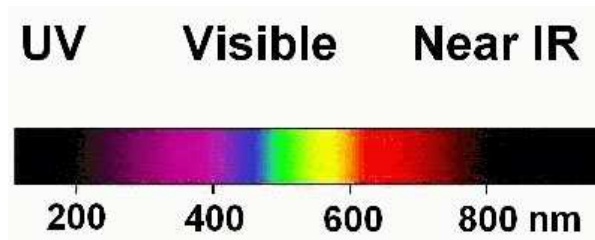


Electromagnetic Spectrum

Light is a form of electromagnetic energy propagating in different wave length. Only a small portion of light is visible to human beings since the retina of eye is sensitive only to a narrow part of the light spectrum. Human beings can detect light rays in the **visible spectrum** ranging from **400 to 800 nanometers**. Human eye is most sensitive to **550 nm** wavelength of yellow green part of the spectrum since green colour is most abundant one in nature.



A light ray below **400 nm** is the **Ultraviolet** and above **800 nm** is the **Infrared**. The amount of energy in the light is related to the wavelength of the individual light rays. Shorter wavelength light has high energy. For example in the visible region, **Violet** has very high energy while **Red** has least energy.



Infrared spectrum

Infrared light can be divided into three types

1. Near Infrared or NIR

This is close to the visible light and its wavelength range between 0.7 to 1.3 microns

2. Mid Infrared or MIR

The wavelength of MIR range from 1.3 to 3 microns. MIR is used in remote control applications.

3. Far Infrared or FIR

This occupies most of the Infrared region and is responsible for heat. Its wavelength range from 3 to 30 microns. Objects emit **Far infrared rays** and the emission is at the Atomic level. Far Infrared light is also called Thermal Infrared since it has high temperature.



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