

## BFLY-U3-23S6M-C USB 3.0 Blackfly®, Monochrome Camera

#33-432



USB 3.0 FLIR Blackfly Camera

### Teledyne Imaging FLIR/IIS Blackfly®: Legacy series Machine Vision Cameras that fit anywhere

The **Blackfly®** camera line combines Sony, Aptina, and e2v sensors with a host of unique features.

The Blackfly® machine vision camera line combines the high throughput of USB 3.0 or GigE, offering a number of highly sensitive sensors. The camera combines a comprehensive list of unique features, offering industry-leading capabilities, affordability, and uncompromising value. The ultra-compact Blackfly camera measures 29 x 29 x 30mm, weighs just 36 grams, uses 3 watts of power, and includes a 3-year warranty.

The **Blackfly®** is available with either color or monochrome sensors, providing a versatile imaging solution to easily obtain the exact images required to accelerate application development. A range of camera accessories and a common form factor provide a consistent platform for integration across the range of available sensor formats, resolution, and frame rates.

**Note:** USB3 cable sold separately.

## General

|                |                   |
|----------------|-------------------|
| Type:          | Monochrome Camera |
| Manufacturer:  | FLIR              |
| Camera Family: | Blackfly®         |
| Model Number:  | BFLY-U3-23S6M-C   |

## Physical & Mechanical Properties

|                  |   |
|------------------|---|
| Dimensions (mm): | 29 x 29 x 30 (excludes connectors and lens mount) |
| Weight (g):      | 36  |
| Housing:         | Full  |

## Sensor

|                           |                                 |
|---------------------------|---------------------------------|
| Image Buffer:             | 16MB                            |
| Imaging Sensor:           | Sony IMX249                     |
| Type of Sensor:           | Progressive Scan CMOS           |
| Type of Shutter:          | Global                          |
| Camera Sensor Format:     | 1/1.2"                          |
| Resolution (MegaPixels):  | 2.30                            |
| Pixels (H x V):           | 1,920 x 1,200                   |
| Pixel Size, H x V (µm):   | 5.86 x 5.86                     |
| Sensing Area, H x V (mm): | 11.25 x 7.03                    |
| Frame Rate (fps):         | 41.00                           |
| Pixel Depth:              | 10/12 bit                       |
| Exposure Time:            | 19µs - 3.9s                     |
| Dynamic Range (dB):       | 67.12 (Mode 0) / 73.08 (Mode 7) |
| Machine Vision Standard:  | USB3 Vision v1.0                |

## Electrical

|                        |               |
|------------------------|---------------|
| Power Consumption (W): | Not Specified |
|------------------------|---------------|

## Hardware & Interface Connectivity

|                             |   |
|-----------------------------|---|
| Video Output:               | USB 3.0   |
| Connector:                  | USB 3.1 Gen 1, Micro-B with Screw Locks                 |
| Power Supply:               | Power over USB or via GPIO with <a href="#">#88-063</a> |
| GPIOs:                      | 1 opto-isolated input, 1 opto-isolated output           |
| Synchronization:            | Hardware Trigger (GPIO) or Software Trigger             |
| Interface Port Orientation: | Back Panel  |
| GPIO Connector Type:        | 6-pin Hirose (HR10)                                     |

## Threading & Mounting

|                   |  |
|-------------------|--|
| Mounting Threads: | ¼-20 with Tripod Mount Adapter <a href="#">#88-210</a> |
| Mount:            | C-Mount  |

## Environmental & Durability Factors

|                             |            |
|-----------------------------|------------|
| Operating Temperature (°C): | 0 to +45   |
| Storage Temperature (°C):   | -30 to +60 |



April 12, 2025

To Whom It May Concern,

This document certifies that the product stated below has been reviewed as requested by Edmund Optics:

| Stock No. | Description  |
|-----------|--|
| 33-432    | BFLY-U3-23S6M-C USB 3.0 Blackfly®, Monochrome Camera |

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This certification means that:

- EO's suppliers have confirmed the material composition of this product.
- EO has implemented rigorous procedures to document this compliance.
- The information provided may, or may not, be based upon actual test data, or on information from our Vendors, Raw Material Suppliers or Subcontractors.



Jay Budd, Director of Corporate Compliance  
April 12, 2025

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Jeff Harvey- EVP of Operations



April 12, 2025

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This item contains substances listed on the REACH SVHC list as of 23 January 2024 in quantities exceeding 0.1% weight by weight, please contact [compliance@edmundoptics.com](mailto:compliance@edmundoptics.com) if you require more information.

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