

# Laser Beam Profiling



The Phoenix Uncooled Broadband Thermal Imaging Core is the only microbolometer with the ability to image the spectrum from SWIR to LWIR, and can run at frame rates as high as 900 Hz.

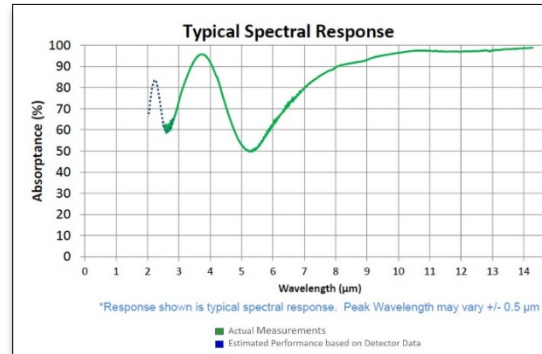
## **Application:**

Customer wanted to align and collimate a mid-infrared laser source (3-5  $\mu\text{m}$ ).

## **Solution:**

The Phoenix Broadband CameraLink 640x480 17  $\mu\text{m}$ , no lens, with external CameraLink to USB3 framegrabber

**Alternate Solution:** Phoenix Broadband GigE POE Camera, no lens



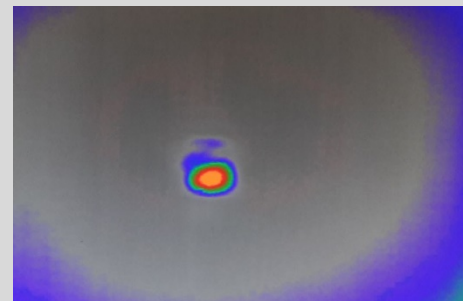
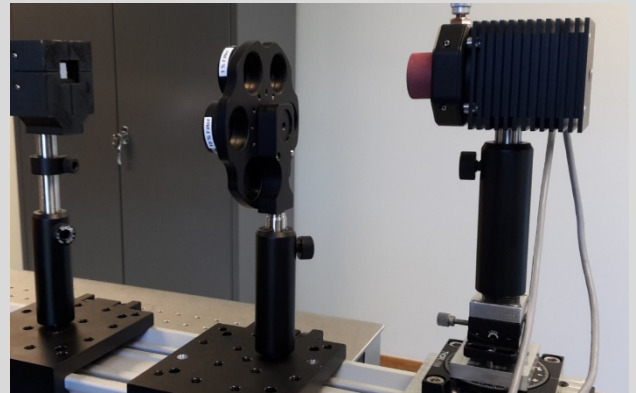
## **Equipment Setup**

The source is energized and mechanically aligned to direct energy towards the center of the Phoenix Broadband camera. The ND filter wheel is placed in line between the source and camera such that the optimum filter can be switched in place during the alignment process. *\*The ND filter value required is dependent upon the power and spot size of the laser. It may not be required for your application, speak to one of our knowledgeable engineers for help.*

The Phoenix Broadband with CameraLink provides two simultaneous video channels. Channel 1 is base CameraLink to the external framegrabber which can capture and analyze the 16 bit sensor data. At the same time, the operator can observe the spot real time on a NTSC monitor.

Display colors are a function of incident power and can be configured by the user via our Phoenix GUI which is included with every camera.

Software for the CameraLink to USB3 framegrabber or for the GigE framegrabber are included with your purchase.



Mid-IR laser spot imaged real time during alignment process