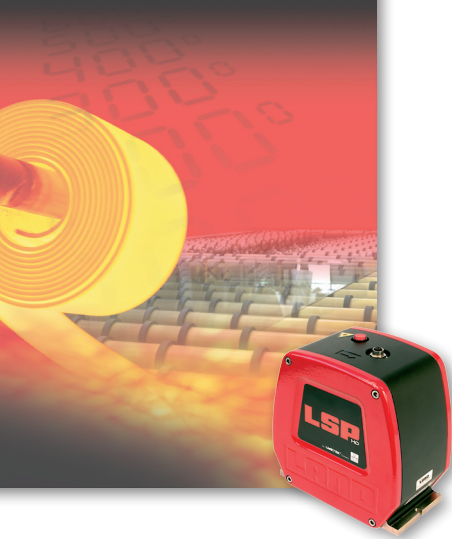


Thermal Imaging and Temperature Profiles for Continuous Process Monitoring and Quality Control



LSP_{HD} 5FL

150 to 750 °C / 302 to 1382 °F

LSP_{HD} 50

150 to 750 °C / 302 to 1382 °F

LSP_{HD} 52

500 to 1100 °C / 932 to 2012 °F

Compact, high performance linescanners which provide high definition thermal imaging from a combination of fast scan speeds and high resolution optics. The real-time processed data is provided via an industrial ethernet connection which is plug and play, installed by means of a single cable connection, which reduces installation time and costs.

**+industry leading 150 Hz scan speed
1000 samples at all scan frequencies+**

Glass Applications - Key Benefits

- + Process Investigation**
Displays can be used to identify and analyse problems.
- + Process Development**
Process modelling to improve process control
- + Quality Control**
Accurate thermal records are a critical aspect of product quality information
- + Process Control**
Provide real time thermal displays of the product in a variety of different display formats.

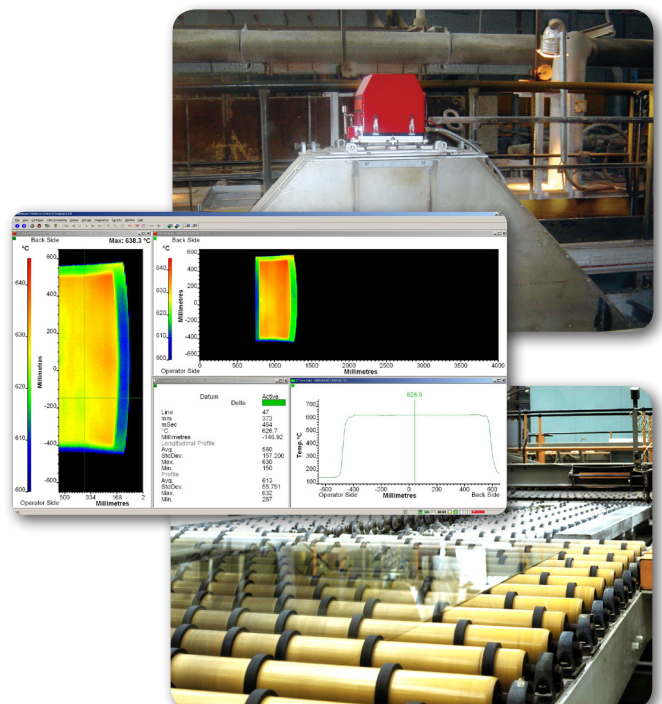
Photos (Top to bottom): LSP_{HD} 5L at Lehr Exit, Thermal map - toughened glass, Float glass line

Key Applications - Glass

- + Float Glass Lines (LSP_{HD} 5L)**
Lehr & Lehr Exit
- + Glass Toughening / Tempering**
- + Glass Forming / Bending**
- + Glass Coating**
- + Solar Panels**

LSP_{HD} - Key Features

- + High resolution, optical system**
- + Designed for operation in harsh industrial environments**
- + Plug and play installation via a single Ethernet cable connection**
- + Range of data output formats**

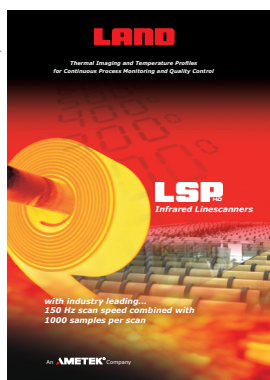


Performance Specifications LSP _{HD} 5FL (P/No. 804801) / LSP _{HD} 50 (P/No. 804802) / LSP _{HD} 52 (P/No. 804803)			
Temperature Range:	LSP _{HD} 5FL 150 to 750 °C / 302 to 1382 °F	LSP _{HD} 50 150 to 750 °C / 302 to 1382 °F	LSP _{HD} 52 500 to 1100 °C / 932 to 2012 °F
Wavelength:	5 µm nominal		
Measurement Accuracy(1):	±2°C / 3.6°F	±2°C / 3.6°F	±3 °C / ±6.4 °F
Repeatability:	<0.5°C / <0.9°F		
Temp. Resolution typical:	< 1 °C / < 1.8 °F	< 1 °C / < 1.8 °F	≤ 2.5 °C / ≤4.5 °F
Drift with ambient temp:	≤ 2° indicated / 10° ambient	≤ 2° indicated / 10° ambient	≤ 3° indicated / 10° ambient
Emissivity:	0.20 to 1.00		
Speed of Response: (Tau- linear output on rising edge)	≤ 5 µs	≤ 5 µs	≤ 5 µs
Scan angle:	80° (software adjustable to 40°)		
Scan Speed:	10 to 150 Hz (User adjustable in 1 Hz steps)		
Samples/scan:	1000		
Field of View:	12mm / 0.5 in for target distance less than 1200mm / 47.2 in 100:1 for target distance greater than 1200mm / 47.2 in <i>static to 95% radiance</i> 300:1 for target distance greater than 1200mm / 47.2 in <i>static to 50% radiance</i>		
Focus Distance:	Fixed Focus at 1200mm / 47.2 in		
Connection (signal/power):	Industrial Ethernet via M12 Connector / Power over Ethernet		
Signal Processing:	Up to 14 user configurable zones with min. / max. / average / quantile / average threshold		
Input/Outputs:	PoE (IEEE 802.3at) enabled TCP/IP Industrial Ethernet		
Ambient Temperature	5 to 60°C / 41 to 140°F (specified) 5 to 70°C / 41 to 158°F (operating)		
Dimensions (w x h x d):	206 x 209 x 100 mm / 8.1 x 8.2 x 3.9 inches		
Alignment Laser:	Class 2, maximum output 1.0 mW at 635 nm, IEC60825-1:2001 / Indicating scan plane & extent		
Environmental Sealing:	IP65		
EMC:	EN 61320:1999 Class A (immunity and emission); IEC 1010 (safety)		
Notes: (1) Applies 5 to 95% of range			

LSP_{HD} Overview

A complete overview of the entire product range, including the key features and benefits of all models.

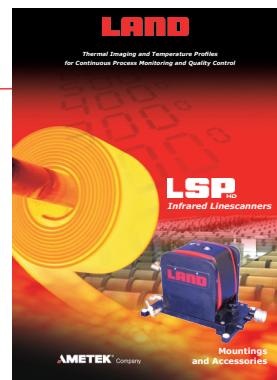
Ref **LSP_{HD}** Overview 0310



LSP_{HD} Mountings and Accessories

A complete overview of the entire range of mountings and accessories for the entire LSP_{HD} product range

Ref. **LSP_{HD}** M&A 0310



LAND

Non-Contact Temperature Measurement Solutions

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Applies in the UK



Applies in the USA

