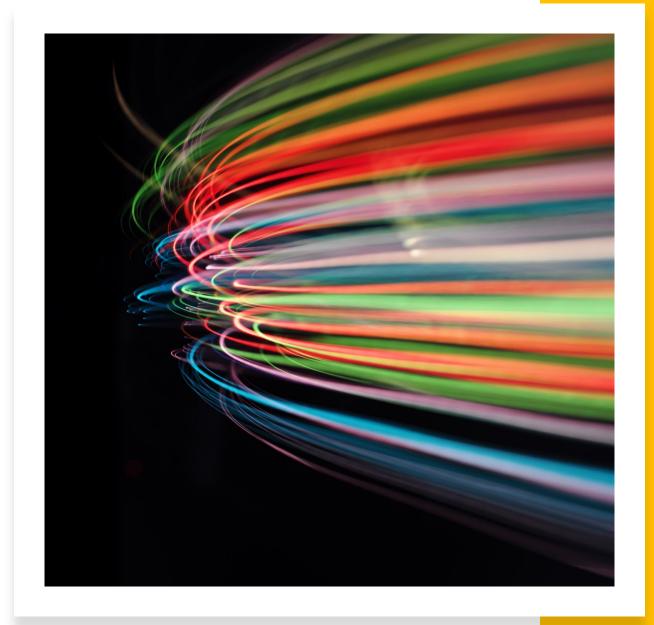
Laser Basics

LIGHT

Photons that travel in a wave and are measured in the electromagnetic spectrum

LASER

The amplification of Light by Stimulated Emission of Radiation. As a device, a laser stimulates atoms or molecules to emit light at specific wavelengths and amplifies that light.



LASER Light Amplification by Stimulated Emission of Radiation



A DEVICE THAT STIMULATES
ATOMS OR MOLECULES TO
EMIT LIGHT AT SPECIFIC
WAVELENGTHS AND
INCREASES (AMPLIFIES) THAT
LIGHT



IT TYPICALLY PRODUCES A
VERY NARROW BEAM OF
RADIATION



EMISSION GENERALLY COVERS AN EXTREMELY LIMITED RANGE OF VISIBLE, INFRARED, OR ULTRAVIOLET WAVELENGTHS



MANY DIFFEREN TYPES OF LASERS HAVE BEEN DEVELOPED, WITH HIGHLY VARIED CHARACTERISTICS



1916 THEORY BY ALBERT EINSTEIN

Multiwave Locked System

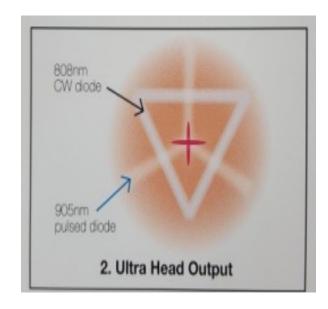
Patented delivery system uses 2 specific wavelengths, simultaneously and synchronized: 808nm (for inflammation and long-lasting effect) and 905nm (analgesic and is fast acting)

Together they are very effective. Both are infrared; they are invisible to the naked eye but can be seen with a camera, or with an infrared sensor card or device

Cleared by FDA in 2002 for animal use; 2009 for human use







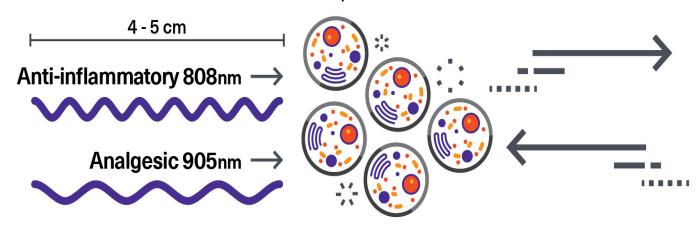
MLS Wavelengths

905nm-pain

- Fast acting analgesia and accelerated healing
- Increase the activity of mitochondria respiratory chain complexes I, II, III, IV and succinate dehydrogenase
- Induces an increase in ATP synthesis that aids in healing process

808nm-inflammation

- Decreased edema and inflammation
- Affects the second absorption peak of cytochrome oxidase, which activates mitochondria to increase ATP production



MLS vs Traditional LLLT

Robotic

Guaranteed even laser delivery

Faster Healing due to dual wavelength and power

75W peak power

Large influence area with 3 diodes

Orthopedic specific interface

Deeper structure treatment (depth of penetration)

Collimated laser: little scatter or reflection

Homogenous delivery

Class IV

6-10 treatments at 10-12 minutes

Do not generate heat

- Low level lasers
- Reduce pain and/or inflammation

Varying wavelengths depending on device- not simultaneous emission

Not robotic

Slower healing

Made for variety of markets

Varying peak power

Small emission if handheld only

Varying delivery

Sometimes longer treatment times and more treatment visit

Superficial treatment

Cause reflection

Large divergence angle

Class IIIA or IIIB

12-20 treatments at 15-20 minutes

MLS M8 Laser Therapy

Traditional LLLT