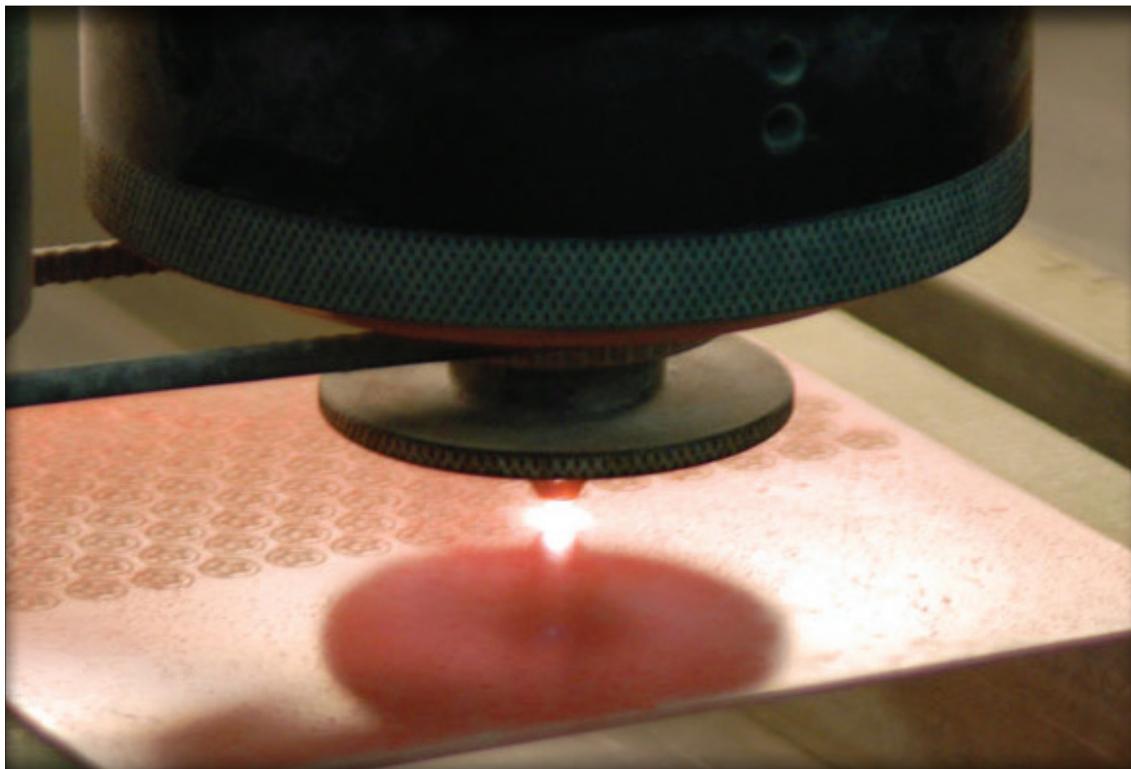
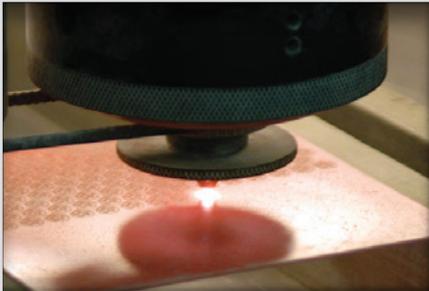


DESIGN GUIDELINE TOLERANCES FOR LASER CUTTING & DRILLING METALS

How to Properly Specify Shapes and Tolerances
in CAD for Laser Cutting and Drilling Metal



NEXT STEPS



[Review our library of Tech Briefs for additional laser processing insights](#)

[Ask us a design/engineering support question](#)

[Request Pricing](#)

Learn more about us at Accumet.com

Maintain tolerances to ensure proper performance and avoid rework.

The following specifications are meant to be used as general engineering guidelines. Please consult the factory to review your exact metal processing specifications.

Hole taper tolerance: 10% of material thickness

Internal machined feature to internal feature tolerance: $\pm 0.005''$, non-cumulative

Hole diameter: $\pm 0.005''$ for exit diameter

As supplied edge to internal feature, mechanically aligned tolerance: $\pm 0.020''$

As supplied edge to internal feature, optically aligned tolerance: $\pm 0.010''$

Overall length and width tolerance: $\pm 0.001'' - 0.020''$
(tolerance is material dependent)

Maximum size: 60" x 120"

Smallest feature: 0.002"

Minimum radius: 0.002"

Available finishes:

#2B (mill finish)

#4 (single or double-sided)

#8 (single or double-sided)

Applications:

Accumet's metals processing applications are extremely varied. The following is a sample list of applications: hybrid electronic package parts such as lids, lead frames, base plates, die pedestals and tabs; production jigs and fixtures; mechanical masks and templates; retainers; medical implants; helicopter armor; jet engine components; stainless steel encoder disks; gold wire cutting; promotional products; and marine components.

Inventory program:

Accumet offers the service of maintaining inventory on a wide variety of customer-specific materials. Please contact us for more information. With Accumet you can lean on our state-of-the art CAD/CAM programming, micro-positioning tables, multiple beam systems, and statistical process controls to get your parts done perfectly. And with up to 2220 watts of CO2 energy and 400 watts of YAG, you can rest assured we have the power to get the job done right.

Accumet Design Guidelines:

Tolerances for Laser Cutting & Drilling Metals