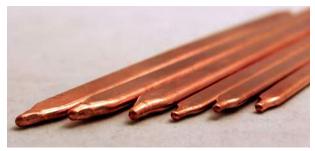
Flat Heat Pipe

ATS Part#: ATS-HP-F4L70S41W-192

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.



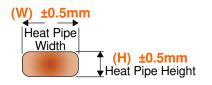
For Illustration Purposes ONLY.

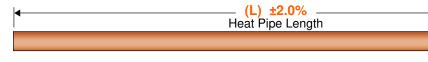
Features & Benefits

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

Applications for Heat Pipes

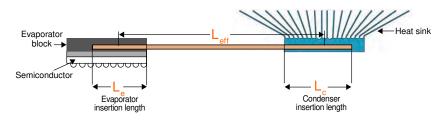
- » Compact Electronics Enclosures
- » Aerospace
- » Medical
- » Consumer Electronics
- » HVAC





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

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



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 _{eff} (mm)	Q _{max} (W)	L _{eff} (mm)	Q _{max} (W)	L _{eff} (mm)	Q _{max} (W)
ATS-HP-F4L70S41W-192	70	4.83	3	Sintered	Distilled H ₂ O	30-120	2.17	42	51.6	52.5	41.3	63	34.4

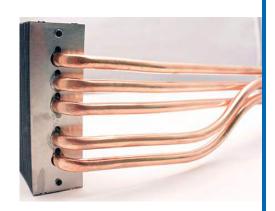
SUGGESTED MINIMUM BEND RADIUS ON ATS HEAT PIPES

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

Product Detail

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 w w w.qats.com.

