BODKIN DESIGN & ENGINEERING

# MWIR-60

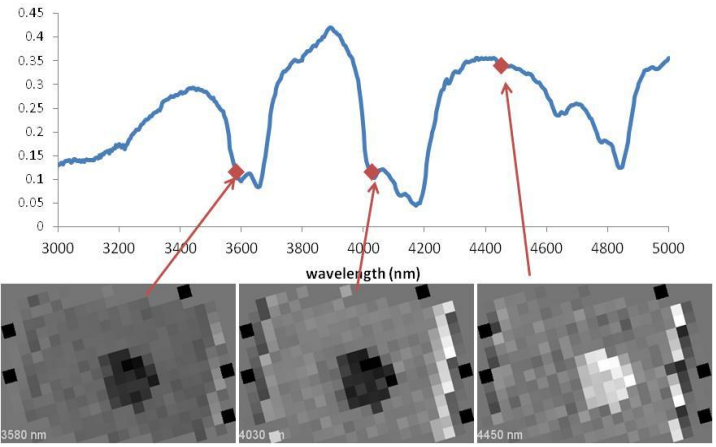
## Video Rate Hyperspectral Imager

***Snap-Shot Mode Imaging Spectrometer Produces Data Cubes at Video Rates***

- **No Moving Parts**
- **Unique Patented Technology**
- **Ideal for moving platforms and transient events**

## PRELIMINARY SPECIFICATIONS

| | |
|---|---|
| Data Cube | 17x 13 spatial x 60 spectral |
| Data Rate | 60 cubes/sec |
| Spectral Range | 3 – 5 µm |
| Spectral Resolution | 34 nm/bin (avg) |
| Field(s) of View | 6.7° x 5.4° & 4.8° x 3.6° |
| Dimensions | 3.5” W x 5” H x 20” L |
| Weight | 10 lbs |
| Power | 14 Watts |




Spectral Identification of Potassium Nitrate on Test Surface

## Hyperspectral Imaging

*Combining Imaging with Spectral Analysis*

A conventional color image has three colors per pixel, but a hyperspectral image can have ***hundreds*****.** Because every material has a characteristic spectral signature, this information can be used to identify an object by analyzing its *spectra*.

Typical hyperspectral imagers scan a scene over time to build a data-cube. This build time makes these technologies unsuitable for high speed applications.

BD&E’s hyperspectral imaging systems use our patented *HyperPixel Array*™ (HPA™) technology to combine spectral data with spatial information to create three-dimensional *hyperspectral data-cubes at video rates.* Two dimensions describe the position of a point in space and the third dimension is the spectral signature at that point.

Using no moving parts, this proprietary *HyperPixel Array*™ technology creates a data-cube in one ***instantaneous*** frame, eliminating motion artifacts.

## Applications

- **Standoff Detection**
- **Material Identification**
- **Chemical Defense**
- **Environmental Monitoring**
- **Geologic Mapping**
- **Biological Research**
- **Medical Imaging**
- **Automatic Target Recognition**





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