

Inexpensive Laser Beam Profilers

We stock 80x64 pixel-element cameras with plane windows whose sensitivity is limited only by the transmittance of the window for use as inexpensive laser beam profilers.

Standard windows are:

- CaF₂ UV to ~9 μm
- High Resistivity Float Zone Si -
- 1.2 μm to > 1000 μm



The 80x64 pixel array is 7.2x5.76 mm in size and the beam must land on it.

The lensless cameras are turnkey kits ready to go out of the box. Application sets include an infrared camera with and an Ethernet interface for easy computer integration, software, cables and table top tripod.



Windows software to capture the image is included. With that software images like this are easily captured as digital files.

Open Source ImageJ Open Beam Profiler plug-in is available at no cost.



Visit our webstore link IR Beam Profilers - 80x64d Digital to order.

Beam Profiling SOFTWARE for data analysis using the Heimann HTPA array with plane window

It is indeed possible to use the Open Source ImageJ Open Beam Profiler plug-in for beam analysis!

Here is a step by step manual:

- Download and install ImageJ, an open source image analysis tool. There is no "installation" needed, just unzip it onto your Hard Disk Drive.
 - Preferably don't unzip it to :C\Programs(x86), otherwise you'll need every time you start it to grant it administrative right. Just unzip it i.e. to C:\ImageJ\
 - Link for the download: https://imagej.nih.gov/ij/download.html
 - Download apache commons math: <u>http://commons.apache.org/proper/commons-</u> <u>math/download_math.cgi</u>

Apache Commons Math 3.6.1 (requires Java 1.5+)

Binaries

| commons-math3-3.6.1-bin.tar.gz | sha256 | pgp |
|--------------------------------|--------|-----|
| commons-math3-3.8.1-bin.zip | sha256 | pgp |

- Unzip it to the plugins folder of ImageJ, in above example C:\ImageJ\plugins
- Download the beam profiler from <u>Open Beam Profiler download | SourceForge.net</u>. Also unzip it to the plugins folder of ImageJ.
- Now start ImageJ. If you already have a picture, to analyze, good.
 - Otherwise start the Heimann GUI. Take a snapshot of the image you want to analyze (Button: "Copy Image to Clipboard").
 - Paste it to Paint or any other picture program on your PC.
 - Save it as bitmap or any other format supported by ImageJ. <u>We used a picture of a solder iron for that</u> <u>purpose.</u>
- Open the saved bitmap in ImageJ.
- Navigate to Plugins/Beamprofiler and start it.
- Now you can select the area to analyze and put some Gaussian fits to it. We didn't read the manual of the beam profiler, but at least it does ...something.



• Above is our soldering iron

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