MATIMOP
Israeli Industry Center for R&D

RAFAEL- Custom Optics Group

Address:

P.O.Box 2250
Haifa 31021 Israel

Company phone: +972 (0)4- 9906084
Company Fax: +972 (0)4- 9906936
Company Email zvini@rafael.co.il

Website www.rafael.co.il

Year established: 1948

Contact person: Mr. Zvi Nizani,

Type: R&D
Ownership: Governmental

Core Business:

Optical systems design and development

Total number of employees: 14
Scientists and engineers: 10

Overview:

- From definition of system requirements through state-of-the-art optical design, experimental and laboratory based prototype development ,to production.
- complete physical analysis of compound optomechanical systems.
  Straylight suppression using dedicated software.
- Specify design and carry out all tests, including in house design of special testing equipment when necessary.
- Rafael's special design and engineering capabilities enable the group to meet Specifications for a wide range of products.

Expertise:

- Multispectral ,visible and infrared ,laser optical systems.
- Variable field of view optics.
- Medical thermal imaging.
- Starring array optics: high coldshield efficiency.
- Alignment of compound optical systems.
- Stray light analysis.
- Wavefront correction elements.
- Development of optical test equipment :interferometers, MTF measurement system,
- collimators.
- Integration of optomechanical systems

MATIMOP
Israeli Industry Center for R&D

- **State-of-the art-optical design tools**
  - CODEV, ZEMAX and OSLO Software for optical design and analysis.
  - ASAP Software for straylight calculation and nonimaging optics.
  - Home developed subroutine to design and calculate diffractive optics , CGH .
- **State of the art optical testing facilities**
  - Quality and performance of optical raw materials, components and final integrated systems undergo stringent testing to meet relevant quality standards.
  - Measurements performed in our laboratory encompass optical system LSF, MTF ,MRT, NET, reflectance ,transmittance, straylight, field curvature,distortion
  - Surface properties of spherical ,aspherical and diffractive.
- **Main tests setups comprise**:
  - Visible and NIR interferometry
  - Holographic interferometry
  - 3.4 and 10.6 micron interferometry
  - Visible /IR MTF
  - MRT
  - MRC
  - Visible /IR transmittance /reflectance
  - Quality and boresight alignment