



Product specification

X-Ray High Resolution Imaging System

Model: CRYCAM micro - CryMicro M8300

- Boxed camera KAF-8300 including control unit and cooling
- Motorized focus adjusting with controller and software
- Optical tube with 45° mirror
- Microscope objective 2x (replaceable)
- Support mechanics
- Camera lead shielding
- Power supply unit
- Software:
 - image acquisition and processing
 - Background subtraction
 - Flat field correction
- Technical documentation



Sample Image

CCD Camera KF-8300

Type: Kodak full frame KAF-8300
Pixel resolution: 3358 x 2536
Pixel size: 5.4 μm x 5.4 μm
Quantum efficiency: 55% @ 550 nm
CCD size: 18.1 x 13.7 mm
Full well capacity: 25 000 e^-

Image download time: 12.2 – 14.4 s (binning 1x1)
Frame rate: variable - depends on the sum of the exposure and the download time
Binning: 1x1 – 4x4
System read noise: 8 e^- - 9 e^- RMS
Dark current @ 0°C: 0.15 e^- /s/pixel
Effective pixel size: 2.7 μm x 2.7 μm (2x - included)

CCD signal processing: correlated double sampling (CDS) + 16 bit A/D converter
Shutter: mechanical, blade
Cooling: Peltier-driven, 40 °C below the ambient laboratory temperature (FAN Cooling)
Data interface: USB 2.0
Power source: 12 VDC/ 5 A/ 100-240 V/ 50-60Hz
Mounting: M6 screws



Focus: stepper motor, 1 step: 0.55 μm
Software: XIMS
Weight: ~ 6 kg (without lead shielding)
Dimensions (L x W x H): 325 mm x 123 mm x 115 (157) mm (see drawing)

Optics & scintillator

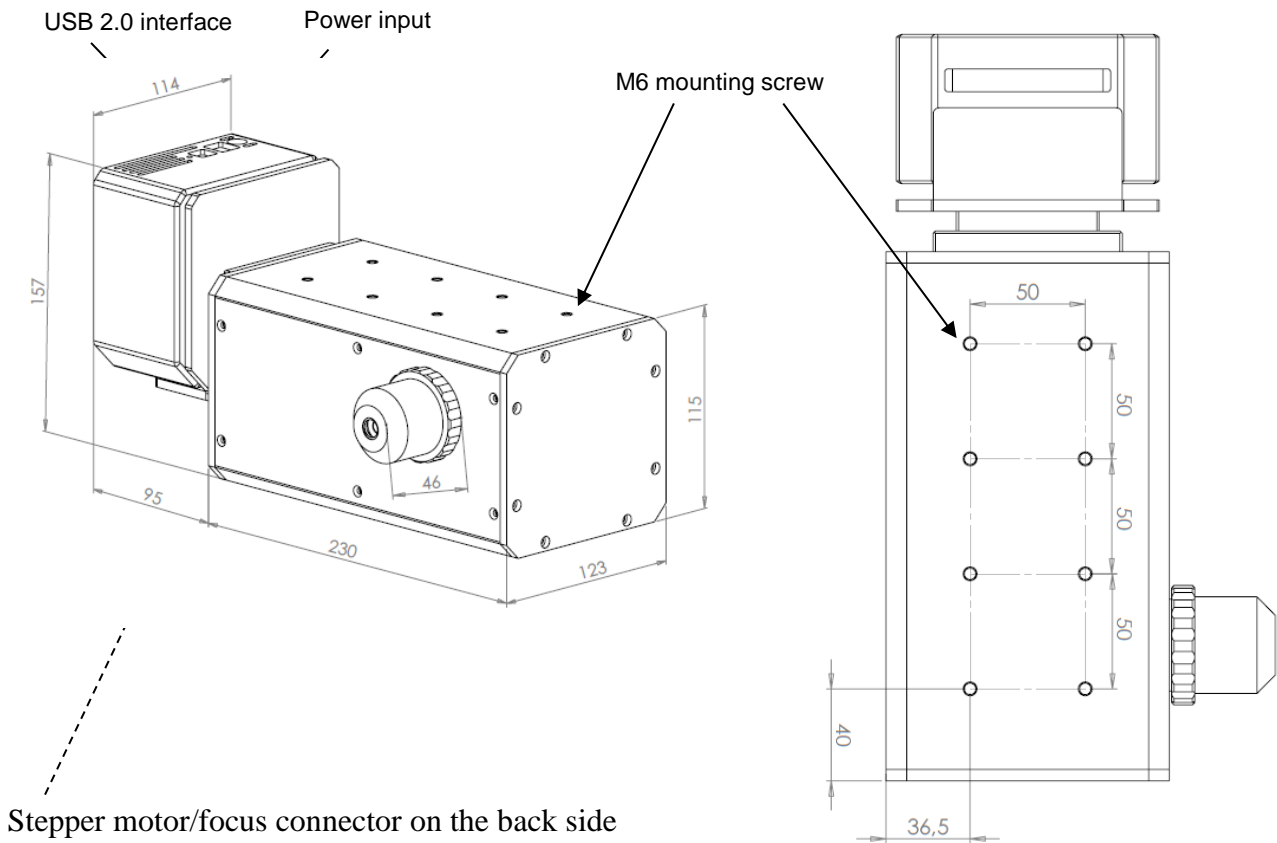
Imaging Set 2x for CRYCAM micro*

- **Microscope objective 2x**
Numerical aperture: 0.1
Field of view (FOV): 9.05 x 6.55 mm
Effective pixel size: 2.7 x 2.7 μm
- **LuAG:Ce High Resolution Screen**, both sides polished, mounted in a scintillator holder
Size: dia. 20 x 0.1 mm
Coatings – anti-reflection, reflection

*Parameters valid for the CRYCAM micro system based on KAF-8300 sensor.



Drawing: CRYCAM micro



Note: All dimensions in millimeters



Additional Imaging Accessories

Imaging Set 4x for CRYCAM micro**

- **Microscope objective 4x**
Numerical aperture: 0.2
Field of view (FOV): 4.53 x 3.43 mm
Effective pixel size: 1.35 x 1.35 μm
- **LuAG:Ce High Resolution Screen**, both sides polished, mounted in a scintillator holder
Size: dia. 10 x 0.050 mm
Coatings – anti-reflection, reflection

Imaging Set 10x for CRYCAM micro**

- **Microscope objective 10x**
Numerical aperture: 0.45
Field of view (FOV): 1.81 x 1.37 mm
Effective pixel size: 0.54 x 0.54 μm
- **LuAG:Ce High Resolution Screen**, both sides polished, mounted in a scintillator holder
Size: dia. 10 x 0.010 mm glued on quartz glass substrate dia. 12 x 0.17 mm
Coatings – anti-reflection, reflection

**Parameters valid for the CRYCAM micro system based on KAF-8300 sensor.