# Chameleon

## USB 2.0 Digital Camera

### Imaging Performance Specification

**Version 1.1**

**Revised 9/19/2013**

USB 2.0

**Point Grey Research® Inc.**

**12051 Riverside Way • Richmond, BC • Canada • V6W 1K7 •T (604) 242-9937 • www.ptgrey.com**

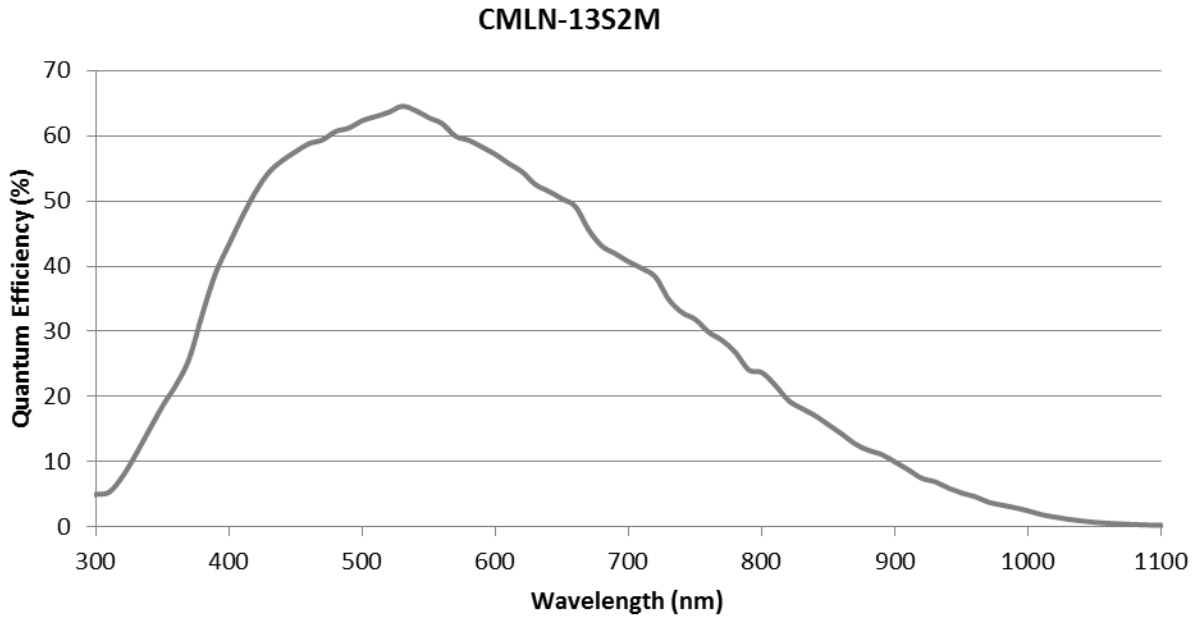
# 1 Specifications

| Model | Sensor | Maximum Resolution | Maximum Frame Rate | Pixel Size | Firmware | Results |
|---|---|---|---|---|---|---|
| CMLN-13S2M-CS | Sony ICX445 CCD, 1/3", Mono | 1296 x 964 | 18 FPS | 3.75 µm | 1.11.3.0 | page 3 |
| CMLN-13S2C-CS | Sony ICX445 CCD, 1/3", Color | 1296 x 964 | 18 FPS | 3.75 µm | 1.11.3.0 | page 4 |


Measurements are taken based on guidelines in the EMVA 1288 standard; the full definition can be found at EMVA.org. Camera settings are at maximum exposure time and bit depth unless otherwise noted. The pixel format is Mono 16 for mono cameras and Raw 16 for color cameras. Results are captured at room temperature (20°C).

# 2 CMLN-13S2M-CS Imaging Performance

| Measurement | Value | Unit |
|---|---|---|
| Quantum Efficiency | 64 | % at 525 nm |
| Temporal Dark Noise (Read Noise) | 8.82 | e- |
| Signal to Noise Ratio Maximum | 38.08 | dB |
| Signal to Noise Ratio Maximum | 6.32 | Bits |
| Absolute Sensitivity Threshold | 14.85 | γ |
| Saturation Capacity (Well Depth) | 6421 | e- |
| Dynamic Range | 56.77 | dB |
| Dynamic Range | 9.43 | Bits |
| Gain | 0.10 | e-/ADU |



# 3 CMLN-13S2C-CS Imaging Performance

| Measurement | Value | Unit |
|---|---|---|
| Quantum Efficiency Blue | 46 | % at 470 nm |
| Quantum Efficiency Green | 50 | % at 525 nm |
| Quantum Efficiency Red | 48 | % at 640 nm |
| Temporal Dark Noise (Read Noise) | 7.65 | e- |
| Signal to Noise Ratio Maximum | 38.04 | dB |
| Signal to Noise Ratio Maximum | 6.32 | Bits |
| Absolute Sensitivity Threshold | 17.23 | γ |
| Saturation Capacity (Well Depth) | 6365 | e- |
| Dynamic Range | 57.85 | dB |
| Dynamic Range | 9.61 | Bits |
| Gain | 0.10 | e-/ADU |