

Physics

Electromagnetic Spectrum

The Electromagnetic Spectrum is the entire range of wavelengths or frequencies of electromagnetic radiation. There are 7 main groups on the spectrum. All groups travel at the same speed.

Section	Hz	Source	Detector	2 common uses
Radio	10^4	Electronic Circuit	Aerial	Radio and TV
Microwave	10^8	Electronic Circuit	Aerial	Telephony and Heating up food and water
Infrared	10^{12}	Sun	Heat sensitive paper	Remote control and the detector in security lighting
Visible	10^{15}	Electronic Devices	Eye	Sight and Photography
Ultraviolet	10^{16}	Sun	causes glowing in some objects	Suntan lamps and production of vitamin D
X-ray	10^{18}	Very fast electrons hitting a metal target	Photographic film	Detect hidden devices and broken or damaged bones
Gamma Ray	10^{20}	Radio-active nuclei decaying	Gm tube	Kill cancerous cells and the sterilisation of surgical equipment