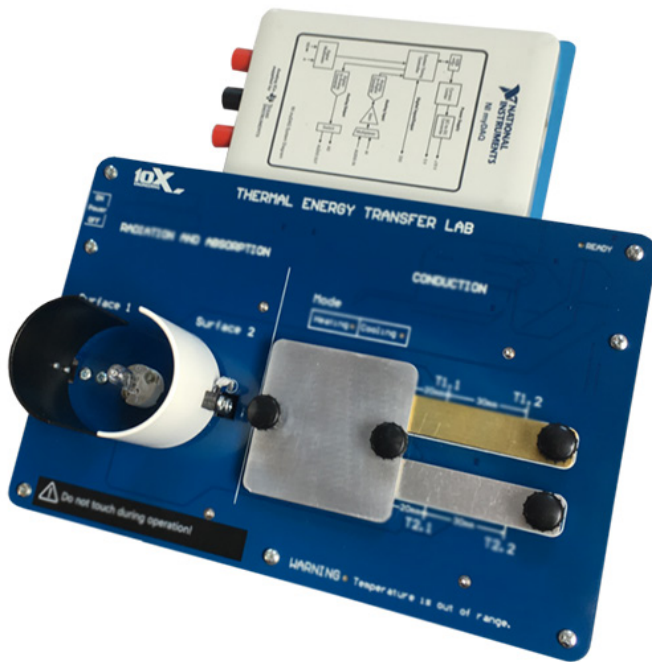


Thermal Energy Transfer Lab



Secondary and higher education



Independent Test Bench



1 workstation



Semiautomatic control



Over 10 hands-on experiments



Powered by
- NI myDAQ
- NI ELVIS II

Features

- Easy maintainable graphical interface;
- Student's registration mechanism;
- Experiment step-by-step instruction;
- Interactive tutorials for each experiment;
- Experimental results demonstration in tabular, graphical form;
- Export of measurement results.

Required hardware and software

- "Thermal Energy Transfer Lab" platform (1 pc);
- "Thermal Radiation" module (1 pc)¹;
- "Thermal Energy Transfer Lab" software CD (1 pc);
- Cables (2 pc);
- Samples for experiments, metal strips (7 pc);
- Thermal insulators (2 pc);
- User guide (1 pc);
- Laboratory curriculum (1 pc);
- DC external Power supply ² (1 pc).

List of labs

- Heating thermal conduction;
- Cooling thermal conduction;
- Material's thermal conductivity;
- Thermal flow speed;
- Heat dissipation;
- Heat pulse;
- Temperature waves;
- Angstrom's Method;
- Heat radiation.

Overview

The Thermal Energy Transfer Lab is an experimental kit for the study of heat transfer in metals, nonmetal materials and gases. The laboratory is based on the National Instrument myDAQ\ ELVIS platform and covers both undergraduate and graduate study courses. The platform provides for highly visualized experiments related to radiation and conduction of heat (rates, dependencies on sample type, size, shape, etc.) The measurements (simultaneously for two samples) and the analysis of heat gradient, as well as reporting are done in LabVIEW Graphical Programming Environment. A complete set of instructional and educational materials is included.



"10X Engineering" LLC
Armenia, Yerevan,
Engineering City,

(+374 77) 21-21-93
info@10x.am
www.10x.am

¹ For ELVIS the thermal radiation module is included in main platform and do not come separately.

² DC external power supply comes with NI myDAQ based configuration, for ELVIS configuration there is no need.