

Update
2015

Infrared Imaging Photodetectors and Systems: Technology and Market Trends

Infrared Photodetectors are critical components of most Military Night Vision systems.

Will third generation technologies pave the way to new applications in Defense as well as in Civil Markets ?

IR PHOTODETECTORS MANUFACTURERS ARE FACING NEW CHALLENGES ...

REPORT OUTLINE

- Title: *Infrared Imaging Photodetectors and Systems: Technology and Market Trends*
- Market & Technology Report
- PDF
- 200+ slides
- € 3 990 - Multi users license

KEY FEATURES OF THE REPORT

- Segmentation of the market of IR imaging Photodetectors
- Market forecast by applications until 2020
- Market shares of main IR imaging Photodetectors manufacturers
- Technology trends and future challenges
- Value chain from IR imaging components to systems

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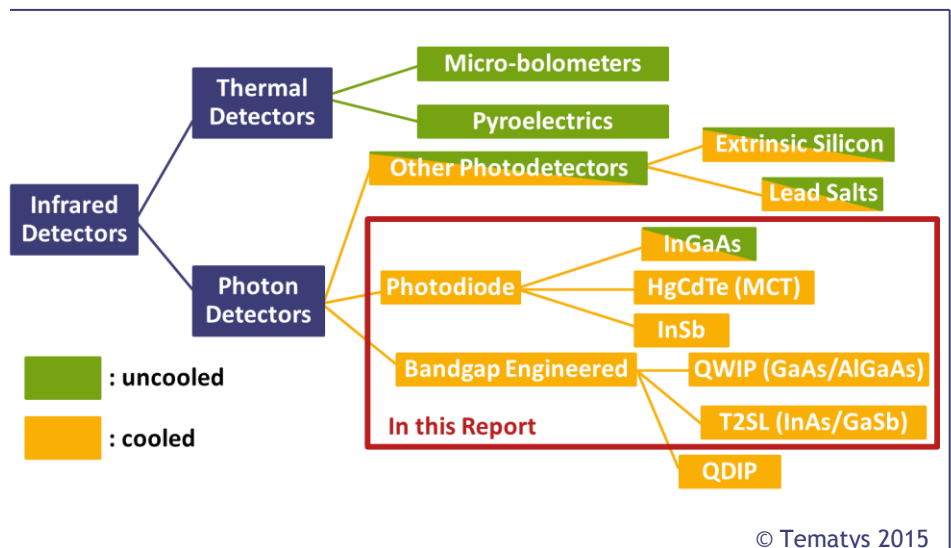
This report covers technologies and applications of Infrared Imaging Photodetectors, cameras and related systems.

For more than 50 years, Infrared Photodetectors have been at the heart of critical defense and security night vision systems. They have also been used in commercial products (such as cameras for thermography) as well as in military and civil satellites.

Most IR Photodetectors are cooled and require cryogenic devices to achieve operating temperature.

IR Photodetectors manufacturers have been facing new Challenges in the last years:

- Continuing decline of military spending in many countries due to budget constraints (especially in US and Europe).
- Market entry of uncooled thermal detectors such as microbolometers, which are competitive for low/medium performance applications in LWIR.
- Unfulfilled needs for night vision equipment in terms of Size, Weight, and Power (SWaP).



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... BUT ADDRESSING THESE CHALLENGES ALLOWS THEM TO REACH NEW MARKET OPPORTUNITIES

These challenges have caused manufacturers of IR Photodetectors and systems as well as their R&D partners to intensify efforts:

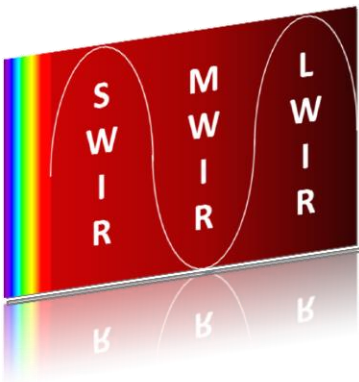
- To improve products performances while reducing cost and SWaP,

- To provide advanced and added functionalities such as multiband, multicolor, active imaging, integrated optics ...

- To adapt their business models to reach new IR imaging applications and explore new markets.

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Photodetectors are still the preferred components for IR military systems due to limitations of thermal detectors in terms of sensibility, frame rate and wavelengths. Infrared Photodetectors manufacturers also managed to respond to the endless need for greater mission capabilities in the area of Night Vision.

Infrared Photodetectors are reaching new Opportunities in Defense but also in commercial and industrial markets (see figure below). Along with market forecasts, this report details current and future trends in IR imaging Photodetectors and Systems.

AUTHOR



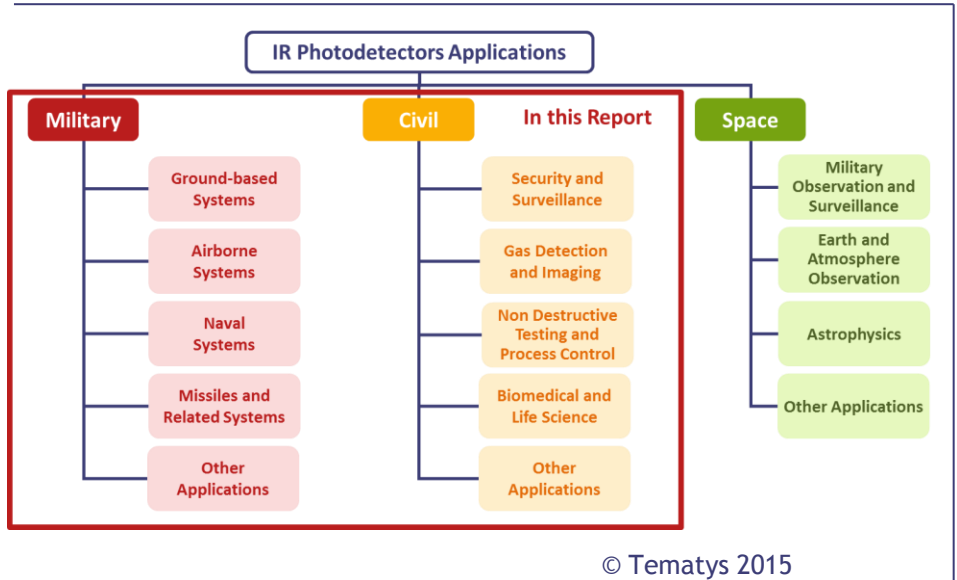
Thierry Robin has run more than 50 projects in Photonics with major players in diverse sectors: defense and security, medical optics, material science, industry... Cofounder of TEMATYS, he is an expert in optical devices, components and systems.

Thierry is graduated from the Ecole Polytechnique, Paris, France and received his PhD from the Physics Laboratory of Ecole Polytechnique.

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3. IR Cameras and Systems Applications and Market Analysis
4. Infrared Photodetectors FPA Market Analysis
5. Infrared Photodetectors FPA Technologies
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7. Appendix : IR Photodetectors Companies

COMPANIES MENTIONED IN THE REPORT

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Infrared Imaging Photodetectors and Systems: Technology and Market Trends

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