Digital Camera HS 102H

Camera was especially designed as a detection system for different kind of spectrometers. It has excellent sensitivity in a spectral range from 200 to 1100 nm. The camera uses Back-Thinned CCD image sensors from Hamamatsu.

Features

- Embedded Personal Computer Pentium MMX class.
- Highly sensitive in a broad spectral region.
- Quantum efficiency of CCD sensor up to 90 %.
- Low dark current and readout noise.
- Advanced features for programming of a operating modes of the camera:
  - spectral binning for several spectral stripes;
  - binning and grouping;
  - regions of interest (ROI);
- Input/output synchronization
- Diodeless shutter control.
- High-speed interface - 10/100 Ethernet.
- Internal camera memory (RAM) - up to 128 MB.

Application

As a detection system of different kind of spectrometers.

Specifications

- The camera provides the following operating modes:
  - mode of a full image with the maximal resolution;
  - mode of a full vertical binning;
  - «multi-track» mode;
  - operating mode with a regions of interest (ROI).

- The camera provides the following modes of the readout:
  - inverted (MPP full Well Mode);
  - non inverted (Large full Well phase) Mode).

- Rate of the readout - 500 kHz and 1 MHz.

- Type of a sensor - the Back-Thinned CCD (charge-coupled device) from Hamamatsu (Japan).
  - number of active pixels - 2048 x 14
  - active area (H · V) - 28,672 · 0,196 mm
  - spectral response range -from 200 to 1100 nm
  - quantum efficiency - up to 90 % (λ = 650 nm)
  - typical full well capacity - 130 000 electrons
  - typical RMS deviation readout noise - 25 electrons
  - typical dark current - 40 pA/cm
  - max. readout speed -5 MHz

- � Rating value of the distance from a forward plane of the camera up to photosensitive field CCD - 10 mm.

- � Cooling CCD - without cooling.

- � Exposure time - from 2 μs up to 7,5 h.

- � Time of a delay before exposure - from 2 μs up to 7,5 h.

- � Time of a delay after exposure - from 2 μs up to 7,5 h.

- � ADC (analog-digital converter) of the camera - 14 bit.

- � Dynamic range - not less than 5 000.

- � The interface of connection with a personal computer - «Ethernet 100 Base-T» under the p r o - tocol TCP/IP.

- � Power - 24 VDC. The external power adapter 100 - 240 VAC/24 VDC is included in the complete set of delivery.

- � Power consumption - not more than 15 V•A.

- � Overall dimensions of the camera (length · depth · height) - not more than 110· 180 · 95 mm.

- � Weight of the camera - not more than 2,0 kg.