Night Vision Technology

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Introduction

- **Thermal imaging** –
  Capturing:
  Upper portion of the infrared light spectrum.

- **Image enhancement** –
  Amplification of:
  Small amounts of light and lower portion of the infrared light spectrum.
Light

Infrared | Visible light | Ultraviolet

Electromagnetic Spectrum
Atom
Thermal Imaging
Working
Types Of Thermal Imaging Devices

- **Un-cooled**:  
  - Most common type.  
  - Operates at room temperature.  
  - Quiet, activates immediately.

- **Cooled**:  
  - Elements cooled to below 32 F (zero C) - Incredible resolution.  
  - Good sensitivity.
Day light
Night
Thermal Image

Sees in total darkness.
Image Enhancement Type
Working
Image Enhancement type
Generations

- Generation 0
- Generation 1
- Generation 2
- Generation 3
- Generation 4
Equipment

- Scopes
- Goggles
- Cameras
Applications

- Military
- Law enforcement
- Hunting
- Wildlife observation
- Surveillance
- Security
- Navigation
- Hidden-object detection
- Entertainment
Thank You

Any Questions?