



Acuros[®] CQD[®] 1920L USB3 SWIR Camera

The Acuros[®] CQD[®] L-Series SWIR cameras feature large sensor area, low angular dependence and a short working distance for highly divergent emitters and collimated beams. Acuros cameras deliver high resolution, high dynamic range and very high detectivity imaging from 400 to 1700 nm.

The L-Series cameras are designed for use in laser beam diagnostics, laser beam imaging and laser alignment applications.

Specifications:

Electro-Optical Specifications:

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|-----------------------------------|---|
| Sensor | Acuros [®] CQD [®] sensor |
| Temperature stabilization | Single-stage thermo-electric cooler |
| Sensor array format | 1920 x 1080 |
| Resolution | 2.07 megapixels |
| Spectral band | 400 nm - 1700 nm |
| Array size | 28.8 mm x 16.2mm, 33 mm diagonal |
| Pixel pitch | 15 μ m x 15 μ m |
| Max frame rate at full resolution | 58 fps (8, 10, 12, 14 bit) |
| Pixel operability | 99.9% typical, 99.75% min |
| Bit depth | 8, 10, 12, 14 bit selectable |
| Integration type | Snapshot global shutter |
| Trigger | External TTL |
| Integration time | 10 μ sec to 4 sec |
| Dynamic range | 70 dB typical |
| Windowing & windowing frame rate | Array centered. Scales inversely to window size |
| Laser beam fringeless operation | Yes |
| Binning arrays | 2 x 2, 4 x 4 |
| Non-uniformity correction | 2-point non-uniformity correction |
| Temporal dark noise | 65e ⁻ typical (high gain) |
| Quantum efficiency | See typical QE curve. |

Features:

- Large sensor size
- Short working distance for highly divergent beams
- Low angular dependence
- Dynamic Range up to 70 dB
- Linear photoresponse
- 2.07 mp resolution
- TEC Cooling
- Low noise
- GigE Vision
- Visible-SWIR

Applications:

- Laser beam diagnostics
- Laser beam imaging
- Laser alignment



SWIR[®]

VISION SYSTEMS

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Specifications:

Environmental & power specifications, typical performance

| | |
|----------------------------|--------------------------------------|
| Operating case temperature | -20 °C to +55 °C |
| Power consumption | 6.5 - 12 W depending on TEC settings |
| Power supply voltage | 6-16 VDC |
| Regulatory compliance | CE mark |

Mechanical specifications

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|---------------------------|--|
| Dimensions excluding lens | 6.1 x 6.1 x 8.2 cm |
| Weight excluding lens | 508 grams |
| Lens mounts | Standard mount. Inquire for other options. |
| Power connector | Hirose 12-pin, HR10A-10R-12PB (71) |
| Trigger connector | BNC |

Software and user interface

| | |
|--------------------------|---|
| Software development kit | Windows GUI & Pleora eBUS SDK (Linux, Windows, MacOS) |
| GenICam compliance | Yes |
| Interface | USB3 Vision |

Export compliance

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|-----------------------|---|
| US export designation | EAR-99. No license required for lawful export |
|-----------------------|---|

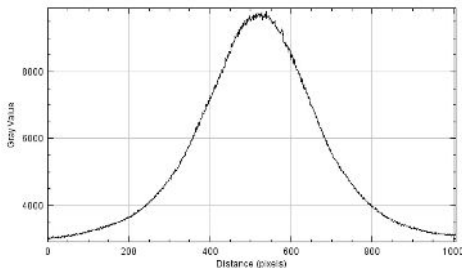
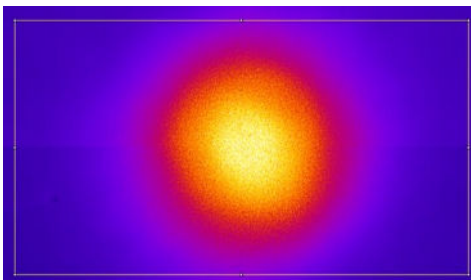
Ordering

| | |
|--------------|----------------------------|
| Part numbers | 1920L: Acuros-1920-USB-003 |
|--------------|----------------------------|



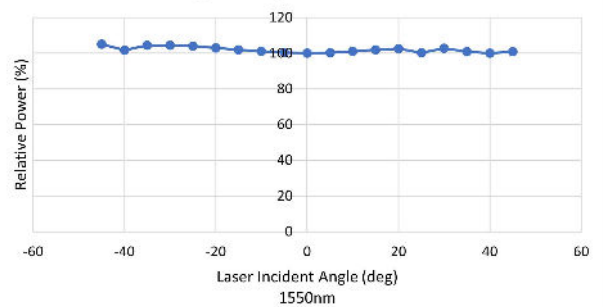
USB Vision Interface

Acuros CQD SWIR camera image of Laser

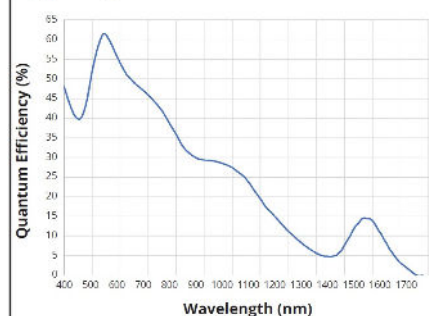


1550 NM Laser image and corresponding line file (false color added post image)

Angular Dependence Data



Typical QE Performance



Acuros-1920-USB3-003

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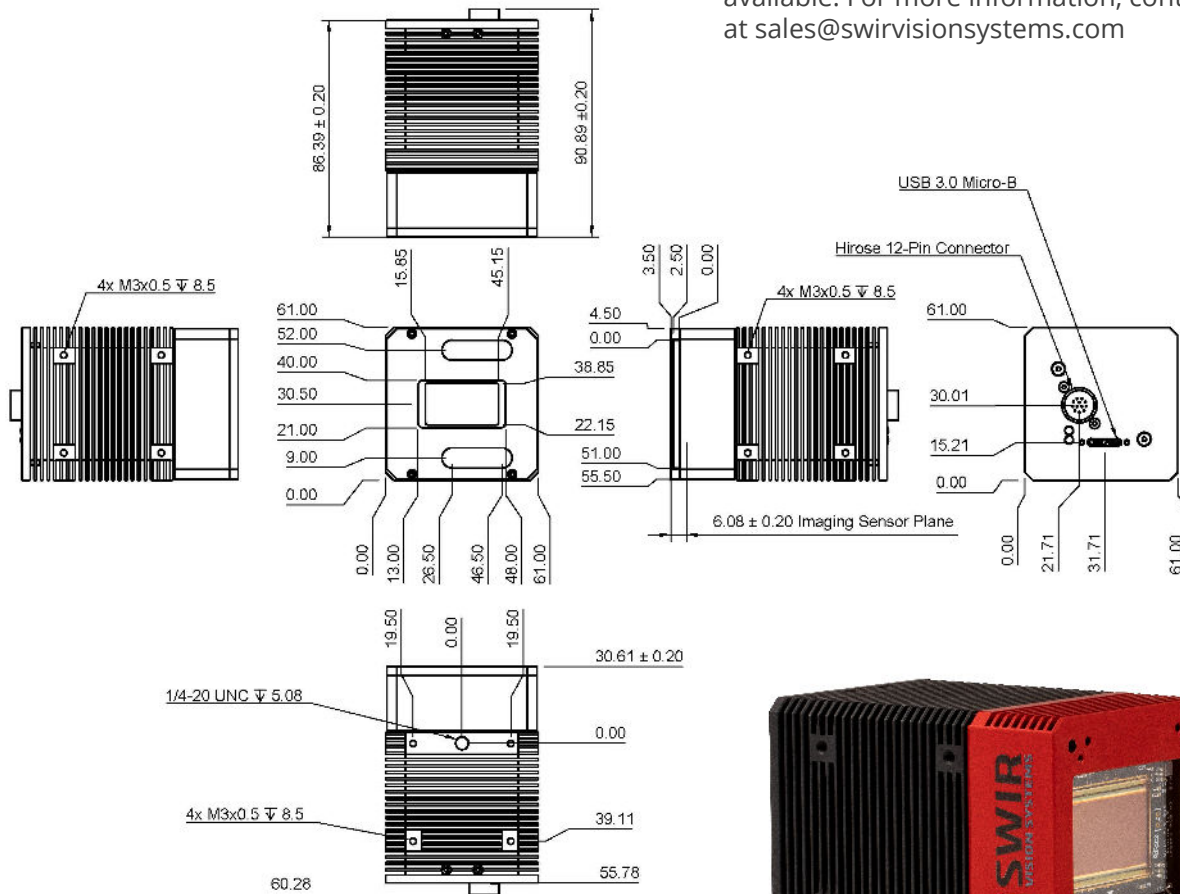


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Mechanical Drawings



**Additional ND filter mounting options are available. For more information, contact us at sales@swirvisionsystems.com



Contact Us:

For technical, pricing, and sales information, or to learn more about Acuros cameras or CQD sensor technology, please contact us at:

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