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Difference Between Night vision and Infrared

• Categorized under Industrial, Technology | Difference Between Night vision and Infrared

Night vision vs Infrared

In applications where there is no distinction between night and day and lives are at risk, like in the military, it is important to establish visibility without being visible yourself. For this night vision goggles were created. Night vision goggles work by collecting what little amount of light is available and amplifying it so that it can be discerned by the naked eye. Infrared is a new technology employed with



<u>night vision goggles</u>. Rather than employing visible light and amplifying them, infrared goggles rely on infrared waves that are emitted by anything that emits heat. The difference in temperatures between objects provides the contrast to identify between different objects.

Because night vision goggles amplifies available light that bounces off of objects, no light means no amplified image. Since infrared goggles do not rely on ambient light, they do not suffer from the same problem. Objects emit their own infrared light with amounts varying according to how much

heat that body has. Infrared goggles can be used with even in total darkness.

The biggest advantage between the usual night vision and infrared goggles is that the latter is much better at spotting at objects that are partially or totally hidden. A person hidden inside a cardboard box or behind some bushes can be hard to see with the naked eye. With infrared, their heat signature would go through the covering material and be clearly visible to the infrared goggles. How deep the material is depends on how sensitive the unit is.

Just as with any weapon, there is always a countermeasure. To counteract an image intensification night vision goggles, a bright source of light can overload the device; momentarily blinding the person who is wearing the goggles. The countermeasure for infrared, although not as dramatic, is still as effective. Increasing the heat in an area means that there is no temperature difference for the device to detect.

Summary:

- 1. Night vision detects visible light while infrared detects radiated heat
- Night vision needs a little amount of light while infrared doesn't
- 3. Infrared is better for camouflaged targets than night vision
- 4. Night vision can be counteracted by bright light while infracted can counteracted by cooling

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