# REINVENTING

LASER THERAPY

BETTER SCIENCE.
BETTER ENGINEERING.
BETTER OUTCOMES.

**ASPEN** LASER

# APEX LASER SERIFS

### DEFY ORDINARY WITH NEW QUAD-WAVE TECHNOLOGY

spen Laser Systems continues to scale even greater heights with the introduction of its latest technological game changer, the **Apex Laser Series**. Equipped with exciting new innovations and jaw-dropping advancements, the Apex Laser Series is redefining photobiomodulation therapy. The result of years of extensive research and development, the Apex Series offers unparalleled therapeutic laser performance. With its built-in safety features and custom mobility options, the Apex Series provides health care professionals with consistent, significantly enhanced clinical results never before seen in other laser systems.

AS AN INDUSTRY LEADER FOR THE PAST 30 YEARS, ASPEN LASER SYSTEMS REMAINS ON THE CUTTING EDGE OF PHOTOMEDICINE, PAVING THE WAY TO BETTER SCIENCE, IMPROVED CLINICAL OUTCOMES. AND HEALTHIER LIVES.



# INSIDE THE APEX QUAD-WAVE LASER SYSTEM

The world's first and only laser device of its kind, the **Apex Quad-Wave Laser System** is changing the way health care professionals are treating pain and injuries. Uniquely featuring four wavelengths of 635nm, 810nm, 980nm and 1064nm, the Apex Quad-Wave incorporates high power with each wavelength for a total combined output of 47 watts.

#### 525nm Wavelength (Aiming Beam)

A 525nm green wavelength at 3mW power is used as the aiming beam. This is in contrast to many therapy lasers using a 635nm red wavelength at 3mW as the aiming beam that provides no therapeutic benefits due to the low power.

#### 635nm Wavelength (Red)

The 635nm wavelength is absorbed primarily by melanin near the surface of the skin. At higher power levels, this enhances collagen production of the skin and generates a therapeutic response for superficial treatments including scar tissue and burns. This helps prepare the treatment area for improved interaction with the near infrared (NIR) wavelengths.

#### 810nm Wavelength (NIR)

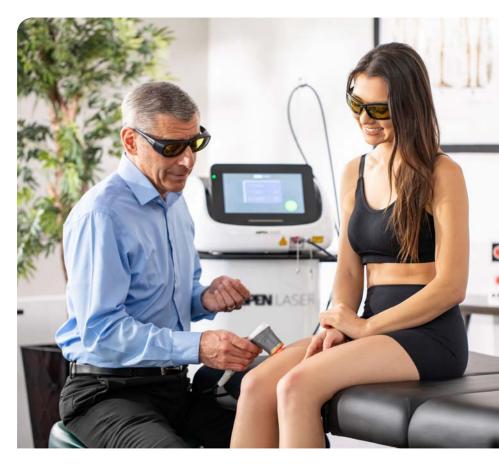
The 810nm wavelength allows for rapid activation of hemoglobin oxygenation, the process by which energetic supply is transferred to muscles and tendons, facilitating regeneration. Clinical studies indicate that the 810nm wavelength influences mitochondrial cytochrome c oxidase by increasing cytosolic calcium and decreasing mitochondrial calcium.

#### 980nm Wavelength (NIR)

The 980nm wavelength optimizes the action on thermo and mechanical receptors for a rapid analgesic effect which results in improved pain control, circulation and muscle relaxation. Clincal studies indicate that the 980nm wavelength primarily affects temperature-gated calcium ion channels.

#### 1064nm Wavelength (NIR)

The 1064nm wavelength is a longer wavelength that provides deeper tissue penetration. Clinical studies indicate that it has minimal dispersion within biological tissues due to its decreased melanin absorption. The result is deep activation of metabolic processes vital for all cellular activities.





#### **Wavelength Multiplexer Technology**

Wavelength Multiplexer Technology incorporates multiple wavelengths operating in various configurations, emitted from a single output. This provides better penetration — from shallow to deep — ensuring the level of tissue saturation required for therapeutic treatments. Additional benefits of Wavelength Multiplexer Technology include:

- The broadest range of wavelengths providing different mechanisms of action
- Direct selection of wavelengths from one to four different wavelengths
- · Adjustable power levels per wavelength

MORE WAVELENGTHS = MORE POWER

MORE MODES = MORE PROTOCOLS

MORE INNOVATION = MORE RESULTS!

## **ASPEN** LASER

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#### SmartMode Controls

Featuring sophisticated laser operating modes, the Apex System's SmartMode Controls offer continuous wave (CW) and a wide range of pulsing settings that provide unprecedented precision in achieving desired clinical outcomes, adjusted to suit each individual patient.

- · Fast treatments with continuous wave
- Broad range hertz (frequency settings) for pulsing treatments
- Patient Response Driven Protocols
- Reduce conditioning response utilizing variations and adjustments with each treatment

#### **PowerDose Diodes**

At the core of the Apex Quad-Wave System are its PowerDose Diodes, which provide the highest standard "average power" output. In contrast to laser devices that only achieve these levels at "peak power," the Apex System's average power has proven to be a key for generating the best clinical outcomes. These innovative PowerDose Diodes feature:

- · Unprecedented power per wavelength
- Durable, solid-state design for long-lasting operating life
- Exceptional craftsmanship German manufacturing that represents the highest international standard of quality

#### TECHNICAL HIGHLIGHTS

LASER TYPE	•	GaAlAs DIODE LASER
WAVELENGTH, LASER	•	635nm, 810nm, 980nm, 1064nm
MAXIMUM POWER	•	47 WATTS
CONTROL MODE	•	COLOR TOUCH SCREEN
VOLTAGE/CURRENT	•	110/220 VAC, 5A, 50/60Hz
DIMENSIONS	•	inches: 16W x 19.5L x 8H
WEIGHT	•	32 LBS (14.5 KG)
For detailed technical specifications, please visit		

AspenLasers.com