



## Precision CCD and EMCCD Cameras

### SI-8M Camelia Black and White 8 Megapixels and CameraLink™ Digital Cameras

#### Description

This camera is designed to meet high performance and quality requirements while providing ease of use. Salvador manages the entire manufacturing process, from the sensor to the camera. The result is a camera that operates in 12 bits, with dedicated electronics that provide excellent signal-to-noise ratio. Due to the 100% aperture pixel, the sensitivity of the camera is fairly high, even in near infrared. The programmable settings let the user work with different integration times, gains and offsets. The external trigger allows the user to synchronize the camera on an external event while the 3-shot color mode allows very high resolution for color image acquisition.

The Camelia camera is powered by a single 24V power supply. The Camelia is also configurable via the serial communication of CameraLink™ for CameraLink cameras. It also sends digital video data.

As the Camelia's CCD is a full-frame sensor, the user must use either pulsed lighting or a chopper/shutter in front of the camera to obtain only incident lighting on the CCD during the integration time. The user must design an electro-optical interface to drive the camera, shutter/chopper or lighting by using the SHUTTER signal emitted by the camera. If required, the system can send an external trigger or external ITC (integration time control signal) to the camera.

The BG38 filter is essential to obtain correct white balance on color cameras and for use with standard optics (for achromaticity purposes).

The following elements are not provided by Salvador:

- Shutter (LCD or mechanical)
- BG38 (Anti-infrared) filter
- Control box
- Lens
- Light source
- +24V power supply
- Computer

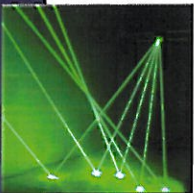
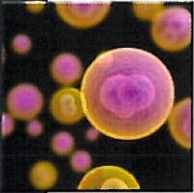


#### Main Features

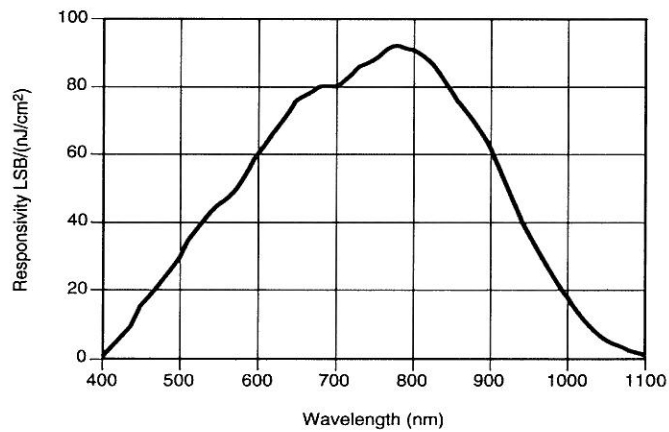
- High Sensitivity Full-frame CCD Sensor
- 2300 x 3500 Resolution with 10  $\mu$ m Square Pixels
- 100% Aperture Pixels
- 12-bit Dynamic Range
- Very Low Noise: 65 dB SNR
- Binning and ROI Modes
- CameraLink™ Data Format (Base Configuration)
- High Data Rate: 25 Mpixels/s
- Flexible and Easy to Operate
  - Trigger Mode: Free-run or External Trigger Modes
  - Binning 2 x 2 and 4 x 4, Up to 5 ROI
  - Exposure Time
  - Gain: -6 to 27 dB by Steps of 0.04 dB
  - Offset: 0 to 255 LSB
  - 3-Shot Color Operation
  - Test Pattern Generation
- Single Power Supply: 24V<sub>DC</sub>
- F (Nikon) Mount Adapter (Lens not Supplied)

#### Applications

Film and document scanning, semiconductor and PCB inspection, DNA analysis, metrology or X-ray imaging.

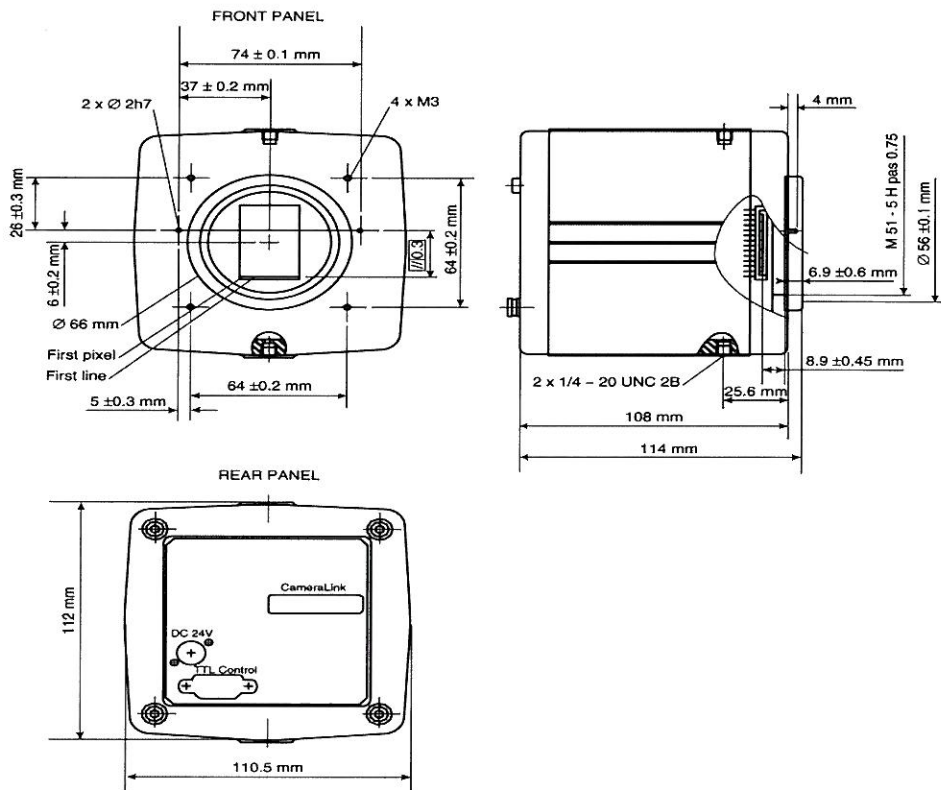


## Spectral Responsivity



Note: nJ/cm<sup>2</sup> measure on the sensor

## CameraLink Camera



## About Salvador Imaging

Salvador Imaging's camera technology combines the low-noise and high resolution needed for true analytical measurements with the speed demanded in today's medical, commercial/industrial, and aerospace/military imaging systems.

Salvador offers standard products as well as fully custom designs to meet the needs of a broad range of markets. Applications for Salvador products range from semiconductor, printed circuit-board and flat panel inspection to medical imaging, biotech data capture, airborne mapping, low light security and surveillance, and burst mode ballistic imaging. Camera products typically incorporate low noise, precision analog design coupled with proprietary thermal stabilization (cooling) to provide unrivaled imaging performance. Features such as binning, area-of-interest and external synchronization are standard in many Salvador cameras. Salvador cameras are 100% inspected using the Photon Transfer curve and other techniques to verify that the technical specifications are achieved.

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**SALVADORIMAGING™**  
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