

The electromagnetic spectrum

Visible and invisible light are electromagnetic radiation, or the e/m spectrum.

Visible light, which human eyes can see, makes up only a tiny portion of the possible kinds of e/m radiation, the difference between which is their wavelength:

<u>Region of the spectrum</u>	<u>Wavelength (λ)</u>	<u>Typical Sources</u>
Gamma rays	Short!	Nuclear reactions
X-rays	10^{-10} m	Inner-electron transitions
Ultraviolet radiation	0.01 – 0.4 microns (1 micron = 10^{-6} m)	The hottest stars
Visible light	0.4 – 0.78 microns	Outer-electron transitions, and the Sun
Infrared Radiation	0.78-100 microns	Room-temperature objects, including human bodies and planets
Microwaves	millimeters	
Radio waves	centimeters & longer	The very cold gas between the stars