High Resolution Infrared Camera for Demanding Imaging Applications

MCL640

• Designed to operate in harsh environments

• High resolution 640 x 480 pixel thermal imager for process control and monitoring

• Measures from -40 °C up to 1600 °C

• Serves the industry's broadest range of process control applications

• Superior images and temperature measurement for longwave applications

• Offers the best view with five standard lens options

LumaSense Technologies, Inc., has been an innovative leader in the field of infrared non-contact temperature measurement since 1969. LumaSense specializes in turnkey solutions consisting of complete engineering, design, and installation services to meet the most severe and challenging thermal imaging system requirements.

The MIKRON MCL640 represents another milestone in innovative infrared thermometry. Designed with advanced maintenance-free electronics and Industrial Protective Packaging, the MCL640 offers unparalleled accuracy for demanding industrial and manufacturing applications.

The MCL640 is a cost-effective, high performance non-contact infrared imager that serves a broad range of process monitoring applications. The unique design produces superior images and temperature measurement (±2 °C).

With an unmatched array of protective accessories, the MCL640 demonstrates LumaSense's commitment to long-term trouble-free process monitoring in harsh, industrial applications.

Available options:
• Wide angle and telephoto lenses
• Industrial enclosures
• Hazardous area enclosures
• Pan-tilt positioner
• I/O modules
• Process control & automation software

Typical Applications:
• High-voltage electrical equipment & substation fault detection

• Metals process control
  - Furnaces
  - Stamping
  - Rolling
  - Casting

• Safety monitoring
  - Gasifiers
  - Pipelines

• Predictive maintenance
  - Metal ladles
  - Refractory lined furnaces and kilns

• Flare monitoring
MCL640 Variations

<table>
<thead>
<tr>
<th>Model</th>
<th>Filter</th>
<th>Range 1 (°F)</th>
<th>Range 2 (°F)</th>
<th>Range 1 (°C)</th>
<th>Range 2 (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCL640L</td>
<td>8 - 14 μm</td>
<td>-40 °F to 248 °F</td>
<td>32 °F to 932 °F</td>
<td>-40 °C to 120 °C</td>
<td>0 °C to 500 °C</td>
</tr>
<tr>
<td>MCL640HT</td>
<td>8 - 14 μm</td>
<td>392 °F to 2912 °F</td>
<td>200 °C to 1600 °C</td>
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<td></td>
</tr>
</tbody>
</table>

Optics

The MCL640 is available with different lenses suitable for most applications.

The table below shows the correlation between different standard lens options and the resulting field of view and different distances from the object. The LumaSense website hosts an online tool for calculating a field of view for a specific measurement distance.

<table>
<thead>
<tr>
<th>Distance of object [m (ft)]</th>
<th>8° (75 mm) lens</th>
<th>14° (50 mm) lens</th>
<th>26° (25 mm) lens</th>
<th>57° (11 mm) lens</th>
<th>77° (8.2 mm) lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 m (32.8')</td>
<td>1.4 m x 1.1 m</td>
<td>2.2 m x 1.6 m</td>
<td>4.3 m x 3.3 m</td>
<td>9.8 m x 7.4 m</td>
<td>13.6 m x 10.2 m</td>
</tr>
<tr>
<td>(4.7' x 3.5')</td>
<td>(7.1' x 5.3')</td>
<td>(14.2' x 10.7')</td>
<td>(32.4' x 24.3')</td>
<td>(44.6' x 33.5')</td>
<td></td>
</tr>
<tr>
<td>25 m (82')</td>
<td>3.6 m x 2.7 m</td>
<td>5.4 m x 4.1 m</td>
<td>10.9 m x 8.2 m</td>
<td>24.7 m x 18.5 m</td>
<td>34 m x 25.5 m</td>
</tr>
<tr>
<td>(11.9' x 8.9')</td>
<td>(17.8' x 13.4')</td>
<td>(35.7' x 26.7')</td>
<td>(81.1' x 60.8')</td>
<td>(111.5' x 83.7')</td>
<td></td>
</tr>
<tr>
<td>50 m (164')</td>
<td>7.2 m x 5.4 m</td>
<td>10.9 m x 8.2 m</td>
<td>21.7 m x 16.3 m</td>
<td>45.5 m x 37.1 m</td>
<td>68 m x 51 m</td>
</tr>
<tr>
<td>(23.8' x 17.8')</td>
<td>(35.7' x 26.7')</td>
<td>(71.3' x 53.5')</td>
<td>(162.3' x 121.7')</td>
<td>(223' x 167.3')</td>
<td></td>
</tr>
</tbody>
</table>

Optical Specifications

- Focus: 75 mm autofocus, others manual
- Focus Range: Lens dependent. See website for details.
- Digital Zoom: 1-8x using LumaSpec RT software

Environmental Specifications

- Operating Temperature: 0 °C to 50 °C (32 to 122 °F) (at housing)
- Storage Temperature: -20 °C to 70 °C (-4 to 158 °F)
- Relative Humidity: Non condensing conditions
- Weight: 2.55 lbs. (1 kg) (excludes any protective housing or optional lenses)
- Operating Position: Any operating position
- Housing: 6063 T5 Aluminum Alloy. Finish is alodine, clear, MIL-DTL-5541F
- Compliance: CE, RoHS
- Dimensions (without lens): 127 mm x 101.6 mm x 101.6 mm (5 in x 4 in x 4 in)

Electrical

- Power Input: 12 VDC
- Power Consumption: 10W

Scope of delivery:

Includes power connector with 30 mm pigtail, manual (electronic format), carrying case, and LumaSpec RT Viewer software.

LumaSense Technologies

Awakening Your 6th Sense

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