

## Nighttime Image Issues

If your nighttime surveillance video looks foggy or soft-focus, one likely cause is that infrared reflection or bleed is affecting the image.

Infrared interference can be caused by

- Loose or missing foam ring (dome camera only)
- Problematic installation
- Dust or grease on the dome cover
- Nearby objects in the environment reflecting IR light

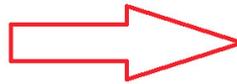
This sheet discusses the symptoms and solutions for each of these.

### Foam Ring

The most common error among inexperienced installers is removing the foam ring from around a dome camera. People have been conditioned to think of foam as disposable padding used to protect devices during shipping. In reality, the foam ring is an essential part of the camera, and must be kept for a proper installation.



**Without Foam Ring**



**With Foam Ring**

Even with the foam ring in place, an improperly installed ring can still leak infrared glare. When properly installed, the dome bubble should sit snugly against the foam ring. Note that a good contact seal with the dome bubble means the foam ring is slightly squished.

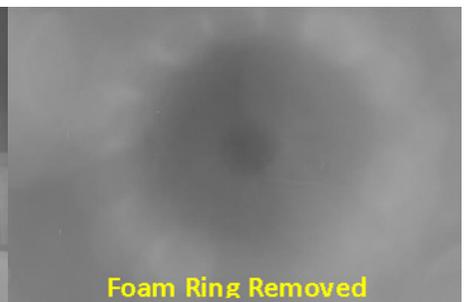
The photos below illustrate how improperly installed foam rings can affect your camera's infrared images.



**Normal Foam Ring**



**Foam Ring Loose-contact**



**Foam Ring Removed**

## Problematic Installation

If the IR lamps are pointed into the camera housing (see image at left), this can cause reflective infrared issues. Note the daytime and nighttime photographs below, and how IR reflection against the housing affect the image.



Other nearby cameras (with their own infrared emitters) can also cause poor nighttime images.

Cameras can cause this even if they are not in the field of view. Cameras that shine infrared on the same area, or on an area that is at the edge of another camera's field of view, can cause glare.

The image at right show one example of another camera's infrared causing glare.



## Dirty Dome



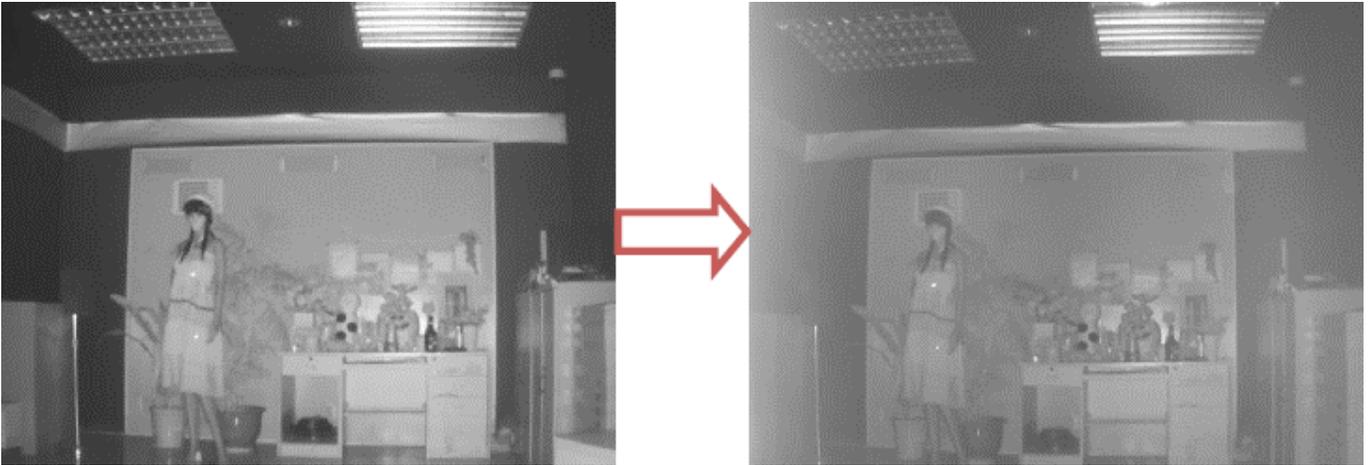
If the glass dome is dirty, the dirt can reflect infrared into the camera lens.

To keep the dome clean during installation, keep the protective film on the dome until you have completed installation. In addition, avoid touching the dome, which creates grease spots on the bubble. Such spots may not affect the daytime image but are an issue with infrared images.

Over time, domes also can get covered with dust, raindrop rings, and cobwebs, which cause the image quality to degrade and appear foggy. Clean the dome periodically to maintain a clear image. When you clean the dome, always use a soft cloth. Do not use an abrasive cleaner; use distilled water if you need a liquid.

## Nearby Objects

Nearby objects and barriers are another possible cause of “foggy” infrared images, even if they are not within the field of view.



The photos above show the glare effect of a small piece of cardboard positioned only 4 inches away from the side of the camera. Even though the cardboard is not visible in the picture, the effect is clear. Similar effects can be caused by the soffit, plants, and other items.

To avoid glare:

- Do not install the camera in a tight corner.
- Use wall mount brackets to set the cameras away from walls and soffits.
- Rotate the camera away from background surfaces as much as possible.
- Clear nearby vegetation from the field of view (plants leaves are highly reflective).