

# Round Heat Pipe

**ATS Part#: ATS-HP-D9.5L100S174W-155**

**Description:** Closed evaporator-condenser heat transfer systems. A heat pipe's wick structure and embedded liquid enables it to produce a very high heat flux transport capability, which can be 10-20 times higher than the equivalent diameter solid copper pipe. Round heat pipes offer advantages for certain fin configurations at the condenser end.



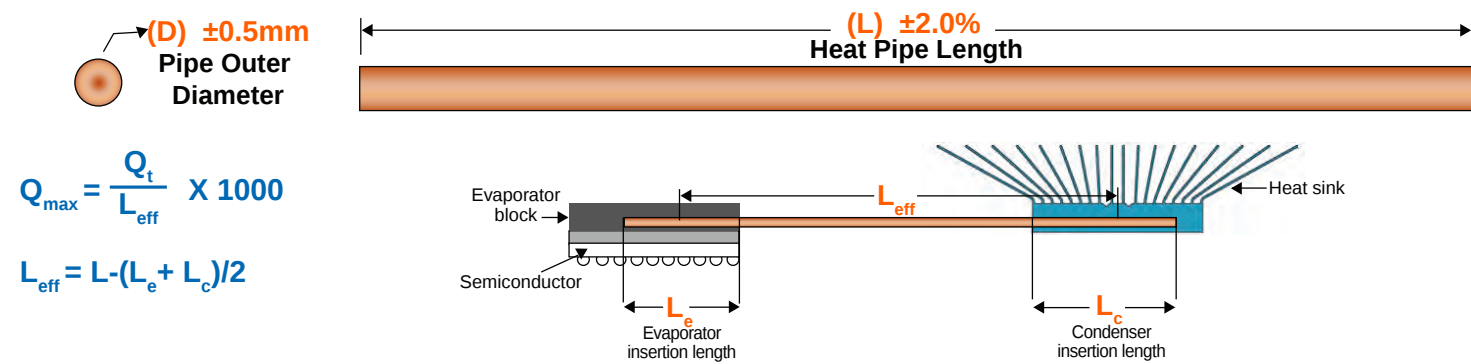
For Illustration Purposes ONLY.

## Features & Benefits

- » Tube material: copper
- » Wick structures: grooved or sintered copper powder
- » High thermal conductivity
- » Light weight
- » Fast thermal response

## Applications for Heat Pipes

- » Compact Electronics Enclosures
- » Aerospace
- » Medical
- » Consumer Electronics
- » HVAC



## PRODUCT SPECIFICATIONS

L=Length (mm); D=Diameter (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR=Temperature Range (°C)

### Product Detail

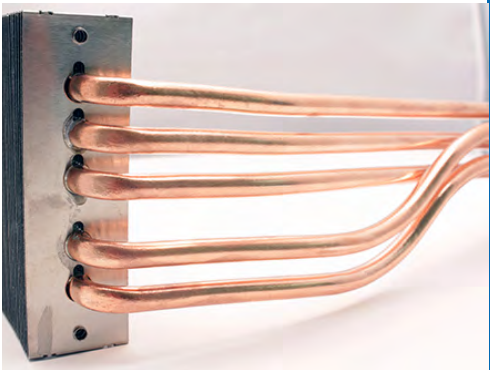
| Part Number              | L   | D   | Wick Type | Working Fluid              | Temp Range (°C) | QT (w.m) | $L_{eff}$ (mm) | $Q_{max}$ (W) | $L_{eff}$ (mm) | $Q_{max}$ (W) | $L_{eff}$ (mm) | $Q_{max}$ (W) |
|--------------------------|-----|-----|-----------|----------------------------|-----------------|----------|----------------|---------------|----------------|---------------|----------------|---------------|
| ATS-HP-D9.5L100S174W-155 | 100 | 9.5 | Sintered  | Distilled H <sub>2</sub> O | 30-120          | 8.72     | 40             | 218.0         | 50             | 174.4         | 60             | 145.3         |

## SUGGESTED MINIMUM BEND RADIUS ON ATS HEAT PIPES

| Heat Pipe Diameter in mm | Minimum Bend Radius in mm |
|--------------------------|---------------------------|
| 4                        | 12                        |
| 5                        | 15                        |
| 6                        | 18                        |
| 7                        | 21                        |
| 8                        | 24                        |

## HEAT PIPE JOINING TECHNIQUES

- 1) For small batches/prototypes, heat pipes can be joined to heat sinks or other pieces with thermal epoxy.
- 2) For optimal results, heat pipes should be soldered using low temperature solder at temperatures above 139°C but no greater than 250°C.



For further technical information, please contact Advanced Thermal Solutions, Inc.  
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