This datasheet describes the specification according to the standard 1288 for Characterization and Presentation of Specification Data for Image Sensors and Cameras of the European Machine Vision Association (EMVA) (see www.standard1288.org). The measurements were performed with an AEON ACC3 RGB Release 3, 20.01.2104, SN 0005. The performance parameters and estimated accuracy of the measurements are described in the technical report for the instrument, its calibration in the corresponding calibration report.

Vendor: MATRIX VISION  
Model: mvBlueCOUGAR-X104eG  
Serial number: GX005373  
Sensor diagonal: 9.00 mm  
Lens category: C-Mount  
Resolution: 1600 × 1200, 10 bit  
Pixel size: 4.50 µm × 4.50 µm  
Sensor type: CMOS  
Shutter type: Global  
Overlap capabilities: Overlapping  
Maximum frame rate: 31.0 Hz  
Interface type: GigE Vision

Type of data presented: Single  
Operation point 1, (page 3)  
Wavelength centroid: 534.2 nm  
Wavelength FWHM: 30.9 nm  
Gain, offset: Gain = 0 dB, Offset = 26.0  
Optional data measured: None

Spectral sensitivity m0389, 19.06.2015

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>Quantum Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>0.0</td>
</tr>
<tr>
<td>400</td>
<td>0.1</td>
</tr>
<tr>
<td>500</td>
<td>0.2</td>
</tr>
<tr>
<td>600</td>
<td>0.3</td>
</tr>
<tr>
<td>700</td>
<td>0.4</td>
</tr>
<tr>
<td>800</td>
<td>0.5</td>
</tr>
<tr>
<td>900</td>
<td>0.6</td>
</tr>
<tr>
<td>1000</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Spectral sensitivity m0389, 19.06.2015

mono data
EMVA 1288 Summary Sheet for Operating Point 1

<table>
<thead>
<tr>
<th>Type of data</th>
<th>Single</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure time</td>
<td>10.0 ms</td>
</tr>
<tr>
<td>Frame rate</td>
<td>0.0 Hz</td>
</tr>
<tr>
<td>Data transfer mode</td>
<td>Mono10</td>
</tr>
</tbody>
</table>

Gain, offset

Gain = 0dB, Offset = 26.0

Environmental temperature

26.2°C

Camera temperature

34.2°C

Wavelength, centr., FWHM

534 nm, 30.9 nm

---

Quantum efficiency

\[ \eta = 0.401 \]

Gain

\[ K \text{ (DN/e)} = 0.129 \]

\[ 1/K \text{ (e/DN)} = 7.756 \]

Dark noise & DSNU

\[ \sigma_d \text{ (DN)} = 2.72 \]

\[ \sigma_0 \text{ (e)} = 21.0 \]

\[ \text{DSNU}_{1288} \text{ (DN)} = 2.32 \]

\[ \text{DSNU}_{1288} \text{ (e)} = 17.98 \]

Signal-to-noise ratio & PRNU

\[ \text{SNR}_{\text{max}} = 84 \]

\[ \text{SNR}_{\text{max}} \text{ (dB)} = 38.4 \]

\[ \text{SNR}_{\text{max}} \text{ (bits)} = 6.4 \]

\[ 1/\text{SNR}_{\text{max}} \text{ (\%)} = 1.20 \]

\[ \text{PRNU}_{1288} \text{ (\%)} = 12.841 \]

Nonlinearity

\[ \text{LE (\%)} = 0.67 \]

Sensitivity & saturation

\[ \mu_{p,\text{min}} \text{ (p)} = 53.9 \]

\[ \mu_{e,\text{min}} \text{ (e)} = 21.6 \]

\[ \mu_{p,\text{sat}} \text{ (p)} = 17385 \]

\[ \mu_{e,\text{sat}} \text{ (e)} = 6975 \]

Dynamic range

\[ \text{DR} = 323 \]

\[ \text{DR (dB)} = 50.2 \]

\[ \text{DR (bit)} = 8.3 \]

Dark current

\[ \mu_{c,\text{mean}} \text{ (DN/s)} = 72.74 \]

\[ \mu_{c,\text{mean}} \text{ (e/s)} = 564.19 \]

\[ \mu_{c,\text{var}} \text{ (e/s)} = 497.11 \]