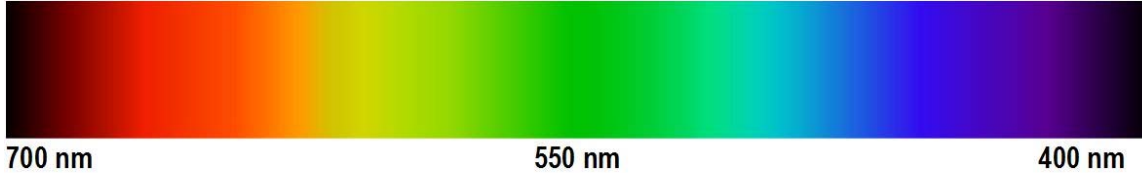




What does “wavelength” mean?

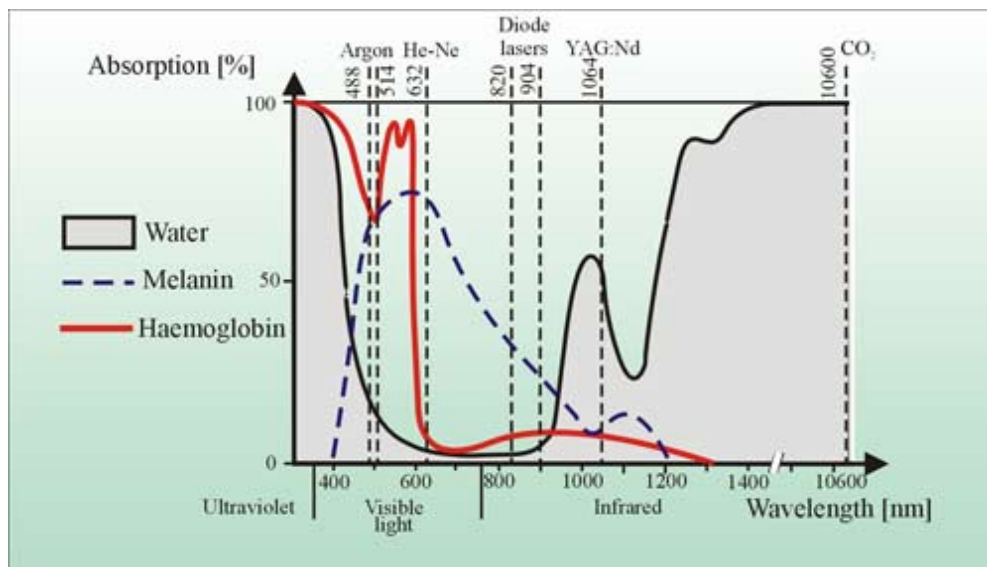


Wavelength is the distance between equivalent points on adjacent light waves and is most commonly measured in nanometers (nm). Wavelength is the physical property that gives light its characteristic color. Ultraviolet light would be off the scale to the right, and infrared is off the scale to the left.

Is there a ‘magical’ wavelength for therapeutic lasers?

No. Despite the marketing claims of some laser manufacturers, there is not a magical wavelength of laser light. Laser therapy studies have been conducted using a variety of wavelengths. What matters? The First Law of Photobiomodulation states that photons must be absorbed in order to have an effect. Low power lasers are simply not capable of delivering enough photons to deeper target tissues.

Which wavelengths penetrate the deepest?



At lower wavelengths, photons of laser light are absorbed by hemoglobin and melanin. Water in the tissues absorbs laser of higher wavelengths. There is an ‘optical window’ between 790nm and 940nm where absorption from the three components is lowest, and laser photons are able to penetrate deepest.

What wavelengths does the K-Laser use?

The K-Laser uses dual treatment beams of 790 and 970 nanometers. The 790nm treatment beam penetrates the deepest, providing powerful biostimulation to the deepest tissues. Analgesic effects are delivered by the 980 nm treatment beam. No other Class IV Therapy laser delivers dual treatment beams like the K-Laser.