

## Filter Kits

For use with the iVu Series<sub>TG</sub> Image Sensor


This document describes how to install red, blue, green, or infrared filters in the iVu Series sensor.

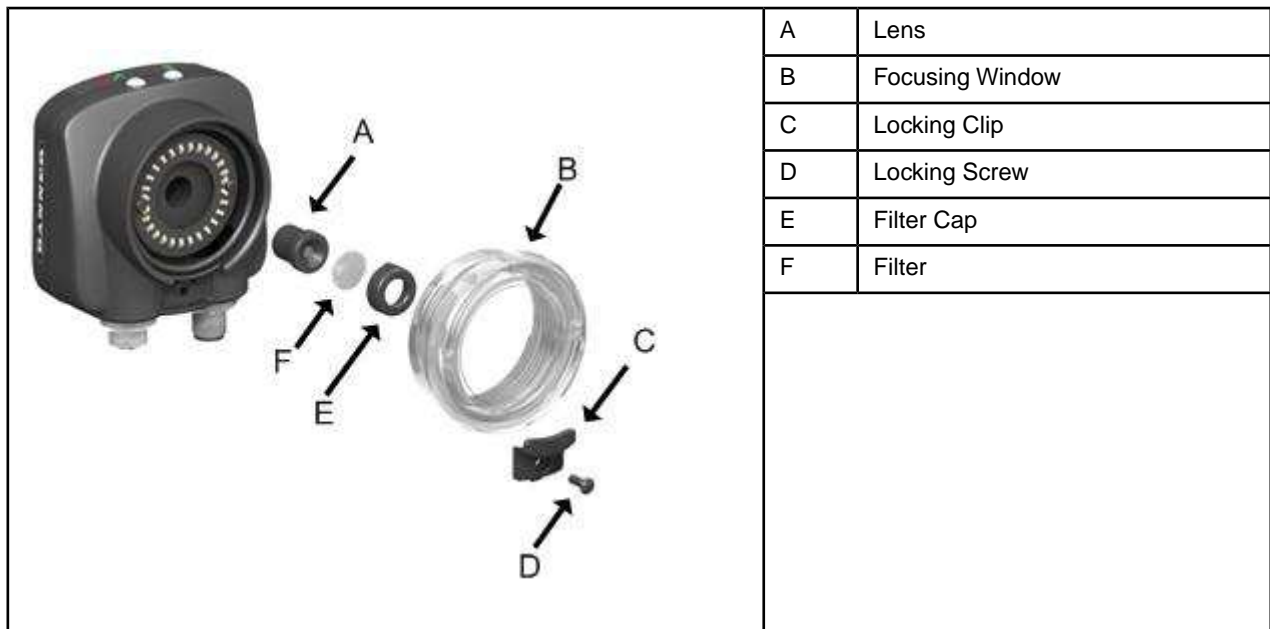
### Models

| Model | Description      |
|-------|------------------|
| FLTMR | Red filter kit   |
| FLTMI | IR Filter kit    |
| FLTMB | Blue filter kit  |
| FLTMG | Green filter kit |


### Installing Filters on the iVu Series Sensor

To install a filter on the iVu Series sensor, use the illustration as a guide and follow the steps listed below.

 **Note:** Failure to follow these instructions can cause damage to your iVu Series sensor.




1. Use the 1/16" hex key to remove the Focusing Window locking screw (D).


 **Note:** The Locking Clip (C) inserts in a groove near the top of the Focusing Window. When removing the window, the Locking Clip will be loose. Be careful not to lose the clip while removing the window.

2. Unscrew the Focusing Window by turning it clockwise approximately 5 complete turns or until the Focusing Window disengages from the light/lens assembly.

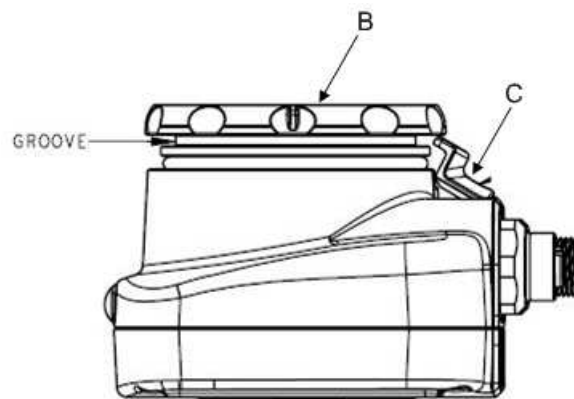
## Filter Kits

 **Note:** The light/lens assembly may include an integrated ring light or a blank disk if an integrated ring light is not used. Be careful that the light/lens assembly does not pull out when removing the Focusing Window. Give a slight tug on the Focusing Window when you think you've unscrewed it far enough. If the lens assembly moves with the window, continue to rotate the window clockwise until the lens assembly does not move.

3. Set the Focusing Window aside. Be careful not to get any debris on the window's O-ring.
4. If present, remove the protective covering on the filter.
5. Place the filter into the Filter Cap and press the cap onto the lens.

 **Note:** Avoid getting fingerprints on the filter or lens. If necessary, carefully clean the filter and/or lens with an appropriate lens cleaner.

6. Once the filter is installed, place the Focusing Window back into the housing while inserting the Locking Clip into the groove as shown below.



7. Press the Focusing Window onto the housing to make sure that it seats correctly (that is, there is no gap between the window and housing). Rotate the window counter-clockwise at least two turns.
8. Replace the locking tab screw but do not tighten until you have set up and focused the sensor again.



### **CAUTION . . . Electrostatic Discharge**

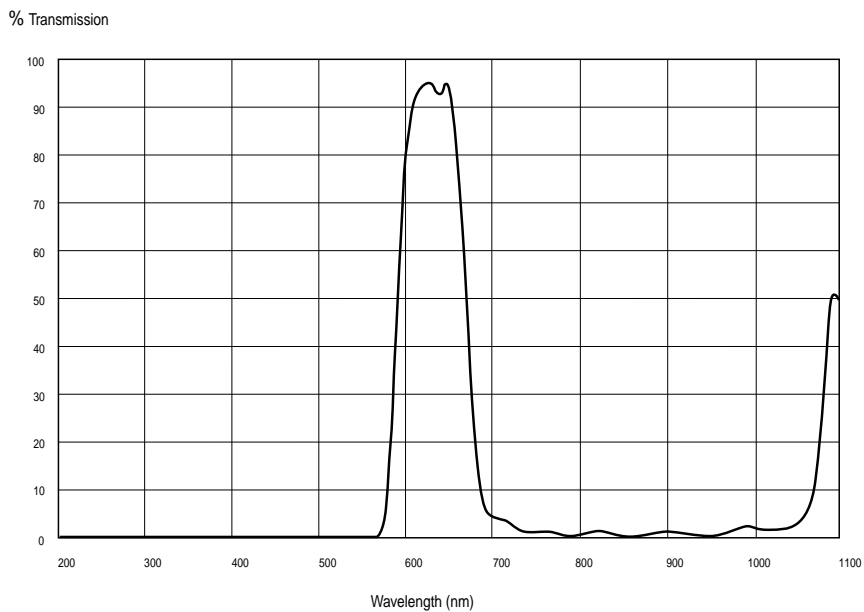
**Avoid the damage that electrostatic discharge (ESD) can cause to the Sensor**

Always use a proven method for preventing electrostatic discharge when installing a lens or attaching a cable.

## Filter Wavelengths

### FLTMR Red Filter

The FLTMR Red Filter improves image quality by helping to reduce unwanted ambient light. It passes red light while blocking infrared and other visible light.



**Figure 1: Percent transmission of light wavelengths through the FLTMR red filter**

### FLTMI Infrared Filter

The FLTMI Infrared Filter blocks visible light and passes infrared light. Use the FLTMI filter only with infrared light sources.

#### % Transmission

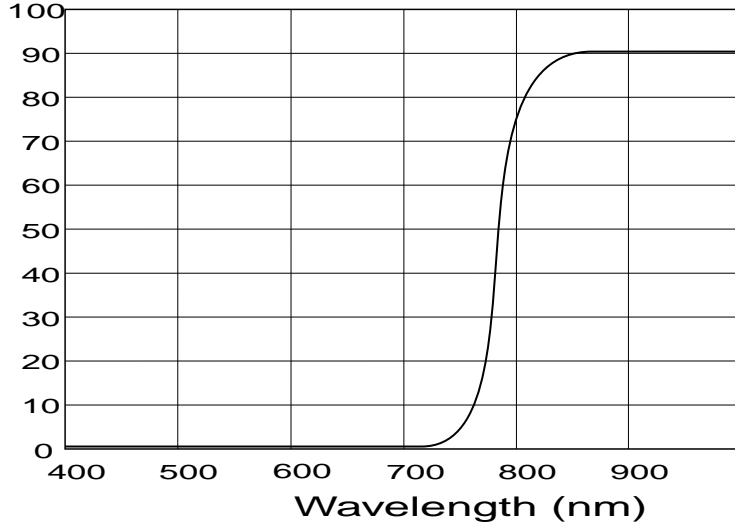


Figure 2: Percent Transmission of light wavelengths through FLTMI infrared filter

### FLTMB Blue Filter

The FLTMB Blue Filter improves image quality by helping to reduce unwanted ambient light. It passes blue light while blocking infrared and other visible light.

#### % Transmission

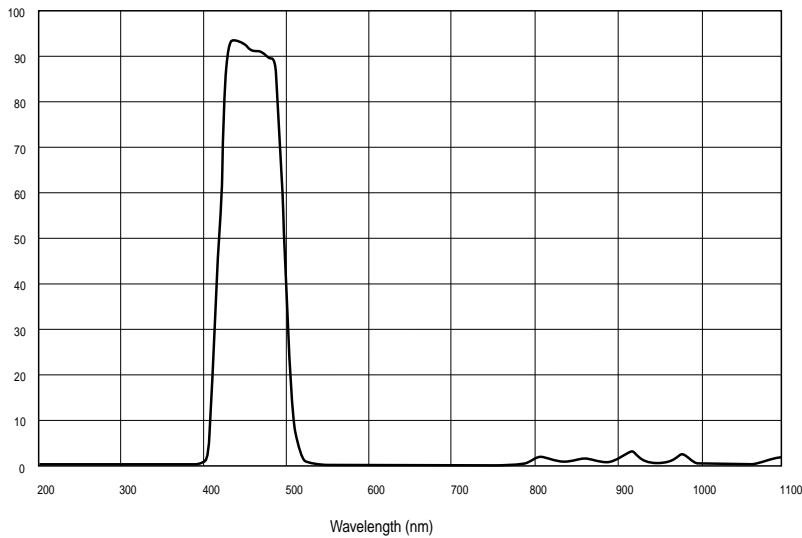
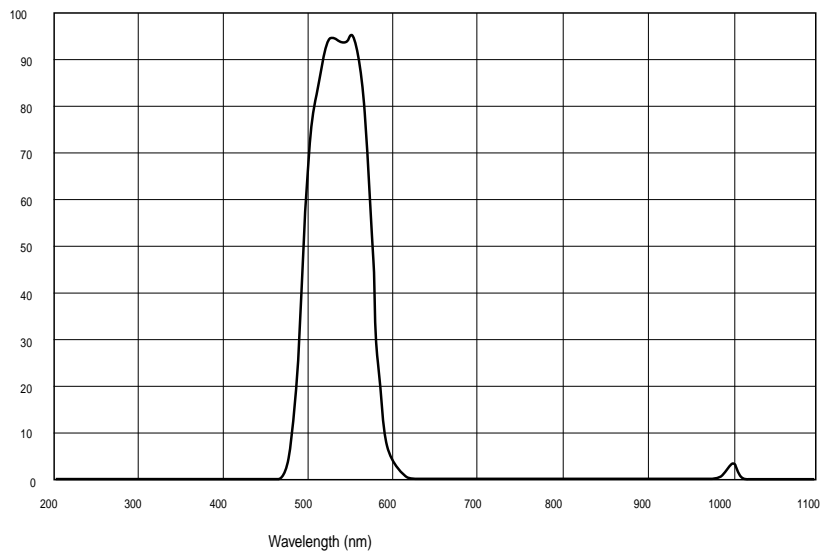


Figure 3: Percent transmission of light wavelengths through the FLTMB blue filter

## FLTMG Green Filter

The FLTMG Green Filter improves image quality by helping to reduce unwanted ambient light. It passes green light while blocking infrared and other visible light.

% Transmission



**Figure 4: Percent transmission of light wavelengths through the FLTMG green filter**



**Warranty:** Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture found to be defective at the time it is returned to the factory during the warranty period. This warranty does not cover damage or liability for the improper application of Banner products. This warranty is in lieu of any other warranty either expressed or implied.