improve quality and allow features to be spaced more closely, a 4X benefit.



**.040" thick black ceramic
webs are .005" wide**

Normally, design guidelines limit feature spacing to be equal to material thickness, a 1:1 ratio. With the new laser system we can space features at half the material thickness. This can be achieved *without creating micro-fractures* with new technology that allows the heat-affected zone (HAZ) and the taper inherent in the laser machining process to be significantly reduced.



**.020" thick 96% alumina
webs are .010" thick with no signs of
microfracturing or stress**

LESS LIMITATIONS

HAZ limits how closely thin and thick film metallization can be deposited around the features. In addition, it limits the spacing between features on other materials such as laminates, Kapton, metal foils, plastics, and other exotic materials. Our new laser cuts these limitations by 50%.

Another benefit of reduced HAZ is that the scribe pulses can be produced using a tighter gap between them. Smaller and cleaner pulses can be achieved allowing for more uniform snapping of the substrate.



**.001" thick Kapton
webs are .003" between cutouts**