GigE SWIR Line Scan Camera

Teledyne DALSA’s 1024 pixel GigE SWIR line scan camera features a cutting-edge InGaAs sensor in a compact package for a wide variety of machine vision applications.

The newest member of the Linea family features an advanced InGaAs detector with 12.5 µm pixels in a 1k array that offers a 40 kHz line rate. The small pixels offer high resolution without compromising sensitivity. With high speed, high sensitivity, cycling mode, and programmable I/Os, the versatile Linea SWIR is ideal for applications such as optical sorting, solar panel inspection, and general purpose machine vision.

### Specifications

<table>
<thead>
<tr>
<th></th>
<th>1024 pixels</th>
</tr>
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<tbody>
<tr>
<td>Resolution</td>
<td>1024 pixels</td>
</tr>
<tr>
<td>Line Rate</td>
<td>40 kHz</td>
</tr>
<tr>
<td>Pixel Pitch</td>
<td>12.5 µm</td>
</tr>
<tr>
<td>Spectral Band</td>
<td>950 to 1700 nm</td>
</tr>
<tr>
<td>Gain Setting</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>Max Responsivity (DN12/nJ/cm² at 1550 nm)</td>
<td>10 100 400 800</td>
</tr>
<tr>
<td>Dark Noise (DN12)</td>
<td>1.5 2.5 7 12</td>
</tr>
<tr>
<td>Full Well (ke⁻)</td>
<td>10,000 1,000 265 135</td>
</tr>
<tr>
<td>Dynamic Range (dB)</td>
<td>72 65 55 51</td>
</tr>
<tr>
<td>Peak Quantum Efficiency</td>
<td>66%</td>
</tr>
<tr>
<td>Dark Current</td>
<td>&lt; 5 pA</td>
</tr>
<tr>
<td>Output Bit Depth</td>
<td>8, 12 bit mono</td>
</tr>
<tr>
<td>Optical Interface</td>
<td>C Mount</td>
</tr>
<tr>
<td>Control &amp; Data</td>
<td>GigE</td>
</tr>
<tr>
<td>GPIO</td>
<td>Programmable: 2 inputs, 2 outputs</td>
</tr>
<tr>
<td>Camera Size</td>
<td>46 x 46 x 55 mm</td>
</tr>
<tr>
<td>Camera Weight</td>
<td>150 g</td>
</tr>
</tbody>
</table>

**Key Features**

- 1024 pixel resolution
- 12.5 µm pixel size
- 950 to 1700 nm spectral band
- 40 kHz line rate
- HDR mode
- Cycling mode
- Programmable I/Os
- Compact form factor
- Configurable full well
- GigE, PoE

**Typical Applications**

- Food sorting
- Industrial sorting
- Recycling
- Solar panel inspection
- Silicon wafer inspection
- General purpose machine vision

www.teledynedalsa.com
SPECIFICATIONS

Spectral Responsivity

**Camera P/N**
SL-GA-01K04A-R

**Applications/Projects**

**Usages**

**Dimensions**

**Notes:**
1. Units: Millimeters.
2. Image area is aligned to datums A, B, & C.

**Responsivity** [DN/nJ/cm²]

**Wavelength [nm]**

**Spectral Responsivity SL-GA-01K04A-R**

EMVA1288 Release 3.1 compliant
- 8nm bandwidth, 10nm steps, Savitzky-Golay filtering: 3rd order, 5 point

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