

"with all this innovation coming from Bodkin Design, it makes sense to consider them for your next engineering challenge!"

AUTOMATION
MACHINE VISION
SENSOR SYSTEMS
CONTROL SYSTEMS
INDUSTRIAL EQUIPMENT
BIOMEDICAL ENGINEERING
FIBER OPTIC COMPONENTS
PNEUMATICS / HYDRAULICS
ROBOTICS / MACHINE DESIGN
LASERS / IMAGING / ILLUMINATION
AUTOCAD / ZEMAX EE / RAYCAD
OPTICAL ASSEMBLY AND TEST
MACHINED COMPONENTS
ELECTRONIC ASSEMBLY

**FRESH IDEAS AND CUTTING
EDGE TECHNOLOGY
TO SOLVE YOUR
TOUGHEST PROBLEMS**

Bodkin Design & Engineering, LLC
Headquartered in Wellesley Massachusetts provides product development, innovation, and engineering services to the industrial, commercial, military and research communities. Founded in 1988, the firm has developed numerous patented devices, and overseen the successful introduction of a diverse spectrum of products, from miniature infrared cameras, to dental imagers, to spectroscopic instruments for drug discovery. Visit our website at www.bodkindesign.com

PAST PROJECTS

IMAGING

OEM Infrared Cameras
Fire Helmet Mounted IR Camera
Miniature IR UAV Camera
IR Land Mine Detection
Miniature UAV Surveillance Camera
Dental Imager for Telemedicine

INSTRUMENTATION

Scanning Microfluorimeter
Non-invasive Blood Glucose Meter
IR Exhaust Gas Analyzer
High Speed Intensified CCD Camera
Microthermopile Linear Array
Hyperspectral Imager
UVA/UVB Integrating Radiometer
CCD Camera Heliograph
Imaging FT-IR Spectrograph
Liquid Crystal Tunable Etalon
Diode Laser Beam Shaper
Laser Range Finder
Laser Beam Scanner
Two Color IR Gas Detector
High Temperature Liquid Crystal Display
Radar Railroad Speed Controller

SPECIAL OPTICS

DWDM Optical Multiplexer
Diffractive Optics
Diode Laser Beam Shaper
Miniature Grating Spectrograph
Compound Parabolic Concentrator
Diffractive LCD Illuminator
Planar Optics



**FULL SERVICE
PRODUCT DEVELOPMENT**

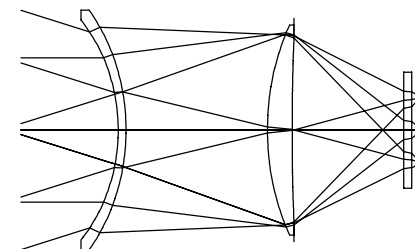
**DESIGN AND ENGINEERING
OPTICAL RAY-TRACE
ELECTRICAL
MECHANICAL**

**MODELING
AND SIMULATION**

**PROTOTYPE AND
PRODUCTION**

**PATENTS AND IP
PROTECTION**

**MARKET STRATEGY
PLANNING AND PROPOSALS**

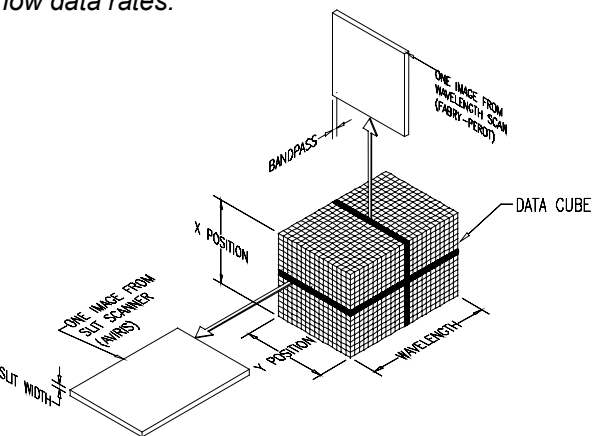


***SPECIALIZING IN
ELECTRO-OPTIC DEVICES***

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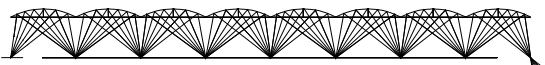
Staring Hyperspectral Imager

The Air Force seeks innovative, hyperspectral imaging techniques for space-based remote sensing and standoff detection. Existing hyperspectral approaches use spectrally or spatially scanned sensor arrays, resulting in low data rates.



In response, Bodkin Design is developing the **Staring Hyperpixel Array®**. This device captures the entire data cube instantly, without scanning. Now rapidly evolving events can be recorded both spatially and spectrally.

- Instantaneous Data-Cube
- No Scanning
- Improved Signal-to-Noise Ratio
- High Spectral Resolution
- All Bands - VNIR, MWIR, LWIR



Optical MEM Relay

“These projects are a sample of the innovative solutions we can bring to your toughest problems.”

Optical MEMs

PROBLEM

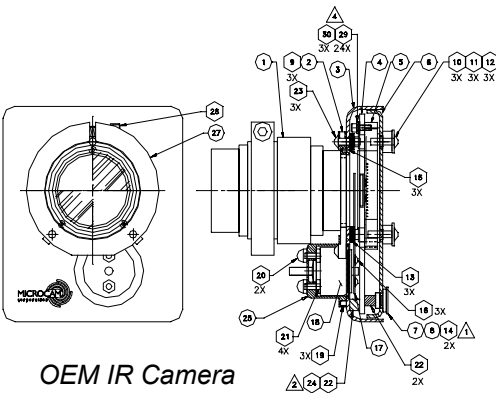
Client sought ray-trace confirmation of the function of their micro-optic switching matrix, prior to prototype fabrication.

PROCESS

During the initial review BD&E uncovered critical design errors, and rapidly identified the source of the problem.

SOLUTION

Within weeks BD&E had proposed, modeled, and demonstrated a new innovation that put the client's project back on track. In addition to completing the ray-traces, BD&E worked with the fabricator to assure product integrity and developed qualification tests. BD&E named as co-inventor in the patent filings.



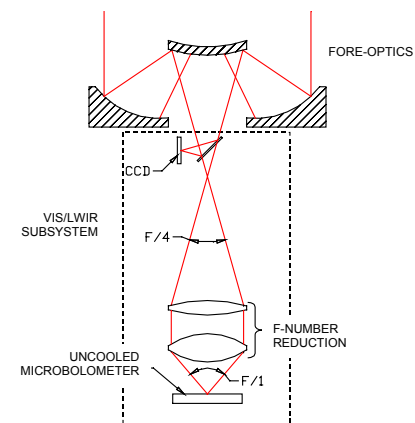
OEM IR Camera

Low Cost

Multi Band Imager

The Navy requires a low-cost Visible and IR imager to improve the reliability of automatic target recognition systems used for missile guidance.

Bodkin Design proposed a radically new approach that uses a single common fore-optic and a low cost uncooled infrared array. The modular design allows for the exchange of the fore-optic, and the detector arrays. This permits a single camera platform to be configured to provide LWIR, Visible, NIR, MWIR as well as LADAR and Hyperspectral imaging through a single aperture with a variable field-of-view.



“What can we do for you?”



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