

**New**

# CCD-5000F

**5 MPixel High Resolution High Speed  
Progressive-Scan CCD Camera**



## Features

- 2448 (H) x 2048 (V) square pixels
- 12 frames/sec. at 2448 (H) x 2048 (V) pixels
- Progressive scan
- Interline-transfer sensor (IT)
- Asynchronous shutter up to 1/10000 sec.  
(image on demand)
- Digital output with 8-bit (Camera Link or Gigabit Ethernet)
- Single output (80 Mpixels/sec.)
- Very compact design

With a resolution of 2448 x 2048 effective pixels, the **CCD-5000F** is a further member of the VDS high resolution high fidelity CCD camera family.

The **CCD-5000F** gives out the full resolution with 12 fps.

Due to the fast read-out mode with only a single sensor output offered by this camera, no mirror images or disturbing stripes at the channel borders occur, normally being a typical problem at two channel cameras.

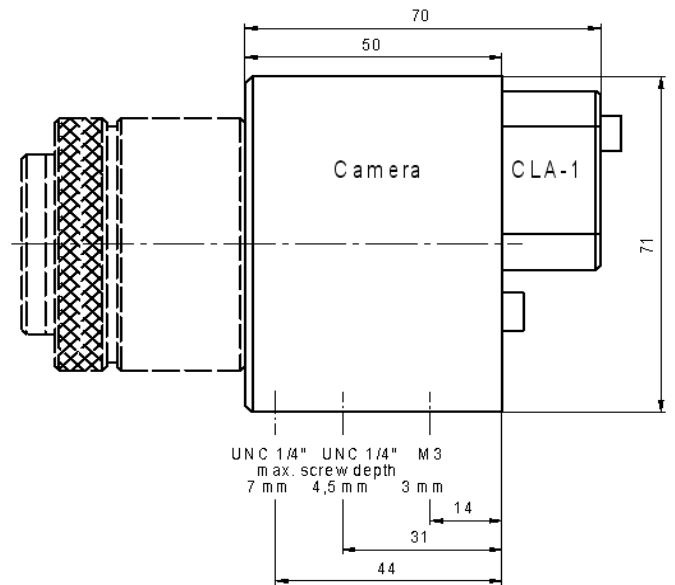
By means of the progressive interline transfer sensor very short exposure times up to 1/10000 seconds can be achieved at a full resolution. The exposure time can be regulated in steps of approx. 40  $\mu$ s. Due to the asynchronous operation (image on demand), the exposure starts 15  $\mu$ s after an external trigger pulse. Therefore the camera is especially useful for recording moving objects.

The digital output supplies image data with 8-bit precision. There are two options available: Camera Link (BASE) or Gigabit Ethernet.

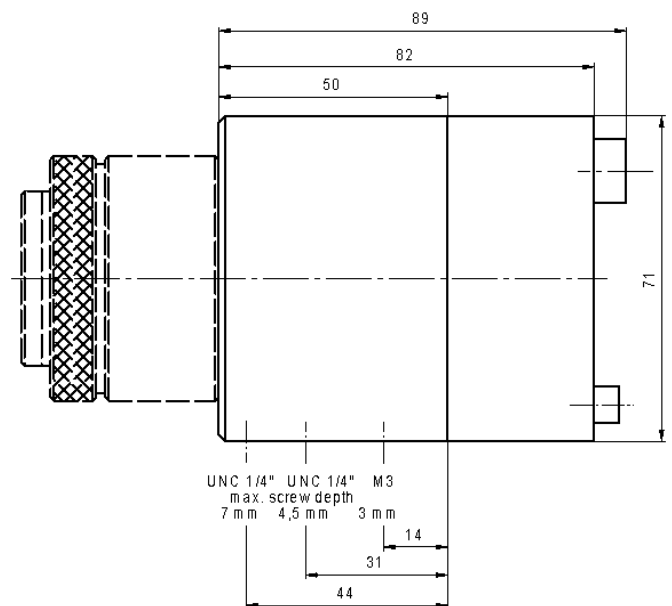
Because of the C-mount connector different C-mount objectives and adaptors for F-mount can be used.

#### Power and Control Input (15-pin D-SUB Jack)

Pin	Function
1	] + 12 V DC
2	
3	] GND
4	
5	(reserved)
6	-
7	-
8	(reserved)
9	Mode: (Open) $\Rightarrow$ Continuous Mode (GND) $\Rightarrow$ Image on Demand
10	-
11	+ ] Trigger Input (Optocoupler)
12	-
13	+ ] Exposure Output (Optocoupler)
14	Line Sync Output (active low)
15	Frame Sync Output (active low)



**Camera Link version**



**Gigabit Ethernet version**

#### Technical Data

- Resolution: 2448 (H) x 2048 (V) pixels
- Image rate: up to 12 frames/sec.
- Progressive scan
- Pixel size: 3.45  $\mu$ m x 3.45  $\mu$ m
- Active sensor size: 8.44 mm x 7.06 mm (2/3")
- Interline transfer sensor (no mech. shutter required)
- Electronic shutter up to 1/10000 sec.; adjustable in approx. 40  $\mu$ s steps
- Image on demand
- Sensor saturation:  $\geq 6000$  e
- Anti-Blooming
- Exposure time up to approx. 1 sec.
- Digital output: 8-bit, Camera Link or Gigabit Ethernet
- Frame system: 2072 lines
- Pixel clock: 80 MHz
- Video gain: 1 or 2 (+ 6 dB)
- Power supply: + 12 V, max. 0.75 A
- Ambient air temperature: 0° to 40° C
- Lens mount: C-mount
- CE standard
- Made in Germany