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# GS3-U3-51S5C-C 2/3" FLIR Grasshopper®3 High Performance USB 3.0 Color Camera

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Teledyne FLIR IIS Grasshopper®3 USB 3.0 Cameras (Front)



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Color **Spectrum:**

**General**

Color Camera **Type:**

GS3-U3-51S5C-C	<b>Model Number:</b>
FLIR	<b>Manufacturer:</b>
Grasshopper®3	<b>Camera Series:</b>

**Note:**  
Dimensions: Exclude 1/4-20 Tripod Adapter and Lens Holder

## Physical & Mechanical Properties

44 x 29 x 57.5 (excludes connectors and lens mount)	<b>Dimensions (mm):</b>
90	<b>Weight (g):</b>
Full	<b>Housing:</b>

## Sensor

128MB	<b>Image Buffer:</b>
2/3"	<b>Sensor Format:</b>
5.00	<b>Resolution (Megapixels):</b>
75.00	<b>Frame Rate (fps):</b>
2,448 x 2,048	<b>Pixels (H x V):</b>
3.45 x 3.45	<b>Pixel Size, H x V (µm):</b>
8.45 x 7.07	<b>Sensing Area, H x V (mm):</b>
Sony IMX250	<b>Imaging Sensor:</b>
Progressive Scan CMOS	<b>Type of Sensor:</b>
Global	<b>Shutter Type:</b>
10/12 bit	<b>Pixel Depth:</b>
6µs - 32s	<b>Exposure Time:</b>
65.41 (Mode 0) / 71.27 (Mode 7)	<b>Dynamic Range (dB):</b>
USB3 Vision v1.0	<b>Machine Vision Standard:</b>

## Electrical

4.5	<b>Power Consumption (W):</b>
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## Hardware & Interface Connectivity

USB 3.0	<b>Interface:</b>
USB 3.1 Gen 1, Micro-B with Screw Locks	<b>Connector:</b>
Power over USB (required for operation) <a href="#">#86-770</a> or via GPIO with <a href="#">#86-784</a>	<b>Power Supply:</b>
1 opto-isolated input, 2 opto-isolated outputs, 2 non-isolated bi-directional ports	<b>GPIOs:</b>
Hardware Trigger (GPIO) or Software Trigger	<b>Synchronization:</b>
Back Panel	<b>Interface Port Orientation:</b>
8-pin Hirose (HR25)	<b>GPIO Connector Type:</b>

## Threading & Mounting

C-Mount	<b>Mount:</b>
1/4-20 with Tripod Mount Adapter <a href="#">#88-057</a>	<b>Mounting Threads:</b>

## Environmental & Durability Factors

0 to +50      **Operating Temperature (°C):**

-30 to +60      **Storage Temperature (°C):**

## Regulatory Compliance

[View](#)      **Certificate of Conformance:**

## Product Details

- Feature High Resolution, High Sensitivity Sensors
- High Frame Rates Driven by USB 3.0 Interface
- Includes Image Capture Software and SDK



### Teledyne FLIR IIS Grasshopper®3: Machine Vision area scan camera

The **Grasshopper®3** offers a cost-effective, powerful and easy-to-use alternative to Camera Link and dual GigE LAG solutions.

The **Grasshopper®3** camera line combines the benefits of CCD with the affordability and data throughput of either USB 3.0 or GigE interfaces. This high-performance camera model provides a range of characteristics with either CMOS or CCD sensors. Its FPGA and frame buffer-based architecture provides optimal reliability, a rich set of features, and a full image processing pipeline including color interpolation, gamma, and lookup table functionality.

**Note:** USB 3.0 cable (sold separately) is required for operation. Optional power supply ([#86-784](#)) available. Software available for [download](#). FLIR was previously known as Point Grey.

#### Features

- Compact form factor
- USB 3.0 models with resolutions from 2.3 to 12 Megapixel sensors
- GigE interface model at 2.3 Megapixel for high bandwidth performance
- Various high-resolution, large format CCD and CMOS sensor options
- Color transformation tools for true-to-life color
- GigE models feature PoE for simplified setup and maintenance
- Spinnaker SDK and code samples

#### Applications

- Factory automation
- 3D Measurement
- Flat Panel Inspection
- Life science instrumentation
- Biometrics kiosk solutions
- Ophthalmology
- Intelligent traffic systems