

# Purpose Built Heat Pipes

## Great Thermal Configurability

We tune wick characteristics, wall thickness, working fluid, case metal, and fin structure for each application in order to meet stringent thermal performance targets.

## Heat Transport Chameleon

Shaped into almost any configuration, our heat pipes range in lengths up to one meter with diameters to 40mm and can be flattened to as thin as 1mm.

## Hybrid Design Performer

Improve performance by pairing heat pipes with cold plates, thermo-electric modules or vapor chambers.

## Ideal for Custom Applications

When standard heat sinks don't meet design or performance requirements, Celsia can quickly prototype, test, and mass produce an optimized solution.

## Versatile Liquid Two-Phase Workhorse

Design flexibility, unmatched power handling capability, and the ease with which they can be integrated into hybrid designs make heat pipes **the most adaptable two-phase device**.



**Cost Optimized for Every Application**— Because off-the-shelf heat pipes don't always optimize cost and performance, Celsia offers a wide selection of purpose built solutions.

## Project Examples



**Variable Width** – This notebook application required a swaged heat pipe that allows for direct contact with the heat source.



**High Power Density** – Medical application cooling a laser diode at  $1,000 \text{ W/cm}^2$  in conjunction with a pumped liquid cold plate.



**Hybrid Design** – One vapor chamber and four heat pipes cool a performance CPU in a space constrained system.



**Recessed Heat Sources** – 100mm long two-phase isothermal posts transport heat to a remote thermo-electric module.

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