Glass Testing Instruments

Model LSP
Littleton Softening Point (Fiber Elongation)

Automatic Softening Point results in less than 10 minutes.

The softening point of a glass is the most widely used production control parameter. Changes in the softening point temperature are indications of chemistry changes.

According to ASTM C-338 the **softening** point temperature is the temperature at which a uniform fiber of glass (0.65 mm in diameter by 23.5 cm long) elongates under its own weight at a rate of 1.0 millimeters per minute when the upper 10 cm of its length is heated in a specified furnace at the rate of 5°C per minute. The Orton Model SP has been designed to automatically monitor the elongation of a 235mm long fiber and calculate the Littleton softening point according to the ASTM C-338 method. In addition, the operator can modify the thermal cycle to suit other testing procedures such as rapid sample testing to meet high volume production QC demands.

EASY OPERATION requires little training. After the test fiber is pulled to meet the ASTM specified dimensions, the operator simply places the fiber into the furnace, aligns the laser and starts the test from a local computer *(computer not shown)*

In less than 10 minutes the Littleton Softening Point Temperature is displayed on the computer monitor. It is possible for one operator to test 50 fibers during a single 8-hour shift.

Software prompts the operator to select 1 of 2 modes of operation: the ASTM C-338 Mode, or the User Defined Mode. The User Defined Mode follows the guidelines of the ASTM C-338 Mode, but allows the operator to change the test parameters (the starting temperature for each test, the heating rate for the data collection period, and the target elongation rate) to suit individual testing requirements.

ACCURATE, RELIABLE, and **REPRODUCIBLE:** The laser system automatically monitors the fiber elongation, the computer calculates the rate of elongation, and the computer determines the softening point temperature.

POWERFUL: The data acquisition software displays the test data and conditions in real time. The data analysis software shows the test results and generates reports that automatically calculate the average temperature for a series of fibers.

	Model LSP-900	Model LSP-1000
Max. Temperature	900°C	1,000°C
Thermocouple	Type "S"	
Heating Element	Kanthal	
Process Controller	Honeywell	
Elongation Tracking System	Keyence Laser micrometer	
Power Requirements	120VAC, 5 amp, 50/60 Hz (240 VAC available as an option)	
Computer Requirements	Windows 2000/XP/7 OS, with USB	
Measuring Unit Dimensions	10" Wide x 10" Deep x 15" Tall (250 x 250 x 380 mm)	
Process Controller Dimensions	18" Wide x 12" Deep x 5" Tall (460 x 305 x 130 mm)	