USB2 - InGaAs 512 C

Complete medium speed, low noise InGaAs linescan camera system for the near infrared

khs instruments
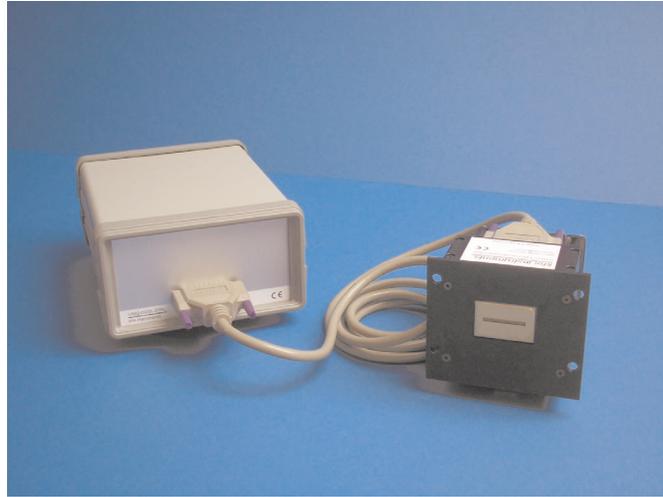
Key Features:

- InGaAs line scan camera system.
- 512 Pixels, Low Noise Peltier Cooler.
- 16 Bit ADC.
- 2 counts rms readout noise.
- 1 ms to > 100 s exposure time.
- USB 2.0 Interface.
- Drivers for Win 98 / XP / Labview.

Overview:

The USB2-InGaAs C is an easy to use, complete InGaAs linescan camera system. It includes a InGaAs camera head and a low noise peltier controller with USB 2.0 interface.

The USB2-InGaAs was designed for near infrared light measurements.

Applications:

- Spectroscopy.
- Portable applications.

Hardware:

The USB2-InGaAs camera head includes the complete InGaAs timing with signal conditioning (CDS), a precision 16 Bit ADC and a digital interface to the peltier controller.

The camera head is powered and controlled by the peltier controller with USB 2.0 interface.

External power supply 12 V / 2 A required.

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Software

The USB2-InGaAs linescan camera system is shipped with a software and drivers for Windows 98 and Windows XP.

The software includes a DLL to provide an interface to other software and the user software. Drivers for Labview are available upon request.

The DLL configures the USB2-InGaAs by reading internal stored EEPROM data, so in most cases there is no need to configure the camera.

One single DLL supports all and up to 127 (different) khs-instruments cameras connected to the USB-bus.

The user software supports all cameras from khs-instruments. It provides following and more functions:

- X/Y Scaling.
- X/Y Zoom.
- Two Cursors.
- Averaging.
- Binning.
- Subtract a Reference Scan.
- Cooler control.

It provides functions to read, write and print stored (ASCII) files.

Mechanical Dimension

USB2 - InGaAs 512 C

88.5 mm
88,9 mm
50,8 mm
6.35 mm DIA
101.6 mm
5 mm
110 mm
9.0 mm
80.0 mm

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Specifications

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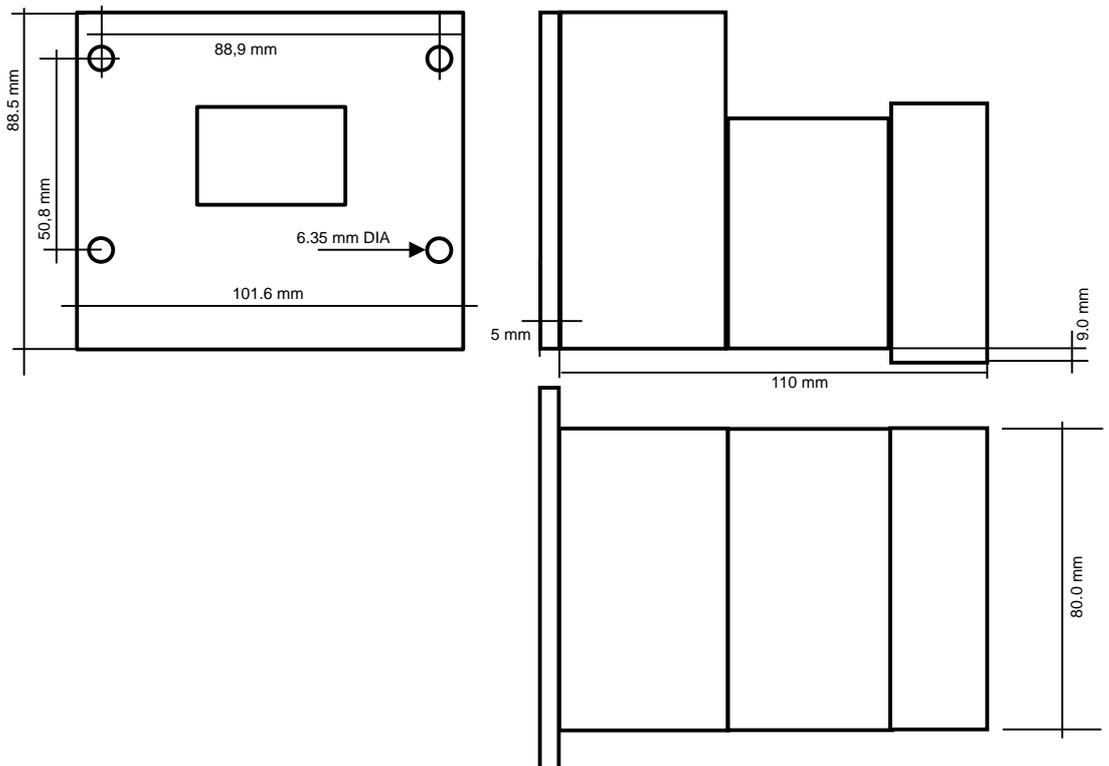
Detector Aarray:

Sensor:	Hamamatsu G9214
Number of pixels:	512
Pixel size:	50 / 25 µm x 500 µm
Spectral range:	900 nm..1670 nm
Sensitivity nonuniformity:	10%
Saturation charge	30 pC
Cooling Temperature	typ. -15°C
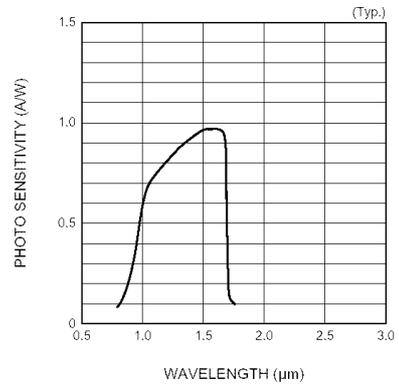
System & Detector:

ADC resolution:	16 bits
Readout Noise :	typ. 2 counts rms
Exposure Time:	1.0 ms to >5 s.
Linerate:	50 lps.

System Requirements:

Operating system:	Win 98 / XP.
Disk:	300 KB free.

USB Interface:

USB:	2.0.
Required Current:	500 mA.
External Power:	12 V 2A max.

Software:

Software includes:	User software, DLL interface, Driver for Labview upon request.

PHOTO SENSITIVITY (A/W) vs WAVELENGTH (µm) — (Typ.)

User software:

X scale edit:	Enter start and stop. Enter the values at two cursor positions.
Y scale edit:	Enter start and stop. Enter the values at two cursor positions.
X / Y unit edit:	Enter units.
Averaging:	Integration of several scans (up to 15). Running mean of n consecutive scans.
Binning:	Up to 64 pixels.
Display options:	Display actual scan. Load reference from actual scan and display scan minus reference. Set refernce to zero.
Data operations:	Write to disk. Write consecutive scans to disk. Read from disk. Print scan.

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