

# LaserVia™ Drilling Centers, LLC



*"Putting vias in SMD pads - where they belong"*

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## **Thermount® Nonwoven 100% Aramid Reinforcement** **Recommendations for Small Hole Drilling**

The following drill recommendations have contributed to optimum hole quality in Thermount® reinforced printed wiring boards. Since hole quality is dependent on many factors including drill geometry, laminate construction, and machine conditions, Drill Engineers may need to experiment with various conditions before satisfactory results are obtained.

### **Recommendations for 0.014" diameter drill:**

1. Feed rate: 60 - 80 ipm; Spindle speed: 80 - 100 K rpm; Retract rate: 200 ipm
2. Narrow web, extended flute drills for optimum cut debris removal
3. New drills (2000 hits maximum)
4. High vacuum removal of cut debris
5. Optional: peck drilling at 0.030" per peck will reduce flute packing
6. Optional: high point angle drills will accelerate debris removal
7. Optional: small orifice pressure foot (0.130" opening in pressure foot)

Some Fabricators of Thermount reinforced PWBs have optimized hole quality by drilling without entry material for drill diameters ranging from 0.008" - 0.014". Others have used a sheet of 0.028" 1/1 FR-4 laminate or thick entry material on the top surface of the panel stack to reduce burring. We are not advocating either of these approaches, yet we wanted to make you aware of various methods which have been used in the field.

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