Applicable for thermal design and quality test of heat sink, thermal module, LED, NB, all-in-one PC, desktop PC, server, LCD monitor, and other electronic devices

**We guarantee**
- True natural convection condition
- Temperature uniformity report

**Features**
1. Temperature control, accuracy $<\pm 0.5^\circ C$
2. Temperature uniformity: Standard deviation $<2^\circ C$
3. IR imaging visualization with LW-9395 ZnSe window

**LW-9022**
- Ambient: $+3\sim+70^\circ C$
- Chamber: $86 \times 86 \times 116$ cm
- Door: $50 \times 80 \& 30 \times 60$ cm

**Introduction**
**LW-9022 series** generate natural convection condition with accurate temperature control and good temperature uniformity.

Different from ovens which offer forced convection condition, **LW-9022 series** can provide a windless phenomenon to convect air simply by temperature gradients, thus be able to simulate authentic environments and know real heat transfer performance, or even with strict environmental factors.

Chambers with different sizes can be applied to various kinds of thermal management and cooling issues.

Programmable temperature and relative humidity (RH%) control are also able to be chosen.

In our lab, there are all models for demonstration and test. Also more than 100 kinds of instruments for thermal & flow, fluid mechanics, condition test and solid mechanics.
Temperature Uniformity Report  
Model: LW-9022TH; RH Condition: 95%

<table>
<thead>
<tr>
<th>Temp.</th>
<th>Measurement Points</th>
<th>Avg °C</th>
<th>SD °C</th>
<th>Non-uniformity</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 °C</td>
<td>29.1 29.4 29.5 29.2 29.2 30.2 29.8 29.3 29.2</td>
<td>29.45</td>
<td>0.35</td>
<td>1.18%</td>
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<tr>
<td>Deviation</td>
<td>-0.3 0.0 0.1 -0.2 -0.2 0.8 0.4 -0.1 -0.2</td>
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<tr>
<td>50 °C</td>
<td>49.0 49.8 49.0 49.2 50.2 48.7 49.0 49.4 50.0</td>
<td>49.35</td>
<td>0.54</td>
<td>1.08%</td>
</tr>
<tr>
<td>Deviation</td>
<td>-0.4 0.5 -0.4 -0.2 0.9 -0.7 -0.4 0.1 0.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 °C</td>
<td>59.9 60.9 60.8 60.5 60.8 60.8 60.6 60.6 60.1</td>
<td>60.54</td>
<td>0.34</td>
<td>0.56%</td>
</tr>
<tr>
<td>Deviation</td>
<td>-0.6 0.4 0.2 -0.1 0.2 0.3 0.1 0.0 -0.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70 °C</td>
<td>69.5 70.2 70.4 69.8 68.9 69.6 69.5 69.2 68.7</td>
<td>69.54</td>
<td>0.56</td>
<td>0.81%</td>
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<tr>
<td>Deviation</td>
<td>0.0 0.7 0.9 0.2 -0.7 0.1 0.0 -0.3 -0.8</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Placing Specimen
Lifting platform
- Stepless height adjustment
- Max. loading: 30 kg
- Upper plate: 30 x 35 cm

Lattice platform
- Stepwise height adjustment by moving independent grid rods
- Height range: 30 cm

Suspension platform
- The platform is suspended by steel ropes on each corner.
- Stepless height adjustment

Applications
Flow visualization
- The flow pattern of a blower in a static state

IR imaging visualization
- Chambers of LW-9022 series can be cooperated with the following devices,
  - LW-9117 laser sheet generator for having a 2-D light source
  - LW-9205 smoke generator for having a non-toxic, not sticky, not slinky and not burnable seeding source
- Chambers of LW-9022 series can be cooperated with the following devices,
  - LW-9395 ZnSe IR window which performs a good penetration capability of infrared.
- After setting the window on the chamber wall, the thermal imaging from an IR imaging camera can be caught conveniently without influencing any test conditions inside the chamber.