

Piranha XL Color 8K

Multi-line CMOS TDI Camera



Multi-line CMOS Color TDI camera delivering breakthrough performance

Teledyne DALSA presents our latest multi-line CMOS color camera, delivering an unprecedented combination of speed and responsivity with low noise and in color. Each color uses four rows, resulting in an unprecedentedly responsive tri-color operation with no color interpolation.

The camera uses the Camera Link HS interface based on Teledyne DALSA's field-proven HS Link technology. It delivers very high data throughput with long transmission distances and reliability. The camera, combined with the XTium Camera Link HS frame grabber, offers a complete solution for the next generation Automatic Optical Inspection.

Key Features

- Trilinear color TDI sensor
- True exposure control
- Up to 70 kHz line rate
- Highly responsive multi-line CMOS architecture
- 8k pixel resolution with $5\ \mu\text{m} \times 5\ \mu\text{m}$ pixel size
- High full well maximizing signal-to-noise
- High dynamic range using a look-up table (LUT)
- Binning
- Bidirectional scanning
- Smart lens shading correction
- Field proven Camera Link HS interface
- Multiple user sets

Programmability

- Responsivity adjustable by color
- White balancing
- Multiple areas of interest (AOI) for data reduction
- Multiple regions of interest (ROI) for easy calibration
- Lens and shading correction
- Test pattern and diagnostics

Typical Applications

- Flat panel display inspection
- Film and web inspection
- Printed circuit board inspection
- High throughput and high resolution applications
- Print inspection

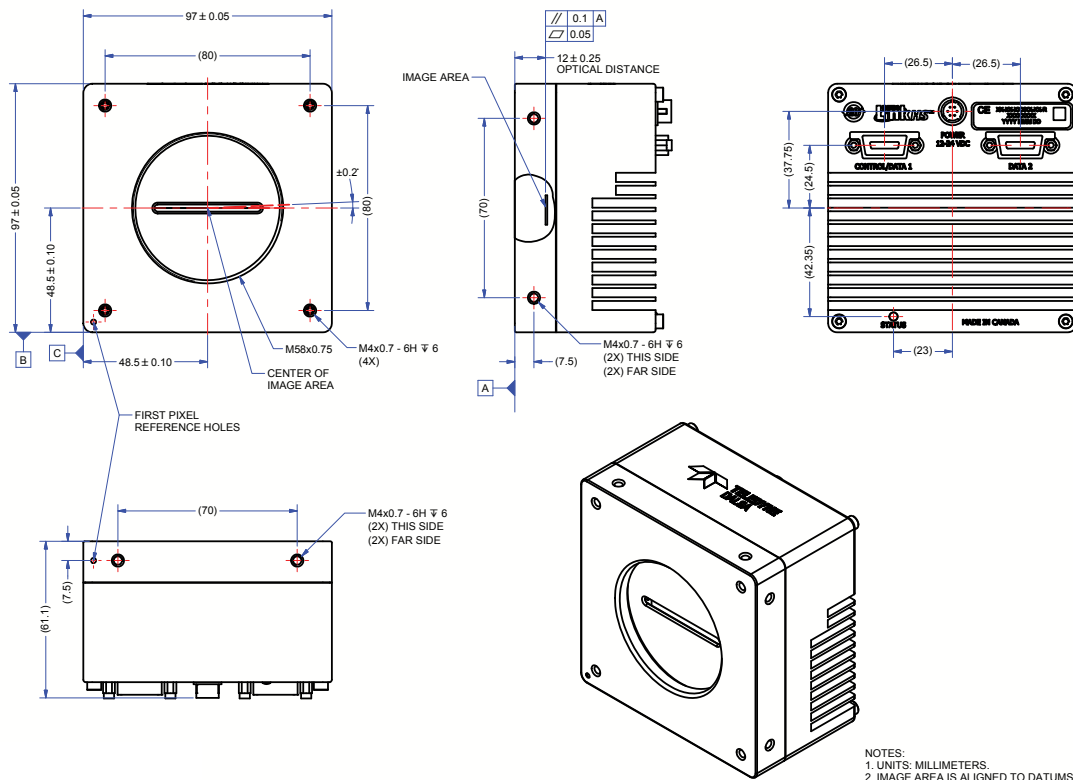
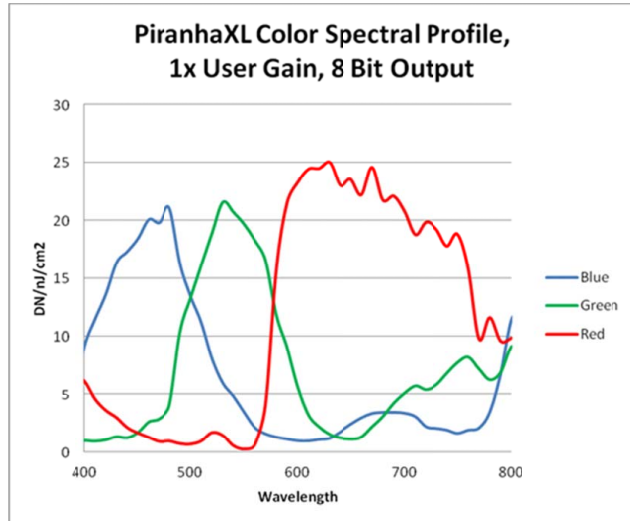
Specifications

Resolution	8160 x 12 pixels (4 rows per color)
Max Line Rate	40 kHz or 70 kHz depending on model
Pixel Size	$5\ \mu\text{m} \times 5\ \mu\text{m}$
Data Format	8 or 10 bit, selectable
Output	Camera Link HS (1 or 2 cables)
Lens Mount	M58 x 0.75 mm
Peak Responsivity	21 nJ/cm ² @ 460 nm, 8 bit, 1x gain 22 nJ/cm ² @ 525 nm, 8 bit, 1x gain 25 nJ/cm ² @ 625 nm, 8 bit, 1x gain
NEE	20 pJ/cm ² @ 460 nm 18 pJ/cm ² @ 525 nm 12 pJ/cm ² @ 625 nm
Nominal Gain Range	0.8x to 6x
Antiblooming	> 100x
Size	97 (W) x 97 (H) x 61 (D) mm
Mass	685 g
Operating Temp	0 to 60 °C (front plate)
Power	Hirose 6-pin, +12 V to +24 V DC
Power Dissipation	20 W, max (70 kHz model) < 20 W, max (40 kHz model)
Control & Data	Camera Link HS
Regulatory Compliance	CE and RoHS
Part Number	PX-HC-08K04T-00-R (40 kHz model) PX-HC-08K07T-00-R (70 kHz model)



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