## Flat Heat Pipe

## ATS Part#: ATS-HP-F8L75S80W-382

**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. Flat heat pipes are easier to attach to heat dissipating components.



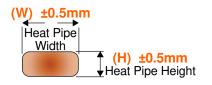
For Illustration Purposes ONLY.

### **Features & Benefits**

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

## **Applications for Heat Pipes**

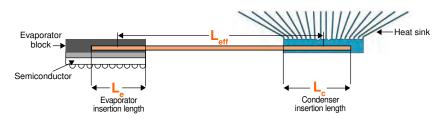
- » Compact Electronics Enclosures
- » Aerospace
- » Medical
- » Consumer Electronics
- » HVAC





$$Q_{\text{max}} = \frac{Q_{\text{t}}}{L_{\text{eff}}} X 1000$$

$$L_{\text{eff}} = L - (L_{\text{e}} + L_{\text{c}})/2$$



#### PRODUCT SPECIFICATIONS

L=Length (mm); W=Width (mm); H=Height (mm); WT=Wick Type (S=Sintered, G=Grooved); WF=Working Fluid; TR= Temperature Range (°C)

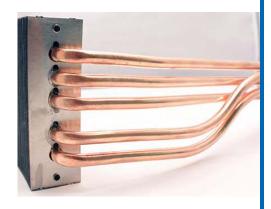
Product Detail													
Part Number	L	w	Н	Wick Type	Working Fluid	Temp Range (°C)	QT (w.m)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)	L <sub>eff</sub> (mm)	Q <sub>max</sub> (W)
ATS-HP-F8L75S80W-382	75	10.86	3.5	Sintered	Distilled H <sub>2</sub> O	30-120	4.51	45	100.2	56.25	80.2	67.5	66.8

# 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 or visit www.qats.com.

