LANDSCAN
LSP Infrared Linescanners

A new series of compact high precision linescanner heads
The new compact LSP infrared linescanners provide affordable, highly accurate process imaging and temperature measurement in a wide range of applications from 20 to 1100°C/68 to 2012°F.

Choice of signal processors used to interface with process control computers and for preprocessing of data with the Windows-based Landscan Control & Analyse WCA processing software.

The new LANDSCAN LSP high speed, wide angle infrared linescanning systems are designed for today's exacting demands for precision temperature measurement, process imaging and control.

LSP Series Linescanner Heads
The LSP series head is extremely compact and has a minimized depth and base 'footprint' for installation in restricted spaces, designed to reduce heat absorption. A built-in laser targeting system aids alignment on to the target. LSP systems have extensive storage, display and analysis capabilities, processing temperature data from multiple sensor heads, and database and archive files simultaneously.

Benefits
• Improved product quality and operating profitability
• Closer control of heating and manufacturing processes
• Detect product defects and heating problems quickly
• Reduced set-up time and scrap rate
• Automated quality monitoring

Features
• Compact size with a robust sapphire window
• Wide scan 80° angle
• Scan speed of 10 to 100Hz (adjustable)
• 100:1 field of view (95% energy)
• Built-in Class 2 laser to define scan plane and angle
• Single cable connection between scanner and processor
• Choice of signal processing units
• Powerful, versatile, software system with single and multiple channel digital/analog input and outputs
• Wide range of protection and mounting accessories

Landscan Control Signal Processors
The new Landscan Control processors (LSC-B and LSC-R) are 19in rack mount units and Landscan Control Compact (LSC-C) is an economic wall/back-of-panel mount unit, each providing serial and Ethernet outputs of temperature data. These processors can interface to local process control systems or Landscan Configuration Professional and Landscan WCA software.

Refer to the Landscan Processors brochure for further information on the signal processors and options available.

Process Control
The outputs from the linescanner head are transmitted to a Landscan signal processor operating on the new Windows based Landscan Control and Analyse (WCA) software system which can be used in process control applications.

Refer to the Landscan Software brochure for further information on Landscan WCA.
LSP5 Series Infrared Linescanners

LSP5 series infrared linescanners have a temperature range from 150 to 750°C/302 to 1382°F and 500 to 1100°C/932 to 2012°F, designed for forming, annealing and tempering in the float, automotive and container glass industries.

The LSP5FL linescanner is specifically designed for use in the hostile environment of the float glass line, available with dedicated ruggedised protection mountings and assemblies.

**Applications**
- Float glass
- Automotive glass
- Holloware
- Glass forming

LSP6 Series Infrared Linescanners

LSP6 series are low temperature linescanners designed for a wide range of process imaging and control applications in the range 20 to 600°C/68 to 1112°F.

**Applications**
- Thermoforming
- Torpedo car/ladle safety
- Building products
- Paper and webs
- Non-wovens
- Cold rolling

LSP71 Infrared Linescanners

LSP71 is specifically designed for process imaging and temperature control of hydrocarbon thin plastics from 50 to 350°C/122 to 662°F.

LSP71 has a narrow spectral response specially selected for measurement of a wide range of thin plastics sheet, such as: PVC, polycarbonate, polypropylene, polyethylene, PET, cellulose acetate and polystyrene.

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**Specifications**

<table>
<thead>
<tr>
<th>Type</th>
<th>LSP5FL</th>
<th>LSP50</th>
<th>LSP52</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement range:</td>
<td>150 to 750°C/302 to 1382°F</td>
<td>500 to 1100°C/932 to 2012°F</td>
<td></td>
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<tr>
<td>Scan speed:</td>
<td>20Hz (preset)</td>
<td>50Hz (preset)</td>
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<tr>
<td>Spectral response:</td>
<td>5µm</td>
<td></td>
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<tr>
<td>Speed of response:</td>
<td>&lt;7µs</td>
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<tr>
<td>System accuracy:</td>
<td>±2°C/3.6°F, ±3°C/5.4°F</td>
<td></td>
<td></td>
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<tr>
<td>Temp. resolution (noise):</td>
<td>2°C/3.6°F, 1°C/1.8°F</td>
<td></td>
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<tr>
<td>&gt;15% range:</td>
<td>2.5°C/4.5°F, 2.5°C/4.5°F</td>
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<tr>
<td>Drift with ambient temp:</td>
<td>&lt;2° indicated/10° ambient</td>
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**Specifications - All LSP Types**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Scan angle:</td>
<td>80°</td>
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<tr>
<td>Scan speed:</td>
<td>Adjustable, 10 to 100Hz (in 10Hz steps)</td>
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<tr>
<td>Repeatability:</td>
<td>±0.5°C/0.9°F</td>
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<tr>
<td>Emissivity:</td>
<td>0.20 to 1.00</td>
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<tr>
<td>Target width:</td>
<td>12mm/0.5in at distance &lt;1200mm/47.2in; FOV 100:1 at distance &gt;1200mm/47.2in</td>
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<tr>
<td>Ambient temperature:</td>
<td>5 to 60°C/41 to 140°F (specified) 5 to 70°C/41 to 158°F (operating)</td>
</tr>
<tr>
<td>Alignment:</td>
<td>Class 2, max. output 1.0mWatt 635nm, IEC60825-1:2001</td>
</tr>
<tr>
<td>Environmental Sealing:</td>
<td>IP65</td>
</tr>
<tr>
<td>EMC:</td>
<td>EN 61320:1999 Class A (immunity and emission), IEC 1010 (safety)</td>
</tr>
</tbody>
</table>