

# FALCON™ 4 CLHS CAMERAS

## KEY FEATURES

- Reduced dark noise levels and improved dark offset
- Improved sensitivity, including NIR response
- In-camera image pre-processing (lens shading correction, pixel correction)
- Large full well when using in-sensor binning >142Ke
- Thousands of frames per second in Partial Scan Mode (ROI)
- Multi-ROI support (up to 32 ROI) and Cycling Mode
- Advanced Sequencer functions of different features

## PROGRAMMABILITY

- Customizable user settings
- Programmable exposure time
- Adjustable analog / digital gain and offset
- Adjustable integration time and frame rate
- Test patterns and camera diagnostics

## RELIABILITY

- Robust all-metal body
- 3 year warranty

## TYPICAL APPLICATIONS

- Electronic Inspection
- Aerial Imaging
- Flat Panel Inspection
- Semiconductor
- High Speed 3D imaging
- Surveillance
- Motion Tracking and Analysis

## REGULATORY COMPLIANCE

- CE and RoHS compliant

## True High-Performance: High-Speed Global Shutter CMOS Cameras

When you need true high-performance imaging, turn to the Falcon™ 4-CLHS camera series. Using Teledyne Imaging's advanced CMOS architectures, the Falcon4-CLHS cameras offer unique, unprecedented capabilities for large area, high resolution, high speed imaging. Models include high-speed cameras with frame rates up to 1200 fps and high-resolution cameras with up to 67 MP.



## FALCON4-CLHS INDIVIDUAL MODEL SPECIFICATIONS

|                    | Active Resolution | Sensor Model              | Frame Rate | Pixel Size | Dynamic Range | Max. Image Circle | Data Format      | Model Part Numbers |
|--------------------|-------------------|---------------------------|------------|------------|---------------|-------------------|------------------|--------------------|
| Falcon4-CLHS M2240 | 2240 x 1248       | Teledyne e2v Lince 2.8 MP | 1200 fps   | 12.0 µm    | 63 db         | APS-C             | 8- 10-bit Mono   | FA-HM10-M2245      |
| Falcon4-CLHS M4400 | 4480 x 2496       | Teledyne e2v Lince 11 MP  | 330 fps    | 6.0 µm     | 60.8 dB       | APS-C             | 8 or 10-bit Mono | FA-HM11-M4405      |
| Falcon4-CLHS M4480 | 4480 x 2496       | Teledyne e2v Lince 11 MP  | 600 fps    | 6.0 µm     | 60.8 dB       | APS-C             | 8 or 10-bit Mono | FA-HM10-M4485      |
| Falcon4-CLHS M6200 | 6144 x 6144       | Teledyne e2v Emerald 37M  | 120 fps    | 2.5 µm     | 58.2 dB       | 1.4"              | 8 or 10-bit Mono | FA-HM10-M6205      |
| Falcon4-CLHS M8200 | 8192 x 8192       | Teledyne e2v Emerald 67M  | 90 fps     | 2.5 µm     | 58.2 dB       | APS-C             | 8 or 10-bit Mono | FA-HM10-M8205      |

## FALCON4-CLHS FAMILY SPECIFICATIONS (COMMON TO ALL MODELS)

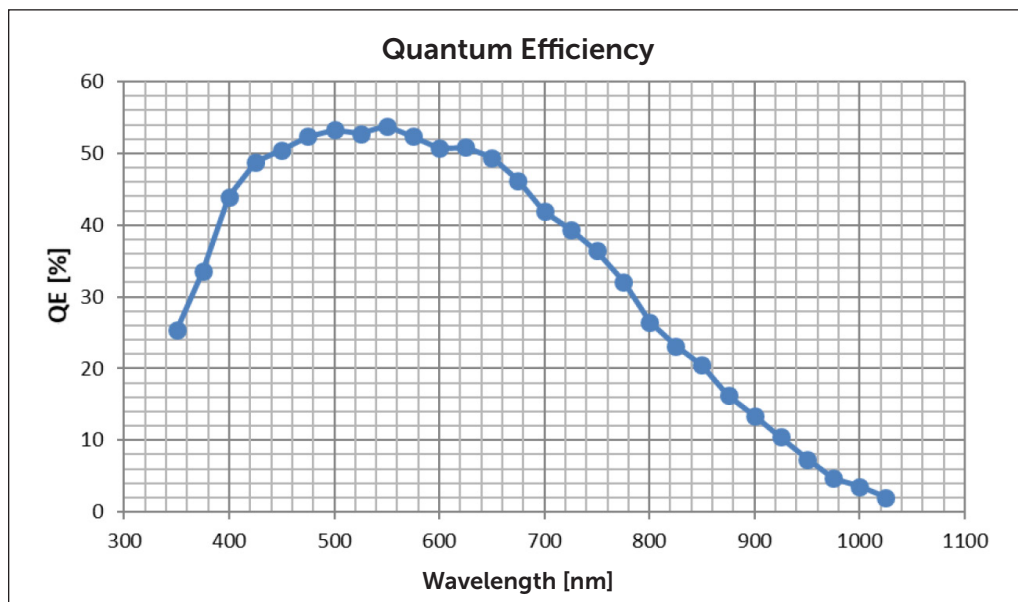
| Feature                             | Falcon4 Medium Case<br>p / n: FA-Hx1x-xxxx5                                 |
|-------------------------------------|-----------------------------------------------------------------------------|
| Data Output Transfer                | CLHS 4 or 7-Lanes - 10.3 Gb / sec. per Lane                                 |
| Exposure Control                    | INTERNAL: Programmable via the camera API, EXTERNAL: Based on Trigger Width |
| I/O Ports                           | 2 input / 4 Output, Opto-coupled                                            |
| Lens Mount                          | M42 x 1 mm                                                                  |
| Size (L x H x W)                    | 59 mm x 59 mm x 70 mm                                                       |
| Mass                                | < 321 g                                                                     |
| Operating Temp                      | -20 to +50°C (Housing Temperature)                                          |
| Power Supply                        | 10 V to 30 V DC                                                             |
| Power Dissipation (model dependent) | < 13 W                                                                      |
| Data Connector                      | CLHS CX4                                                                    |
| Power and I/O Connector             | SAMTEC TFM-105 type                                                         |
| Camera Specification                | Camera Link HS X-protocol                                                   |
| Software Platform                   | Teledyne Spera LT 8.6 or newer (Windows or Linux)                           |

## RESPONSIVITY GRAPHS

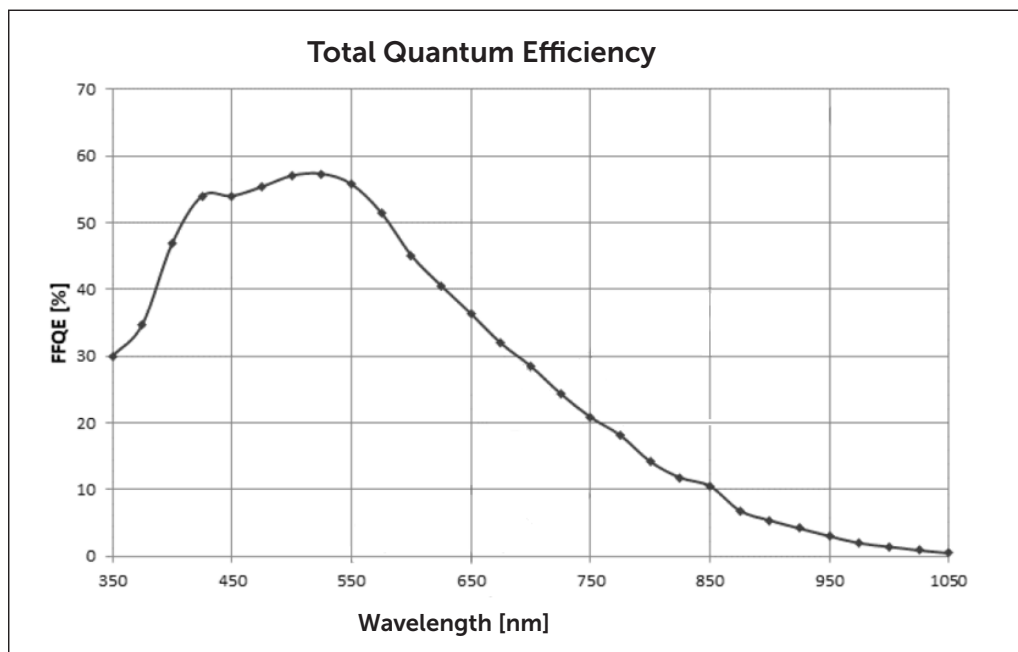
### Spectral Sensitivity Characteristics

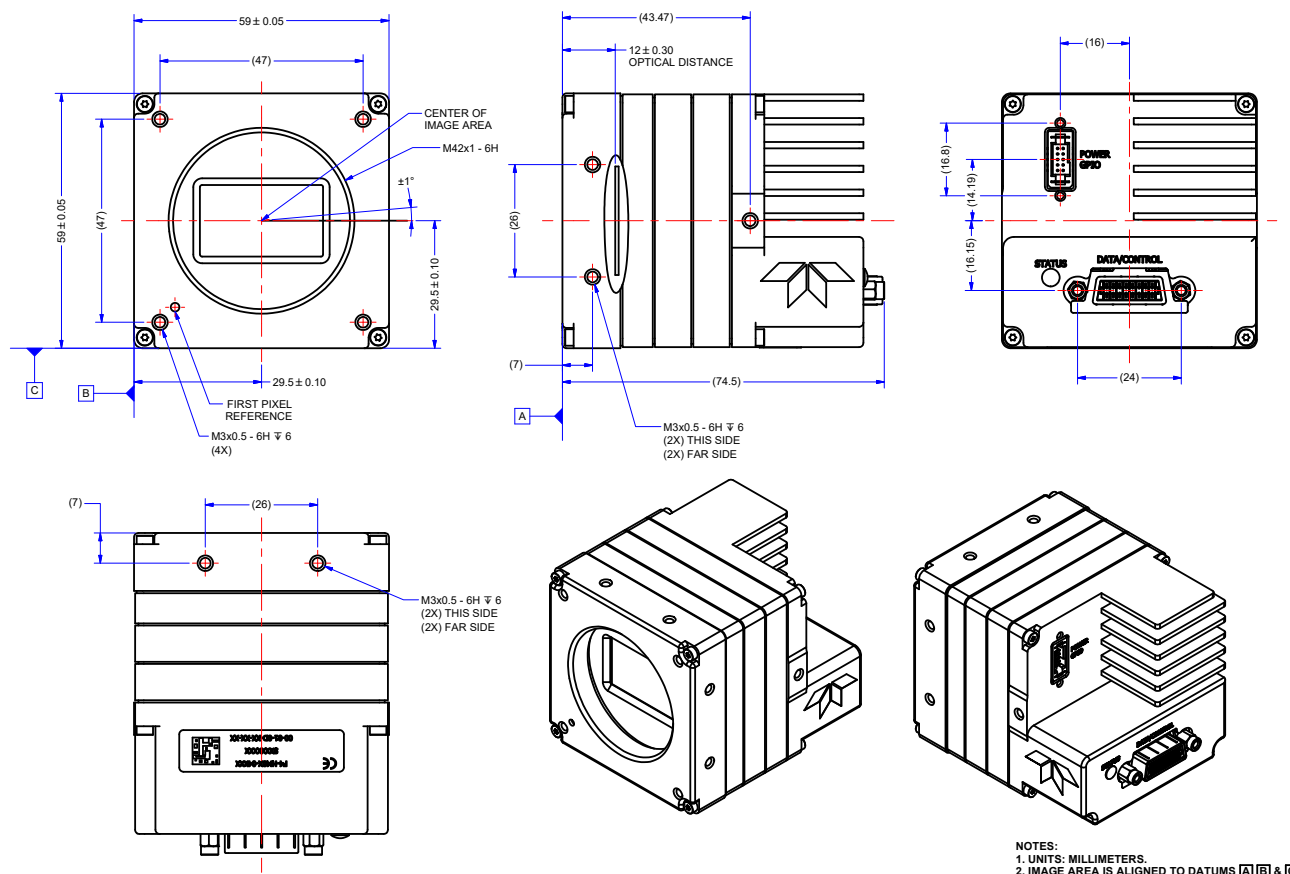
Excludes lens characteristics and light source characteristics

#### FALCON4-CLHS M4480 / M4400 / M2240



#### FALCON4-CLHS M8200 / M6200



**SPECIFICATIONS: Falcon4-CLHS FA-Hxxx-xxxx5 Medium Case**


For more information please contact:

**BOCK OPTRONICS INC.**

14 Steinway Blvd., Unit 7  
 Toronto, Ontario M9W 6M6

Tel: (416) 674-2804  
[sales@bockoptronics.ca](mailto:sales@bockoptronics.ca)  
[www.bockoptronics.ca](http://www.bockoptronics.ca)

This document does not contain information whose export/transfer/disclosure is restricted by the Canadian Export Control regulation. Teledyne DALSA has its corporate offices in Waterloo, Canada. Teledyne DALSA reserves the right to make changes at any time without notice. © 2023 Teledyne DALSA.

Revision Number:  
 Revision Date: 2023 04 26