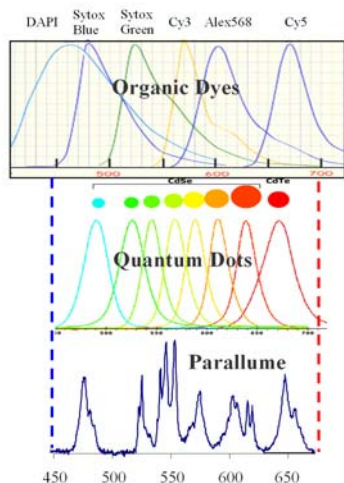


# Optically Encoded Parallume™ Beads for Multiplex Assays or Screening

Parallel Synthesis Technologies, Inc. offers optically encoded beads (Parallume™ Beads) and bead reader systems for labeling and differentiation of millions of biological samples. Readers range from an inexpensive CMOS-based reader capable of resolving ~500 optical bead codes to a hyperspectral imaging system capable of resolving millions of optical codes.

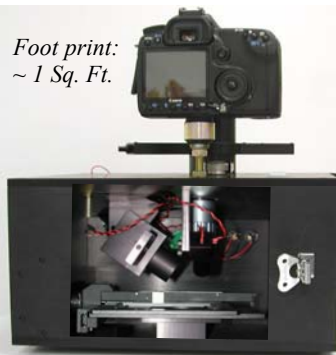
## Why Parallume for Optical Encoding?



Parallume's narrow and resolvable emission bands are produced by a *single* wavelength excitation source.

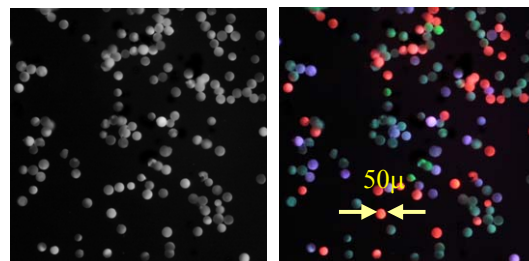
## Multiplex Assay Reader System (MARS)

Foot print:  
~ 1 Sq. Ft.



Parallel's portable and inexpensive MARS is based on a commercially available \$600 CMOS camera. It can read the Parallume optical code and biomolecule's reporter attached to the Parallume encoded beads (e.g. Cy3/Cy5).

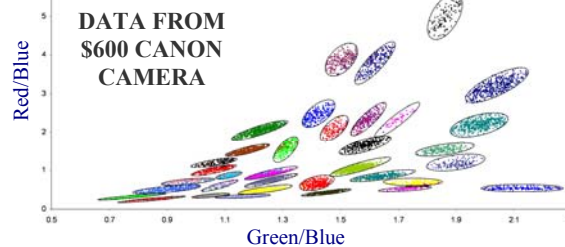
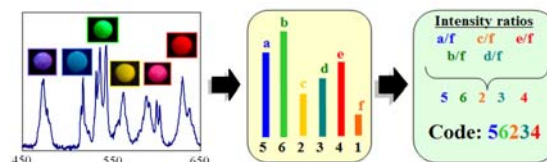
## Parallume™ Encoded Beads



Available bead sizes: 10µm – 100µm

## Advantages over Other Bead Array Systems:

- Rare-earth based Parallume optical codes are generated from color ratios
- Parallume does not photobleach
- Emission spectra are discrete and easily resolved from biological reporter molecules
- Parallume is thermally stable and non toxic
- Parallume's narrow emission bands are produced by a *single* wavelength excitation source
- Many reader designs available to match the multiplex level
- Beads with different sizes and surface chemistries are available



Rare-earth based Parallume optical codes are generated from color ratios.

**Beads with different sizes and surface chemistries are available**

For more information or to purchase, please contact us at  
(+01) 408.749.8318; email [info@parallel-synthesis.com](mailto:info@parallel-synthesis.com)

**OEM INQUIRIES WELCOME**



Parallel Synthesis Technologies, Inc.  
3054 Lawrence Expressway, Santa Clara, CA 95051 USA  
Phone: (+01) 408.749.8318, [www.parallel-synthesis.com](http://www.parallel-synthesis.com)

