

BFLY-U3-23S6C-C USB 3.0 Blackfly®, Color Camera

#33-433



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:	Color Camera
Manufacturer:	FLIR
Camera Family:	Blackfly®
Model Number:	BFLY-U3-23S6C-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:	8/12/16/24 bit
Exposure Time:	19µs - 3.9s
Dynamic Range (dB):	67.33 (Mode 0) / 73.09 (Mode 7)
Machine Vision Standard:	USB3 Vision v1.0

Electrical

Power Consumption (W):	Not Specified
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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 #88-063
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 #88-210
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
33-433	BFLY-U3-23S6C-C USB 3.0 Blackfly®, Color Camera

This item is EU RoHS (2015/863/EU) exempt based on **Exemption 6c**: Copper alloy containing up to 4% lead by weight, **Exemption 7a**: lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead), and **Exemption 7c-I**: electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.

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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Edmund Optics certifies that all articles included in this shipment are in compliance with the terms and conditions of this order. The company also certifies that the articles included in this shipment are in accordance to all agreed upon specifications and quality assurance provisions. Please call 1-800-363-1992 should any questions arise from this shipment.



Jeff Harvey- EVP of Operations



April 12, 2025

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

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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 if you require more information.

Please note the following:

- Entry 11 of Annex V of the REACH regulation EC 1907/2006 as amended by regulation 987/2008, exempts "non-hazardous" glass components from registration.
- Items considered to be packing materials and which do not form part of, or are not required for the operation of, the product, are not considered to be within scope of this declaration.
- EO does not routinely analyze products for substances not purposely added or specified within the design specifications, drawings and assembly procedures.

This certification means that:

- EO's suppliers have confirmed the material composition of this product.
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