Specifications

Linescanner	LSP$_{HD}$-50	LSP$_{HD}$-52
Measurement range	150 to 750°C/302 to 1382°F	500 to 1100°C/932 to 2012°F
Spectral response	5µm nominal	
Scan angle	80° (software adjustable to 40°)	
Scan speed	10 to 150Hz (adjustable in 1Hz increments)	
Measurement Points	1000 per scanline	
System accuracy	±2°C/ 3.6°F	±3°C/6.4°F
Ambient temperature	5 to 60°C/ 41 to 140°F (specified) 5 to 70°C/ 41 to 158°F (operating)	
Environmental Sealing	IP65	
Power In/Data Out	Power-over-Ethernet IEEE 802.3at (single cable)	
Single Point Thermometer	**SOLOnet SN5**	
Measurement range	200 to 1100°C/392 to 2012°F	
Spectral response	5 µm	
System accuracy	0.35% K	
Ambient temperature	5 to 60°C/ 41 to 140°F (specified) 0 to 70°C/ 32 to 158°F (operating)	
Environmental Sealing	IP65 / NEMA 4X	

Intelligent Scanning

Intelligent scanning solutions aim to solve problems by providing more than just a measurement. Land is able to provide a custom solution according to your requirements; this includes custom temperature ranges, application specific mountings, and custom communications protocols.

LAND

Non-Contact Temperature Measurement Solutions

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UKAS CALIBRATION 0034 — Applies in the UK

LABORATORY ACCREDITATION BUREAU ACCREDITED ISO/IEC 17025:2005

REGISTERED ISO 9001 MANAGEMENT SYSTEM — Applies in the USA

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Continuous product development may make it necessary to change these details without notice.

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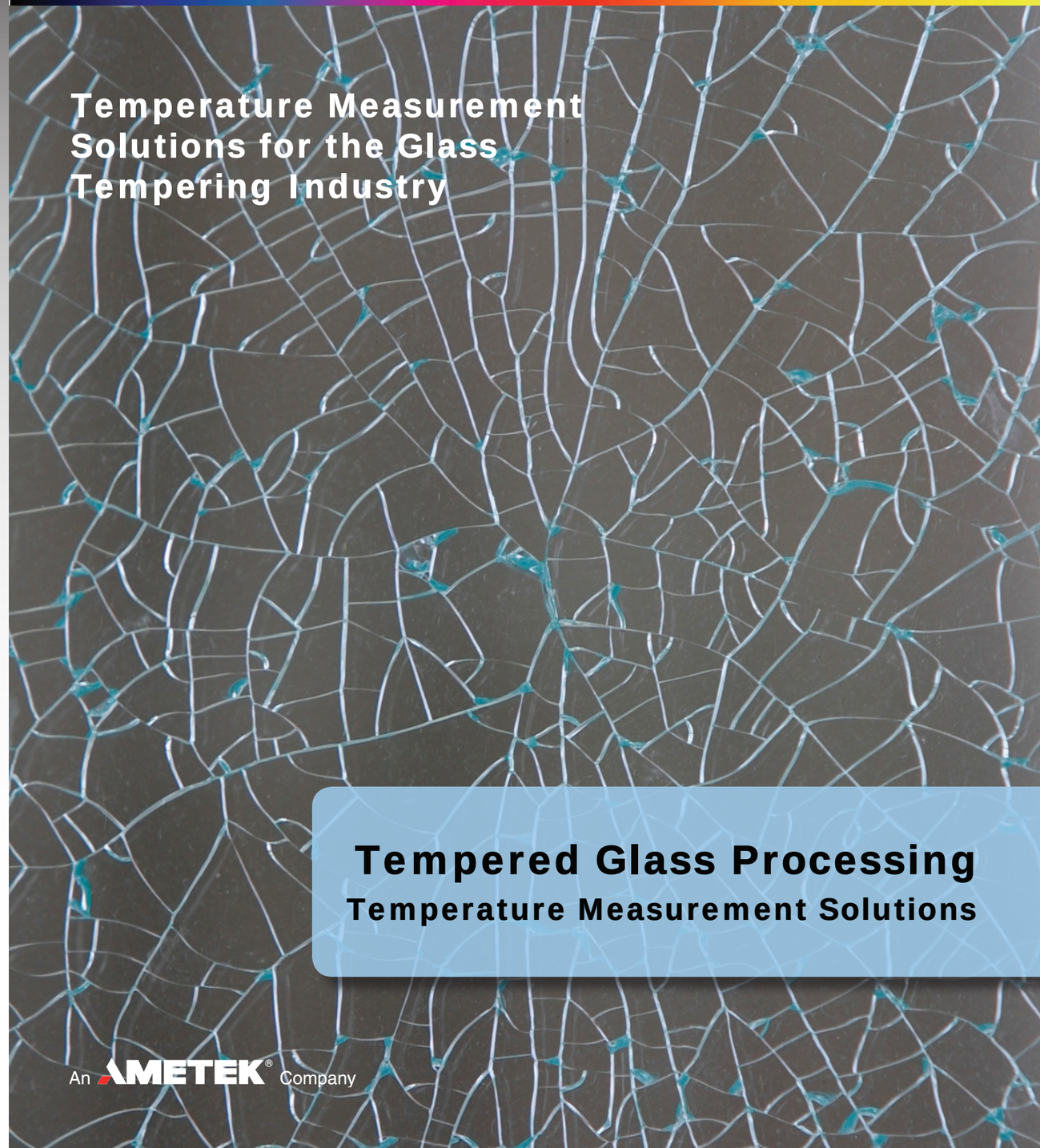


The LAND Glass Tempering System is an integrated solution meeting the temperature measurement requirements of glass tempering plants across the world. Importantly, the system provides high accuracy measurements independent of top surface coatings applied to the glass.

Measurement Challenge

A challenge for plants running multiple glass types with a variety of coatings has been how to accurately measure the glass temperature with a minimum input from the operator, particularly with the increased usage of Low-E glass.

LAND has solved this problem by integrating a compact single point thermometer into the overall system which views the glass from underneath; the dedicated glass tempering software uses this signal to compensate the measured temperature values providing accurate measurements independent of top surface coating.

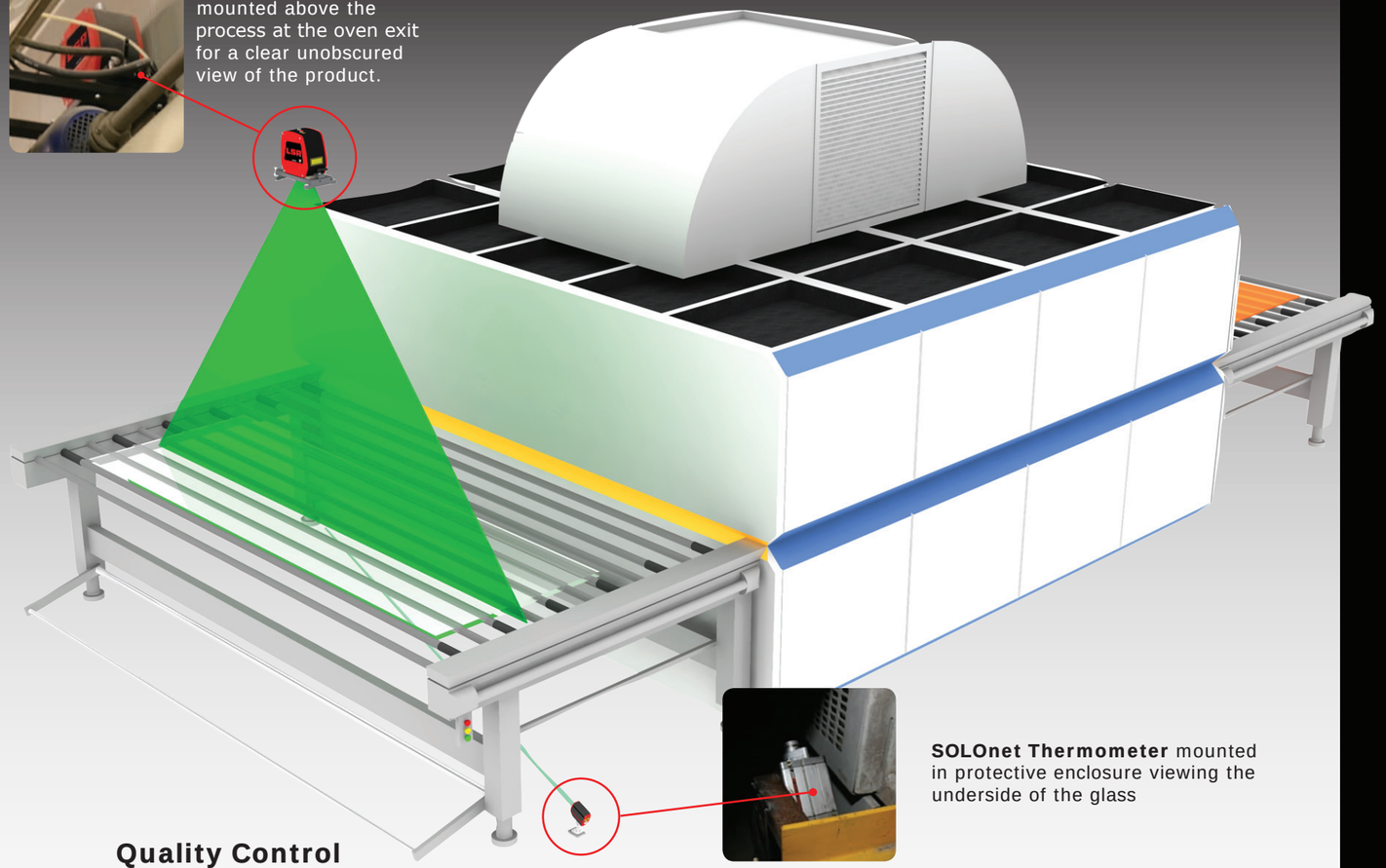
System Overview

The Landscan Glass Tempering System incorporates the LSPHD 5 scanner which samples the glass surface up to 150,000 times per second, using a high performance optical system, detecting even the smallest variations in temperature and the SoloNet Spot Thermometer mounted underneath the roller bed to view the uncoated side.

Features & Benefits

- Suitable for Low-E - an optional single point thermometer makes it possible to make accurate measurements on even the lowest emissivity coatings
- Data Exchange - processed data can be transferred via a simple cross-platform TCP/IP protocol or an optional OPC server
- Fully configurable alarms - can be set to alert operators instantly to product quality issues
- Designed for harsh industrial environments - sealing to IP65 / NEMA4, ensuring ultimate measurement reliability and availability
- Flush, sapphire window provides durable protection and long service life
- Simple installation - via a single Power-over-Ethernet cable connection, reduces installation costs and complexity

Landscan LSPHD mounted above the process at the oven exit for a clear unobscured view of the product.



SOLOnet Thermometer mounted in protective enclosure viewing the underside of the glass

Quality Control

The LAND Glass Tempering System allows for greater quality control throughout the full glass tempering process

- Ensures that a uniform tempering temperature is achieved across the entire bed
- Product quality issues are detected and corrected without destructive testing
- Product traceability is improved through long term data storage

Process Control

The LAND Glass Tempering System provides improved process control by:

- Minimizing wasted energy by preventing over-heating of the glass, allowing the plant to run more cost efficiently
- Checking for uniform heating of the entire bed

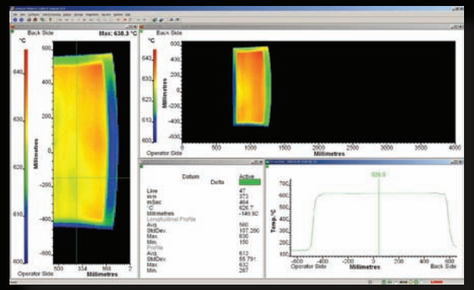
User Display & Control Software (Landscan GT)

The GT Software provides flexible display capabilities to allow simultaneous display and processing of multiple live data streams with historical data.

The package includes powerful post processing features such as auto-size product to window, multi-window linked cursors and the facility to automatically compare the most recent product with a known good product.

The product file associated with each bed is stored for subsequent analysis.

The system can be expanded with optional support of multiple client workstations - accessing both live and historical data through the data server workstation. If live visualization is not required, offline analysis software is available to provide access to historical data for quality control purposes.



Typical software view showing a thermal map and temperature profile (automotive glass)

LSPHD high speed thermal scanner

SOLOnet spot digital thermometer

LAND