![Banner logo]

BANNER ®

more sensors, more solutions

iVu series TG

Image Sensor

iVu series TG

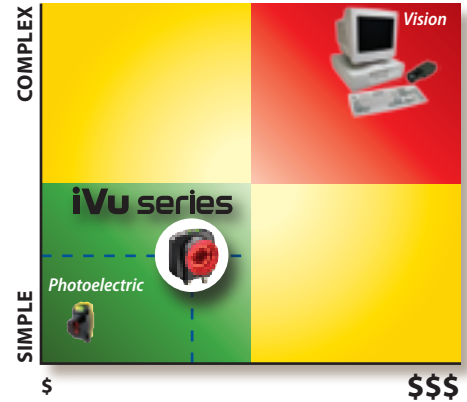## A whole new way of looking at things.

The first touch screen image sensor puts high-performance inspection capabilities at your fingertips.

The iVu series$_{TG}$ Image Sensor combines the simplicity of a photoelectric sensor and the intelligence of a vision sensor, delivering powerful and affordable inspection capabilities to solve a wide variety of complex applications. With intuitive functions for easy configuring and operating, first-time users can have it up and running in minutes, without training. Using the touch screen and intuitive interface, inspection parameters are easily configured and quickly deployable without a PC. Simply put, it's an intelligent solution that allows inspections to be applied and supported right on the factory floor.

An affordable solution that's easy to apply, operate and support.

Three advanced sensors in one compact and rugged package.

The iVu series$_{TG}$ Image Sensor is used to monitor parts for type, size, orientation and shape in three broad application categories:

- a **Match** sensor that compares a part to a reference to determine if there is a match...
- an **Area** sensor that detects whether a particular feature (or features) is present...
- and an **Area** sensor **with** tools that adjust for **Motion**.

No PC required to configure, change or monitor. With a built-in touch screen, this self-contained sensor provides easy configuration and convenient monitoring right on the sensor.

Easier installation and configuration. Four easy steps are all that's required: install and connect the sensor, select the sensor type, acquire a good image and set the inspection parameters. Do it all on the integrated touch screen. That's all there is to it.

Advanced capabilities. Intuitive operation. High-performance sensing. Menu-driven tools quickly guide you through setup, defining region of interest, adjusting tool parameters, and defining the minimum and maximum pass count. The intuitive interface and sophisticated features make powerful inspection capabilities simple.

Date/lot code inspection

Blister pack inspection

More information online at **bannerengineering.com**

Main
Menu

Manual
Trigger

iVu series_{TG} Interface
Make all configuration modifications and display inspection statistics.

Image-based pass/fail inspection without complex hardware and configuration.

Delivers superior inspection performance in a fraction of the time.

iVu series_{TG} Sensors feature a touch screen display, high-resolution imaging, high-performance processing, integrated lighting, adjustable lenses, cordsets and mounting brackets to solve your application challenges. With the iVu series, no special training or image processing knowledge is required. The iVu performs presence or absence inspections that are based on reference parts or feature sizes, combined with the ability to count and yield essential pass/fail decisions, in applications such as:

- Label inspection
- Part presence and orientation
- Date/lot code inspection
- Vial cap inspection
- Injection molding verification
- Packaging verification

- Drilled hole inspection
- Blister pack inspection
- Weld nut presence and orientation
- Feeder bowl inspection
- End-of-mail indication
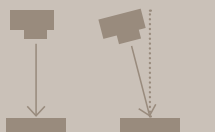- Electronic marking verification

Software emulator lets you perfect your application offline.

Set up, evaluate and modify inspections using the iVu software emulator (see included CD), which lets you program the iVu offline and load parameters using a USB drive — maximizing machine up time, and minimizing training and support requirements.

Apply the iVu series_{TG} in 4 Easy Steps

1. Install and connect the sensor

Euro/M12 connectors for Power, I/O, and USB, and multiple mounting brackets make installation a snap.
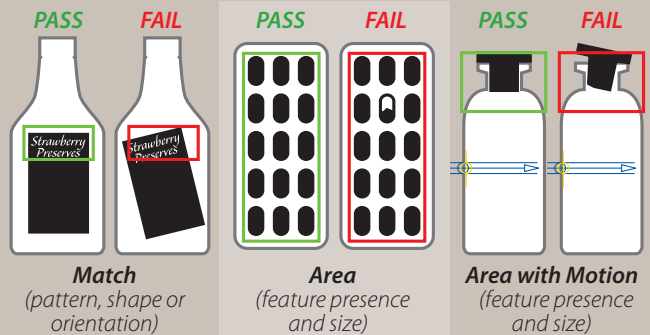
Mount the iVu sensor perpendicular or at a slight angle to the part.

2. Select the sensor type

Choose the sensor type that meets your inspection requirements:

PASS   FAIL   PASS   FAIL   PASS   FAIL

Match
(pattern, shape or orientation)

Area
(feature presence and size)

Area with Motion
(feature presence and size)

iVu series_{TG} Features:

- Three advanced sensors in one compact housing
- Emulator
- 68.5 mm (2.7") LCD display (320 x 240)
- Touch screen
- 752 x 480 CMOS imager
- Integrated lighting (red, blue, green or infrared options)
- Onboard help functions
- Auto exposure function
- Remote TEACH

- Adjustable focus lenses
- Onboard USB port for upload/download to USB drive
- Rugged IP67 housing
- Inspection/system logging
- Password protection
- Highly visible status indicators
- NPN or PNP models
- 10 to 30V dc operation
- Euro/M12 QD connectors
- Supports all Banner lighting

More information online at **bannerengineering.com**

Match
(Date/Lot Code Inspection)

Area
(Blister Pack Inspection)

The ideal inspection solution.

Match to a reference to verify parts, labels and packages regardless of orientation.

Quickly verify that parts match a reference including regular and irregular shapes, part orientation, labels, alphanumeric characters, logos, codes, etching, inkjetting and stamping at high inspection speeds.

Area inspection confirms the presence, size and number of features.

Confirm that each part or package includes the specified number of features (count), and determine if the features are correctly applied or incorporated. Verify that features such as drilled holes are present as well as the expected size.

Area application with motion finds features in variable locations.

An advanced application of the area sensing function is used to ensure that features are present, accommodating positional and rotational change introduced by motion.

Area with Motion
(Vial Stopper Inspection)

3. Acquire a good image

Capture a sample image using the Auto Exposure function. Adjust the focus and exposure/gain to optimize the image contrast.
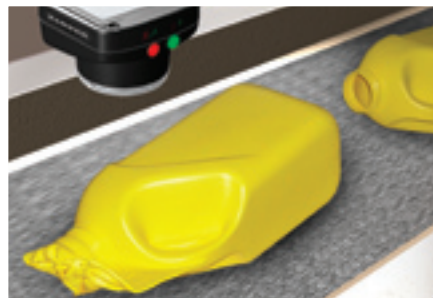

4. Set the inspection parameters

Quickly configure the sensor parameters to perform your inspection using the intuitive interface and touch screen display:

- *Adjust the region of interest (ROI)*
- *Adjust parameters*
- *Set the minimum and maximum pass count*

Food packaging inspection

Injection molding verification

Blister pack inspection

More information online at **bannerengineering.com**

Dimensions

52 mm
77 mm
82 mm

Lenses and Filters

LMF08   LMF12   LMF16   LMF25

Model Number	Description
LMF08	8 mm Lens
LMF12	12 mm Lens
LMF16	16 mm Lens
LMF25	25 mm Lens
FLTMI	Infrared (760 nm) Filter
FLTMB	Blue (470 nm) Filter
FLTMG	Green (525 nm) Filter
FLTMR	Red (635 nm) Filter

iVu series$_{TG}$ Basic Kits

Basic kits include a sensor with or without an integrated light, lens, stylus, CD-ROM and quick start guide. Cordsets and filters are ordered separately.

Sensor	I/O	Light	Lens
IVUTG	N	R	08

N = NPN (Sinking)
P = PNP (Sourcing)

R = Red
B = Blue
G = Green
I = Infrared
X = No Light

08 = 8 mm
12 = 12 mm
16 = 16 mm
25 = 25 mm

Mounting Brackets

SMBIVURAL   SMBIVURAR   SMBIVUB*   SMBIVUU

Model Number	Description
SMBIVURAL	Right-angle bracket for mounting sensor from left
SMBIVURAR	Right-angle bracket for mounting sensor from right
SMBIVUB	Bottom mounting bracket
SMBIVUU	U-shaped swivel bracket kit (includes SMBIVUB)

*Shown with optional **SMBPPK6** mounting stand.

Quick-Disconnect (QD) Cordsets

Model Number	Description	Length
MQDC2S-806	8-pin Euro-style, Straight with Open Shield (Female)*	2 m
MQDC2S-815		5 m
MQDC2S-830		9 m
MQDC2S-850		15 m
MQDEC-8005-USB	USB/8-pin Euro-style, Straight (Male)**	0.15 m
MQDEC-801-USB		0.30 m
MQDEC-803-USB		0.90 m
MQDEC-810-USB		3 m

*For right-angle models, add **RA** to end of model number (example, **MQDC2S-806RA**).

For right-angle models, add **RA in model number (example, **MQDEC-8005RA-USB**).

Label alignment inspection

Stamped hole inspection

More information online at **bannerengineering.com**

Banner is the name to trust for all your lighting needs.

If you think Banner only makes sensors, you haven't seen the light.

- Hundreds of lighting solutions and accessories—the most by any single source

- A complete offering of sizes and colors, including:
  - On-Axis Lights
  - Backlights
  - Low-Angle Lights
  - Structured Laser Lights
  - Spot Lights
  - Ring Lights
  - Fluorescent Tubular Lights
  - Area Lights
  - Linear Array Lights

40-plus years of LED design experience, quality control, sales support and cost-effective solutions:

- Banner quality products with global availability

- Rapid customization with most products shipping in 3 days or less

- The industry's largest team of application engineers to solve your toughest challenges

- More than 3,000 factory and local field representatives

From simple to advanced, Banner solves more applications in your plant!

Sensors **Vision** **Wireless** **Indicator Lights** **Machine Safety**

Banner Engineering Corp.

9714 Tenth Avenue North
Minneapolis, Minnesota 55441
763-544-3164 • Fax: 763-544-3213
1-888-3-SENSOR (1-888-373-6767)
www.bannerengineering.com
email: sensors@bannerengineering.com

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