

# Round Heat Pipe

ATS Part#: **ATS-HP-D10L400S49W-172**

**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



$$Q_{max} = \frac{Q_t}{L_{eff}} \times 1000$$

$$L_{eff} = L - (L_e + L_c) / 2$$



## 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 <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)
ATS-HP-D10L400S49W-172	400	10	Sintered	Distilled H <sub>2</sub> O	30-120	9.98	160	62.4	200	49.9	240	41.6

## 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. by phone: 1-781-769-2800, email [ats-hq@qats.com](mailto:ats-hq@qats.com) or visit [www.qats.com](http://www.qats.com).

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Heat Sinks](#) category:*

*Click to view products by [Advanced Thermal Solutions](#) manufacturer:*

Other Similar products are found below :

[581102B00000G](#) [630-35ABT3](#) [656-15ABPE](#) [657-20ABPNE](#) [73452PPBA](#) [7721-13NG](#) [7G0011A](#) [FI306/SE](#) [PF720G](#) [A22-4026](#) [120-1873-007](#) [HAH10L](#) [1542256-2](#) [1542026-1](#) [1542616-1](#) [HS-2506-F1](#) [HS-87M0-F2](#) [218-40CTE3](#) [25-7520](#) [188854F00000G](#) [F-QB-F1](#) [APA501-60-003](#) [253-122ABE-22](#) [PSC22CB](#) [CLP-201](#) [CLP212SG](#) [CLP-7701G](#) [HAA072](#) [HAA083](#) [HAF10L](#) [HAQ10T](#) [D10100-28](#) [TO5-002D](#) [513101B02500G](#) [BDN183CBA01](#) [531202B0000](#) [HS-56M0-C1](#) [3-21053-4](#) [TX0506-1B](#) [TX1806B](#) [336614B-00000](#) [V2004X](#) [LAE66A3CB](#) [WA-DT2-101E](#) [511-3U](#) [017177](#) [530510B00000G](#) [6110BG](#) [73381PPBA](#) [73403PPBA](#)