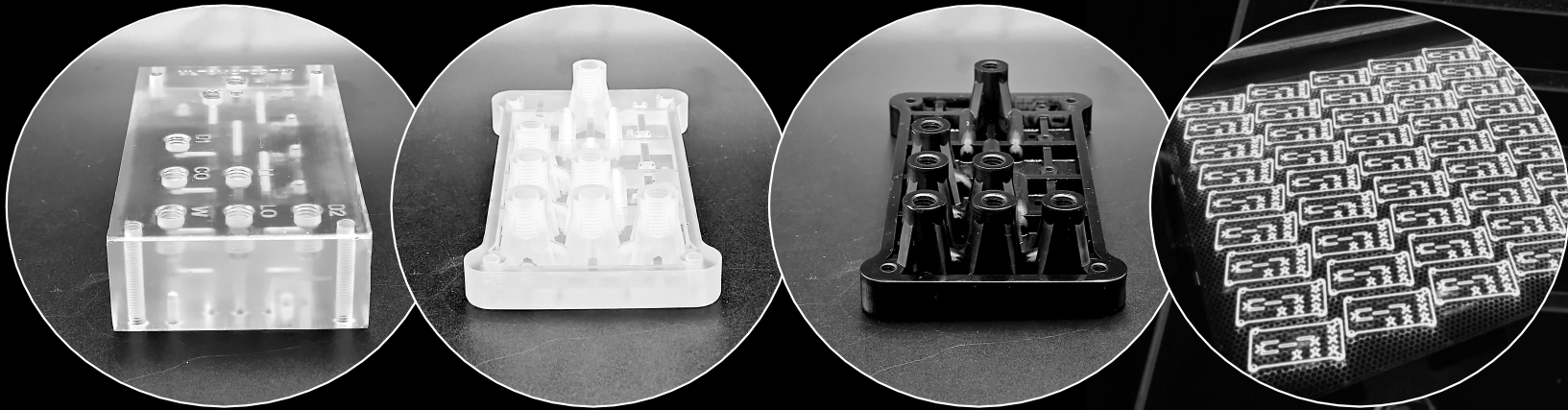


Rapid Fluidics

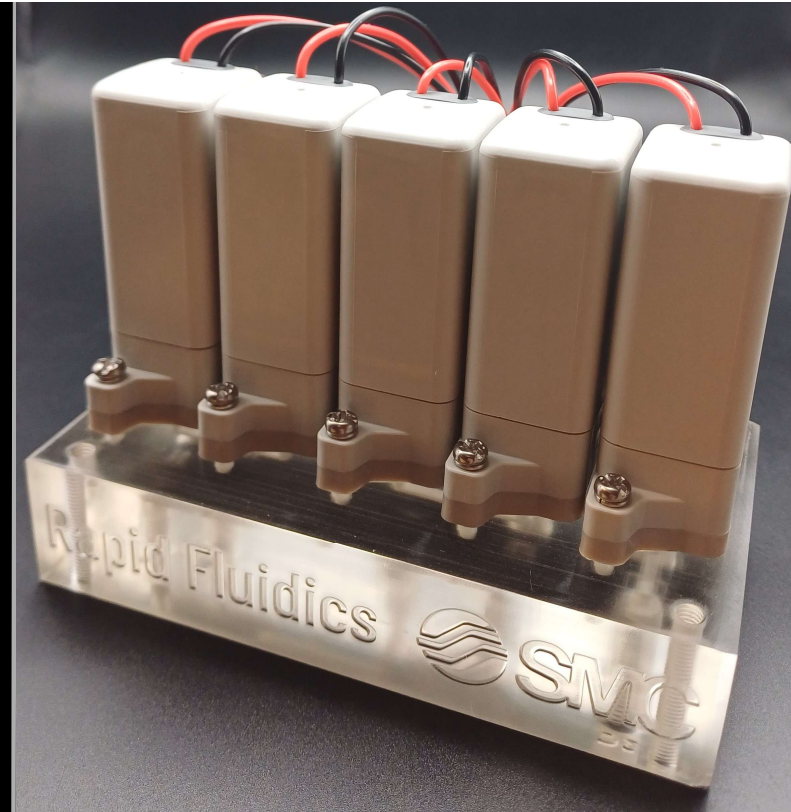
Shaping the Future of Microfluidics

Designing Manifolds for Additive Manufacture Case Study



Original Concept

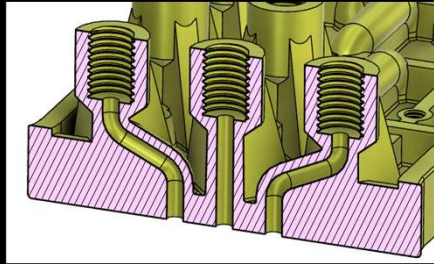
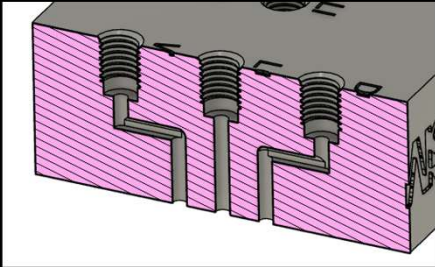
- 3-layer CNC Machined and Diffusion Bonded Manifold
- 3D-printed version print time: 11 hours



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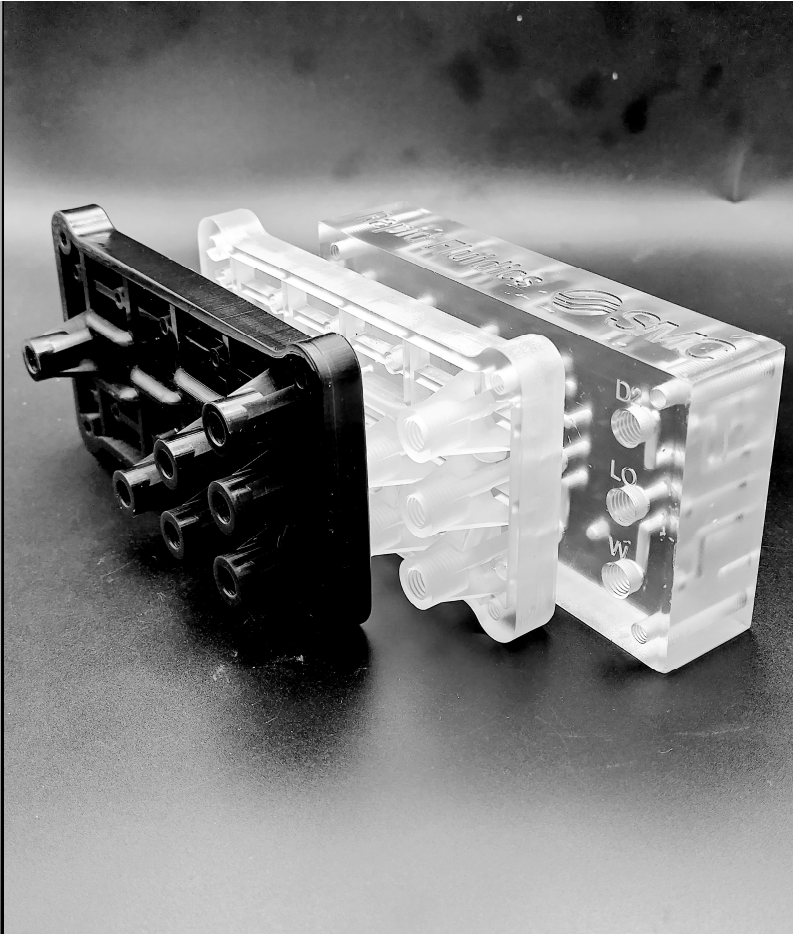
Optimised for Additive

- Print Time: 2.5 Hours
- Mass: 33%
- Cost Reduction: ~80% *
- Channel Routing optimised



- Opaque materials offer further improvements

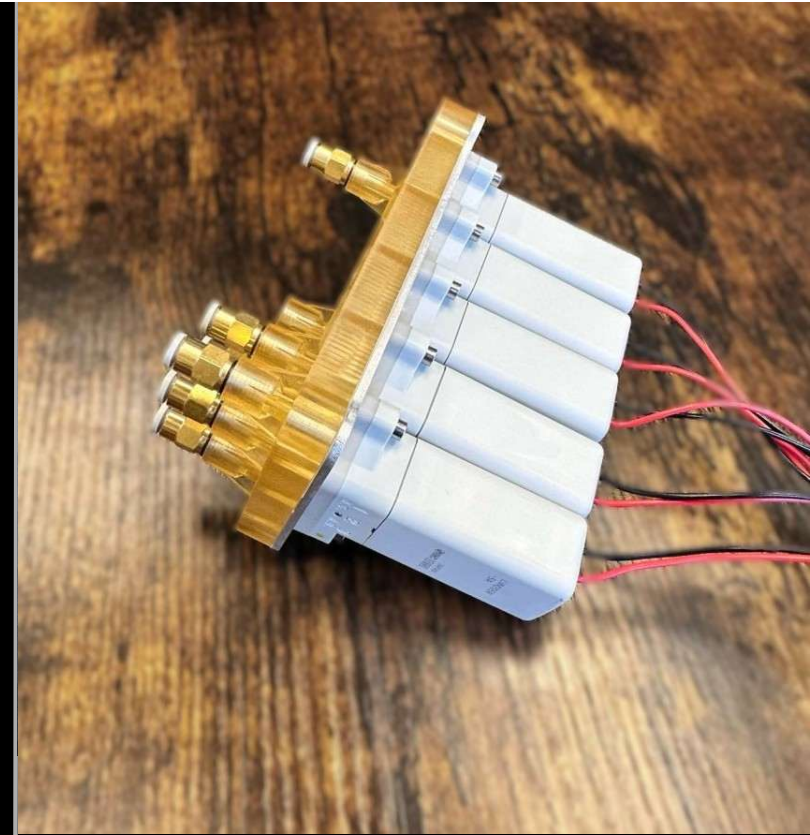
*for typical qty ~200 units



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Further Optimisation

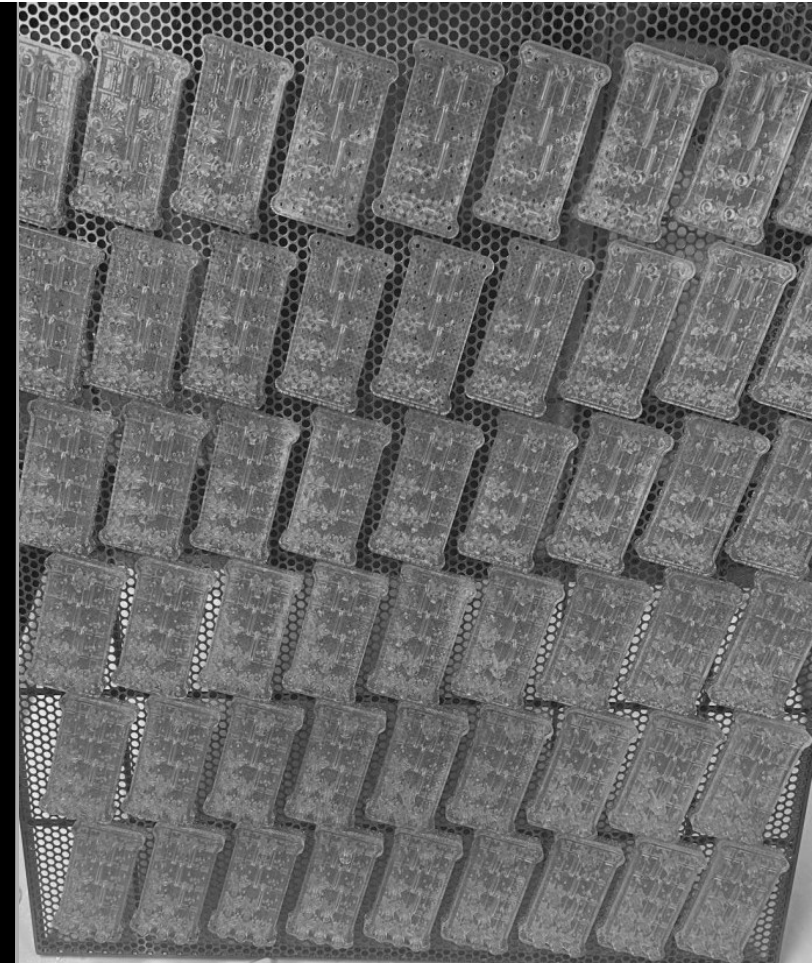
- Integrated substrate
- Resin reduction: 18%
- Improved Strength
- Improved Flatness



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Scale Up Manufacturing

- 54 Parts per print
- Total Print time: 1.75 hours
- Equivalent Part Print time: 2 minutes



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Get in touch

info@rapidfluidics.com

www.rapidfluidics.com

Rapid Fluidics Ltd

Metro House

Marconi Way

Gateshead

NE11 9NH

United Kingdom

Phone: +44 (0) 330 057 1119

