

# StrainScope

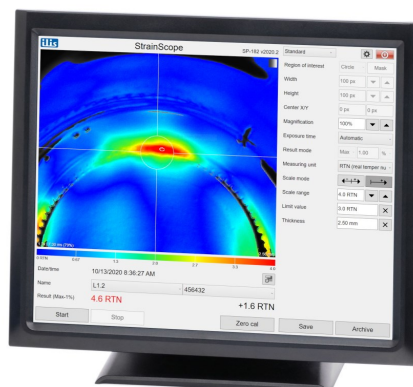
## Annealing Tester

**Real-time polarimeter for fast and precise measurement of annealing stresses in container glass and tableware**

Even in modern glass factories, residual stresses after the cooling process are still visually monitored with simple strain testers. The results are inaccurate, vary from user to user and are often under-documented.

The StrainScope® Annealing Tester delivers objective and accurate measurement results in a minimum of time – in all standard measuring units and compatible with established rating systems, such as apparent and real temper number according to ASTM C148. This allows you to specifically optimize production processes. Not only consistently high product quality is achieved, you can also minimize the energy consumption in the cooling process for each item.

The convenient archive function ensures that all measurement results are completely documented. In case of a later complaint the proof of quality is provided quickly and beyond doubt.



### Features and Benefits

- ✓ Fast and easy operation
- ✓ Prompt results displayed directly in the desired measuring unit
- ✓ Consistently high product quality through testing close to production
- ✓ Cost reduction by optimizing the energy use in the annealing process
- ✓ Avoidance of customer complaints
- ✓ Complete traceability through automatic result documentation





# StrainScope®

## Annealing Tester

### Technical Data

|                      |                                                                                                                                                                                  |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation            | external Windows PC with 17" touch screen                                                                                                                                        |
| Illumination         | LED array (diffuse), linearly polarized                                                                                                                                          |
| Image acquisition    | matrix camera with fixed focal length lens                                                                                                                                       |
| Image resolution     | 728 x 600 pixels                                                                                                                                                                 |
| Working distance     | max. approx. 400 mm                                                                                                                                                              |
| Measuring field size | approx. 138 x 114 mm (at max. working distance)                                                                                                                                  |
| Lateral resolution   | approx. 0.19 mm (at max. working distance)                                                                                                                                       |
| Measuring results    | polarization angle (°)<br>optical retardation (nm)<br>normalized retardation (nm/cm, nm/mm, nm/in)<br>integrated stress (MPa, psi)<br>apparent and real temper number (ATN, RTN) |
| Measuring range      | approx. -280 to +280 nm optical retardation                                                                                                                                      |
| Measuring resolution | approx. 1 nm optical retardation                                                                                                                                                 |
| Measuring frequency  | up to 30 Hz (depending on PC performance)                                                                                                                                        |
| Interfaces           | USB 2.0, foot switch (¼" jack)                                                                                                                                                   |
| Power supply         | 100–240 V AC, 50/60 Hz, 200 VA                                                                                                                                                   |
| Dimensions           | approx. 800 mm (H) x 350 mm (W) x 370 mm (D), excl. PC                                                                                                                           |
| Weight               | approx. 20 kg (excl. PC)                                                                                                                                                         |

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