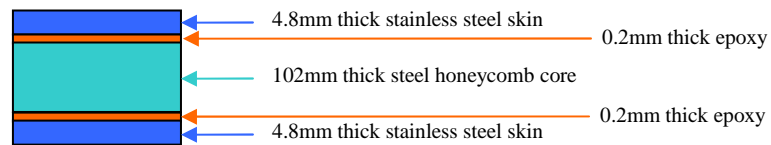


Thermal analysis for the FTT optical table

(1) Optical table modelling



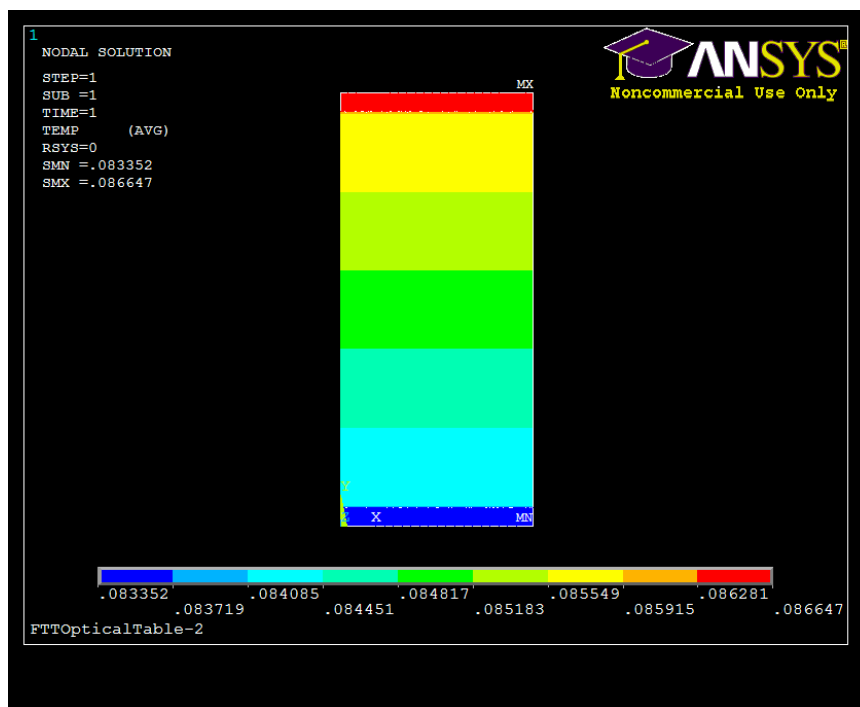
(2) Material properties

Thermal conductivity: Epoxy 0.35W/m-K; Stainless steel 16.2W/m-K; Steel 46W/m-K

(3) Boundary conditions

Air temperatures are 0.17°C on the top side of the table and 0°C on the bottom side of the table. The heat transfer coefficient on both surfaces of the table is 10W/m²-K.

(4) Results



The temperature difference between the top and bottom skins of the table is 0.0033°C, which means that the bending of the optical table at the dichroic position is 0.047'' assuming that the centre of the table keeps horizontal.