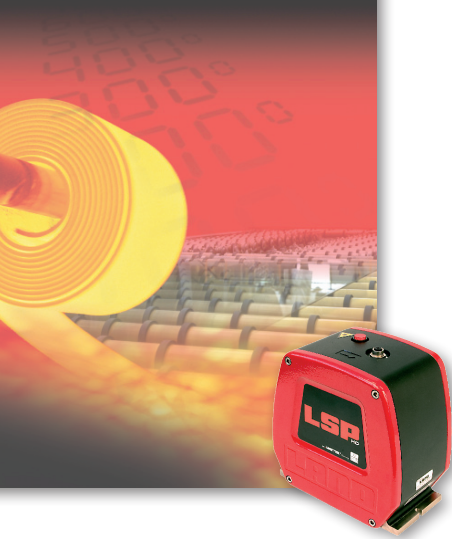


## Thermal Imaging and Temperature Profiles for Continuous Process Monitoring and Quality Control



### LSP<sub>HD</sub> 60 (ZT9400) 50 to 850 °C

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+**

#### Key Benefits

- + Process Investigation**  
Displays can be used to identify and analyse problems e.g. refractory linings on torpedo cars, hotspot detection on conveyors.
- + 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 different display formats.

Photos (Top to bottom): Coke Conveyor, Damage on a superclendar roll

#### Key Applications

- + Non-wovens - Paper rolls, webs, coated paper
- + Conveyors - coal, coke, clinker, grains
- + Cement - Rotary Kilns, Dryers
- + Steel - Torpedo cars, Coated steel
- + Thermoforming, Plastic extruders, Galvanising lines (top position)

#### LSP<sub>HD</sub> - 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



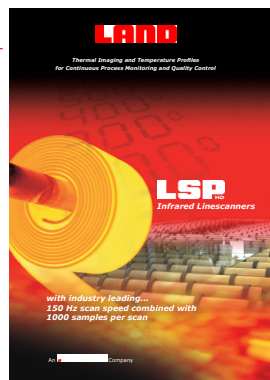
## Performance Specifications LSP<sub>HD</sub> 60 (ZT 9400)

Temperature Range:	<b>LSP<sub>HD</sub> 60 (ZT 9400)</b> 50 to 850 °C
Wavelength:	3 to 5 µm
Measurement Accuracy(1):	±2°C / 3.6°F
Repeatability:	<0.5°C / <0.9°F
Temp. Resolution typical:	< 2 °C / < 3.6 °F
Drift with ambient temp:	≤ 1° indicated / 10° ambient
Emissivity:	0.20 to 1.00
Speed of Response:	≤ 10 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:	Industrial Ethernet via M12 Connector / Power over Ethernet
Signal Processing:	Up to 14 user configurable zones with min. / max. / average / quantile / average threshold
Inputs/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<sub>HD</sub> Overview

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

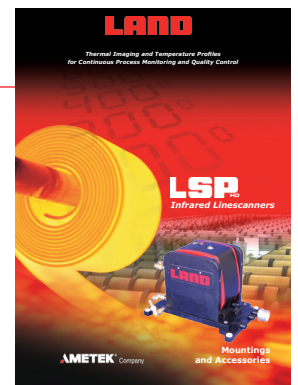
Ref **LSP<sub>HD</sub> Overview 0310**



### LSP<sub>HD</sub> Mountings and Accessories

A complete overview of the entire range of mountings and accessories for the entire LSP<sub>HD</sub> product range

Ref. **LSP<sub>HD</sub> M&A 0310**



# LAND

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Applies in the UK



Applies in the USA

