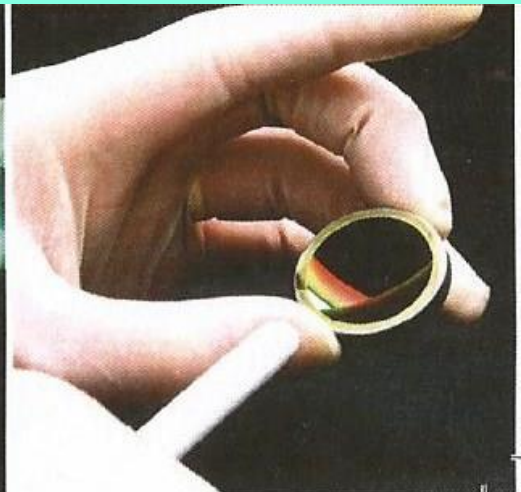
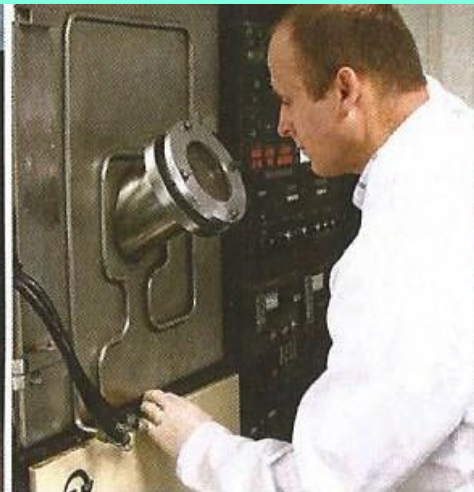


# On Line Meeting on Plastics Sorting .....An Optical Filters Perspective

**Ian Reilly –Vortex Optical Coatings Ltd.**



# On Line Meeting on Plastics Sorting .....An Optical Filters Perspective



- Recycling of plastics needs low cost sorting instruments
- Optical filters, a key component
- Photonics is the answer....IR Photonics !



# On Line Meeting on Plastics Sorting .....An Optical Filters Perspective

Infra Red Transmission

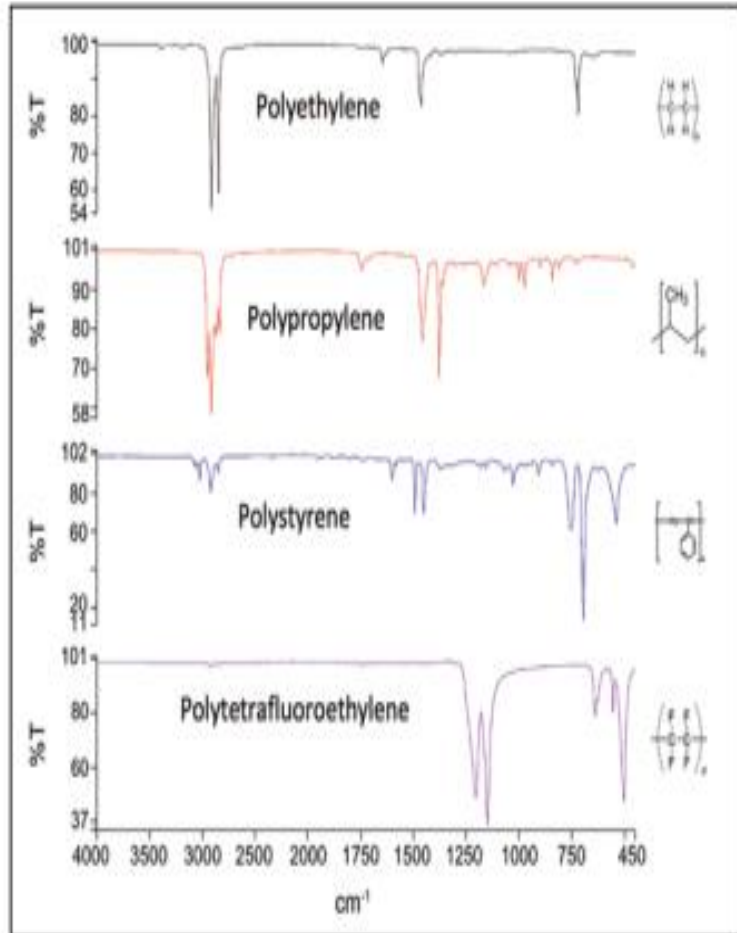
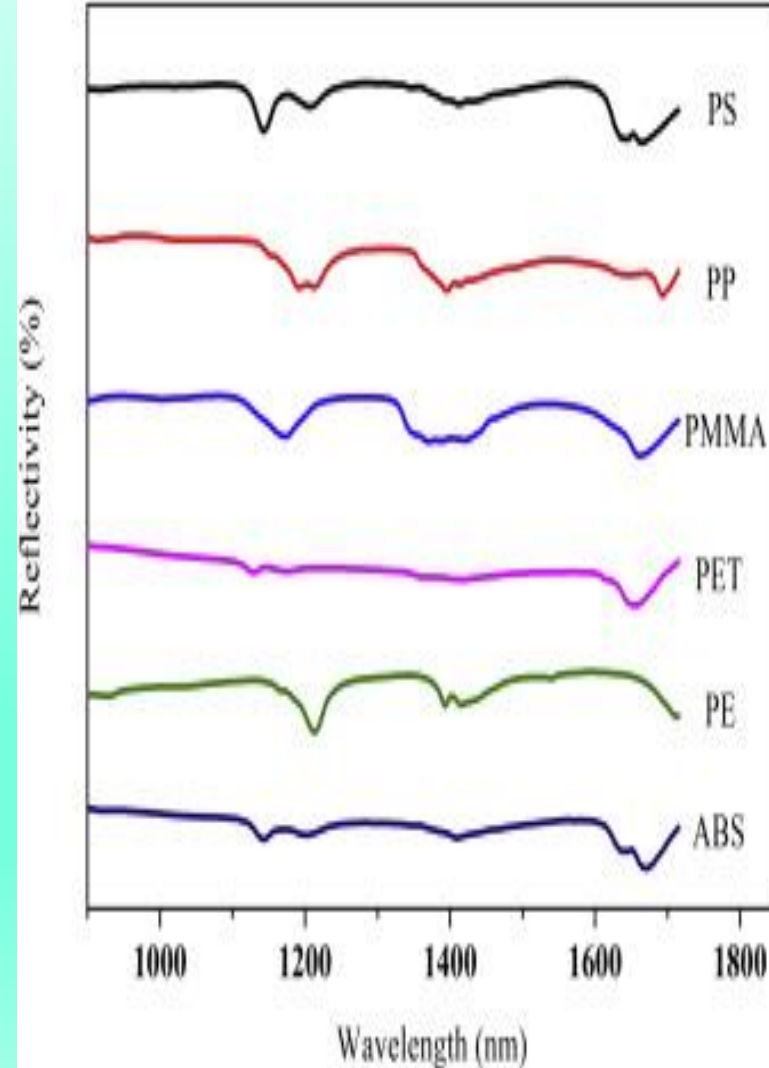


Figure 1. Mid-IR spectra of common polymers.

Infra Red Reflection



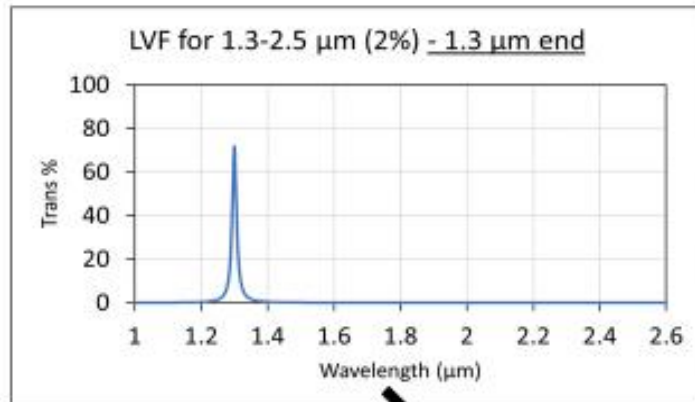
# On Line Meeting on Plastics Sorting .....An Optical Filters Perspective

## The IR Linear Variable Filter

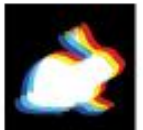
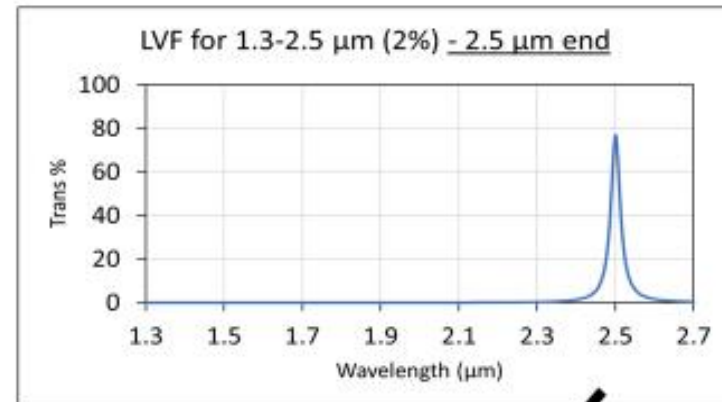


A graded, continuous narrow band coating that varies along the filter length.

### One End



### Opposite end performance

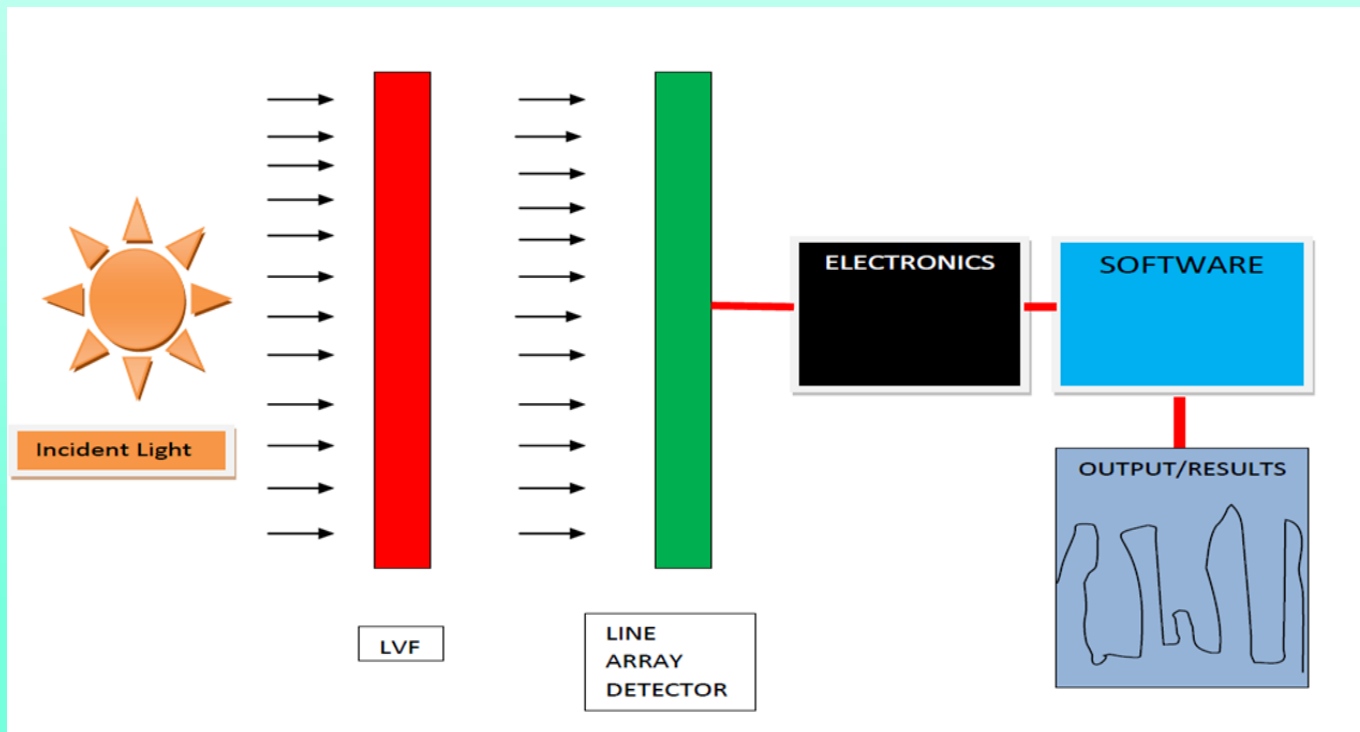


# On Line Meeting on Plastics Sorting .....An Optical Filters Perspective

## IR LVF based 'Plastic Sorting' Instrument

**Typical Set Up, used with a line array detector.**

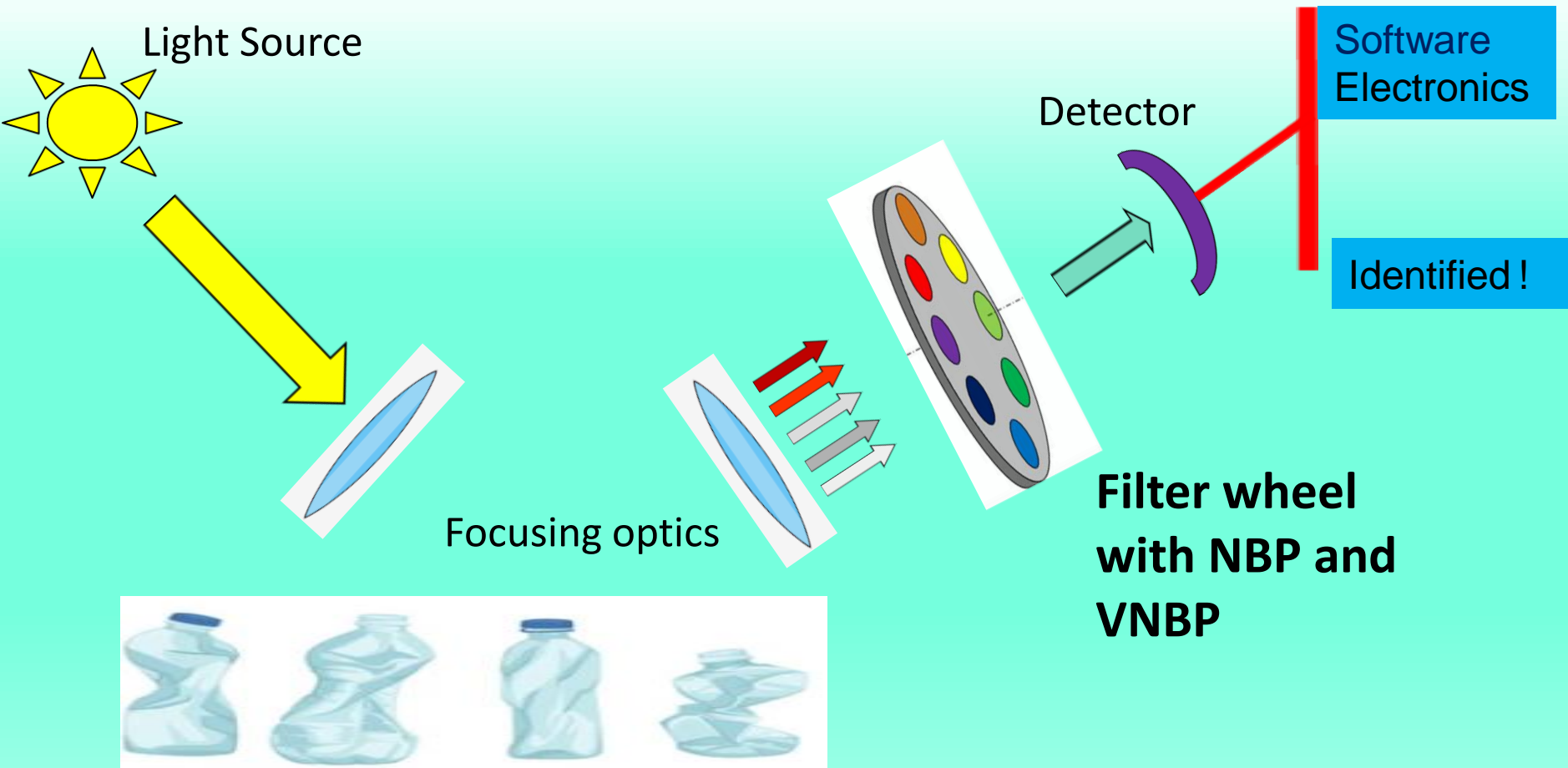
- **Essentially a mini spectrometer.**



- **This can be made much smaller than a grating based system**

# On Line Meeting on Plastics Sorting .....An Optical Filters Perspective

## Filter wheel Instrument with NBP and VNBP



# On Line Meeting on Plastics Sorting .....An Optical Filters Perspective



**What can we do..?**

**Infra Red Filters..**

**Linear Variable,**

**Narrow Bands**

**Very Narrow Band Filters**

**What can you do for us?**

- **Low cost detectors, components**
- **Collaborate**



# On Line Meeting on Plastics Sorting .....An Optical Filters Perspective



**Thank you for your attention!**

## Contact Details

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**See us at Vision In Oct !**

