

# SimOps Thermal Report

Component: Cube

## Thermal Metrics

Date: 2025-12-28 19:24

PASSED

Strategy: MedFi\_Robust

Ambient Temperature: 25.0 °C

Heat Source: 100.0 °C

Max Temperature: 373.15 K (100.00 °C)

Min Temperature: 295.13 K (21.98 °C)

Temperature Range ( $\Delta T$ ): 78.02 K

Elements: 1,352

Nodes: 385

## Validation

Range: PASS (295K-373K)

Gradient: PASS (dT=78K)

## Material: Al6061

k: 167 W/mK

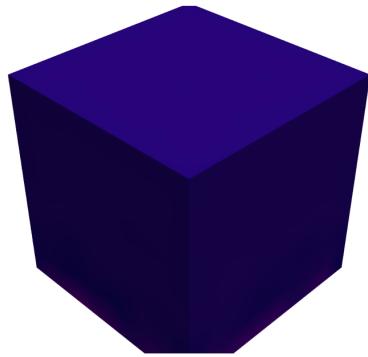
Cp: 896 J/kgK

Rho: 2700 kg/m<sup>3</sup>

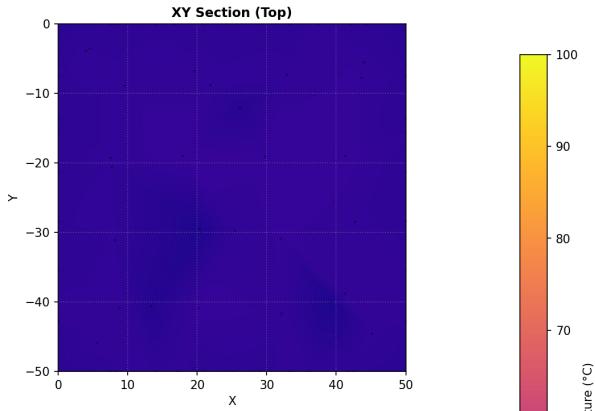
## Sim Results - Cube

Material: Aluminum | Ambient: 25°C | Source: 100°C |  $h=25.0 \text{ W/m}^2\text{K}$

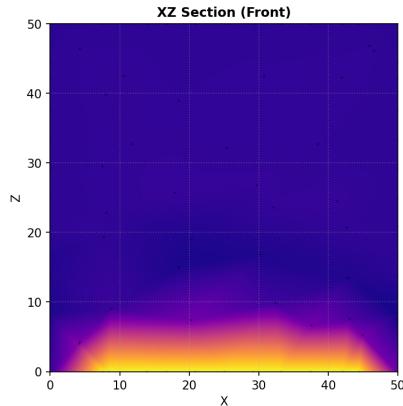
3D Isometric View (Surface)



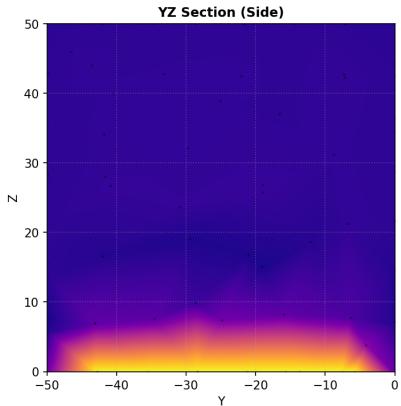
XY Section (Top)



XZ Section (Front)



YZ Section (Side)



Solver: CalculiX v2.21 (FEM) | Mesh: 1,352 Elements | Solve: 0.9s | Converged ( $dT < 0.1^\circ\text{C}$ ) | Flux: 0.2W

## Transient Response & Additional Views

Cube\_transient

