
Subject: 5 micron (0.005mm) precision near Urbana-Champaign
Posted by [triumphant_potato](#) on Wed, 30 Jan 2013 01:17:01 GMT
[View Forum Message](#) <> [Reply to Message](#)

So I am working on a senior design project that is designing a holder for fiber-optic fibers at cryogenic temperatures. One approach we are considering for designing this is to use 3D printing. The key part is 8 X 6 X 3 mm. Along the 8 mm axis need to be 8 holes, arranged in two rows of 4. This design is attached. There are to be 4 parts. Each are identical except for the diameters of the holes.

These diameters are as follows:

1.000 mm

0.755 mm

0.497 mm

0.230 mm

These holes need to be circular and straight to a precision of 0.005 mm.

Strength is also a necessity. If you, or the company you are familiar with, are capable of making these products, please let me know.

NOTE: My team and I will provide the design. I am looking for nearby printing facilities in order to work back and forth, physically, with relative ease.

Subject: Re: 5 micron (0.005mm) precision near Urbana-Champaign
Posted by [stonysmith](#) on Wed, 30 Jan 2013 05:42:42 GMT
[View Forum Message](#) <> [Reply to Message](#)

You didn't get the design attached to your posting.

Shapeway's most detailed material, Frosted Ultra Detail (FUD) has an accuracy of $\hat{A}\pm 0.025-0.05\text{mm}$ for every 25.4mm, which is 5-10 times coarser than the 0.005mm you are asking for.

In addition, Shapeways does not have an office in Chicago. Their only US office is in NYC, with their other office in Eindhoven, NL. You would upload your file(s) to them, order them, and then they are shipped to you in 8-21 business days depending upon which material you select.

Subject: Re: 5 micron (0.005mm) precision near Urbana-Champaign
Posted by [CADNinja](#) on Tue, 05 Feb 2013 03:07:56 GMT
[View Forum Message](#) <> [Reply to Message](#)

Private message sent
