



**CUBE** High Power Laser  
A non-opioid treatment for pain relief

# chattanooga® CUBE High Power Laser

## *A non-opioid treatment for pain relief.*

With the current worsening opioid epidemic, the importance of non-opioid treatment alternatives to help patients with acute and chronic pain has become increasingly important.

One such non-opioid alternative is laser therapy, a clinically-proven adjacent therapy modality widely used in clinical practice for managing pain and inflammation.

Chattanooga has been offering a range of low level lasers for more than 20 years, and now completes the portfolio with a High Power Laser series: the Chattanooga CUBE.



### **CUBE 3**

3 wavelengths, 15 W ISP-12W-CW  
Standard lens  
2 years warranty



### **CUBE 4**

4 wavelengths, 20 W ISP-15W-CW  
Standard lens  
2 years warranty



### **CUBE 4 PLUS**

4 wavelengths, 20 W ISP-15W-CW  
Dynamic lens  
5 years warranty

## Intense Super Pulse

CUBE's ISP mode promotes deep tissue penetration without added heat. This exclusive technology means that you can use the same energy but at maximum power without pulling strength away from the laser.

## Indications

- Temporary increase in local blood circulation
- Temporary relief of minor muscle and joint aches, pains and stiffness
- Minor pain and stiffness associated with arthritis
- Relaxation of muscles
- Muscle spasms





## Standard Accessories



## Optional Accessories



# Chattanooga **CUBE**: Therapeutic Effects

## *Laser light & Biostimulation*

Biostimulation is the ability to stimulate and promote tissue growth and repair at the cellular level.

The wavelengths of laser light are mainly absorbed by the chromophores, molecules located inside cells able to convert laser light.

The products of this process are indispensable substances for the repair, growth and proliferation of cells.

Using the appropriate wavelength, the maximum therapeutic effect on the target tissue can be achieved.

Depending on the modulation of the wavelength and on the different parameters set, different effects can be achieved:

## *Analgesic effect - laser light converting into heat*

Laser light is absorbed and partly scattered in the target tissue and thereby largely converted into heat.

This thermal stimulus to the nociceptors of the skin affects the peripheral neurological tract and polarizes the neurons important for our pain perception.

This polarization activates the neural and humoral endorphinergic pain inhibition system with immediate pain relief as a result.

## *Anti-Inflammatory effect*

Inflammation is necessary for healing. The challenge for the clinician is to control this acute inflammatory stage in order to allow the next stage of healing. The HPL units effectively modulate the inflammatory processes secondary to their deep stimulation of tissues. This deep stimulation triggers vasodilatation and increased oxygenation, which activates the main metabolic activities and resolves the inflammatory process quicker.

## *Regenerative effect*

The described acceleration of healing processes primarily manifests in the form of fibroblast activation. The actual cascade of healing is fueled by increased ATP synthesis and increased protein synthesis combined with cellular proliferation. Because of the non-thermal nature of this activation, only small amounts of laser energy are required. The attenuation of the laser light in the tissue depends on the localization of the lesion and determines the laser power required. Deeper structures such as tendons or joint capsules may require the application of higher doses to the surface.



## *References - some clinical studies supporting the efficacy of HPL treatment:*

Alayat MS, Atya AM, Ali MM, Shosha TM. Long-term effect of high-intensity laser therapy in the treatment of patients with chronic low back pain: a randomized blinded placebo-controlled trial. *Lasers Med Sci.* 2014 May;29(3):1065-73.

Dundar U, Turkmen U, Toktas H, Solak O, Ulasli AM. Effect of high-intensity laser therapy in the management of myofascial pain syndrome of the trapezius: a double-blind, placebo-controlled study. *Lasers Med Sci.* 2015 Jan;30(1):325-32.

Karaca B. Effectiveness of High-Intensity Laser Therapy in Subacromial Impingement Syndrome. *Photomed Laser Surg.* 2016 Jun;34(6):223-8.

Mårdh A, Lund I. High Power Laser for Treatment of Achilles Tendinosis - a Single Blind Randomized Placebo Controlled Clinical Study. *J Lasers Med Sci.* 2016 Spring;7(2):92-8.

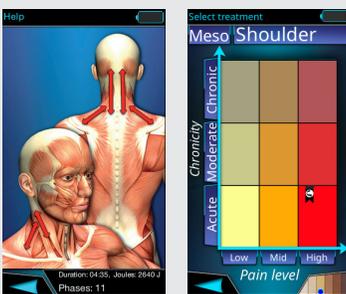
# Chattanooga **CUBE**: Dynamic Therapy

CUBE technology allows optimal effect through the unique ability to use and modulate several pulse frequencies as well as adapt to influencing factors specific to the patient such as skin color and level of chronicity of injury. We call this Dynamic Therapy.



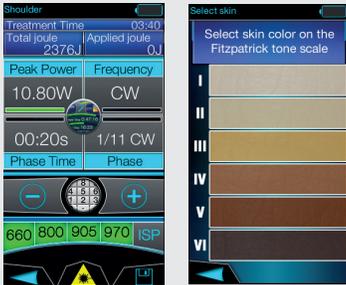
## Graphically-intuitive and customizable CUBE therapy

CUBE allows adjustment of energy delivered depending on the factors involved, thanks to selected menus that are graphically intuitive. Increased power and the wavelengths available play a crucial role in the success of the laser therapy.



## Different treatments adapted to level of pain

According to the kind of pain experienced by the patient, CUBE makes it possible to select specific treatments.



## Adjustable for all skin phototypes

CUBE, besides analysing body morphology and the types of tissues, also takes into account another crucial factor for our skin: melanin. Thanks to its innovative parameters, CUBE recognises the skin's six phototypes, taking into account every pre-set protocol variant.



## Tissue-adapted parameter settings

Every CUBE protocol consists of a dynamic parameter setting, to be chosen according to the different types of tissues.

## Therapy settings records

For ease of continuity of patient treatments the CUBE's software allows the storage of the treatment specific settings and data of a patient in a compliant way without storing actual patient data. This data can be exported via wifi or USB, ready for file management.



# Chattanooga **CUBE**

Ergonomic technology at the heart of your practice

## Quick Release Technology (QRT) for rapid switching of accessory tips

### *Handpiece with interchangeable optics*

This technology springs from the need to perform Dynamic Therapies on different application fields: from Physiotherapy to dermal-foot therapy, from Stomatology to Oral Pathology.



## Variable zoom *from 1 to 5 cm<sup>2</sup>*

A better performing and more uniform therapy thanks to CUBE Zoom.

(CUBE 3 & 4: MP486-USA)

(CUBE 4 Plus: MP554-USA)



## ENT Tips:

The optional ENT tip can be attached to the handpiece to allow ear, nose, and throat treatments. Now treating those hard-to-reach areas is easier, and the device's smart software automatically adapts the treatment power to the appropriate level.

(MP041P-USA)



## CUBE Optic Plus: *12 cm<sup>2</sup>*

With CUBE Optic Plus treating extended areas is easier.

(MP475-USA)

## CUBE Extend Plus *Treating larger areas (optional)*

CUBE Extend Plus, with a 100 mm diameter is ergonomic and easy to position; it is equipped with special optics that deliver energy uniformly across the entire treatment area and allows hands-free sessions without the risk of overheating.

CUBE Extend Plus is equipped with an articulated swivel arm and with a removable head with housing for the laser beam. Thanks to its wider emission cone, it can treat larger areas.

*CUBE Extend Plus and Trolley*  
(PF115-USA)



## Rechargeable Battery *lithium-ion*

CUBE is equipped with a rechargeable battery with 60 minutes operating time in case of continuous treatments.

(6239243CUBE)

## Trolley *(optional)*

This light and mobile transport trolley features a magnetic plate to improve stability when moving the mounted CUBE device.

(PF094-USA)



## Portable therapy *Maximum mobility for ease-of-use*

Thanks to the CUBE device's compactness and light weight (under 3 lbs), therapists are free to perform treatments wherever they choose. This makes it an ideal tool in the fields of sports medicine, physiotherapy, and rehabilitation.

## LCD full colour graphic display touch screen *Maximum visibility for easy interaction*

The LCD, high-definition, full-colour screen offers excellent visibility even with strong ambient light. Combined with touchscreen technology, this provides an intuitive and straightforward user interface.



# CUBE High Power Laser

## Ordering Information

Part Number	Description
3079KIT-USA	<b>CUBE 3</b> 15W-ISP - 12W-CW - 3 wavelengths
3080KIT-USA	<b>CUBE 4</b> 20W-ISP - 15W-CW - 4 wavelengths
3081KIT-USA	<b>CUBE 4 Plus</b> 20W-ISP - 15W-CW - 4 wavelengths with optical plus handpiece

### Standard Accessories (included with CUBE 3 & 4, or 4 Plus)

MP542-USA	White Sock, Chattanooga, CUBE 3
MP543-USA	Black Sock, Chattanooga, CUBE 4 & 4 Plus
EG254481	Interlock Connector
MP443-USA	Optical fiber handpiece
MP486-USA	Zoom optical, CUBE 3 & 4 only
MP554-USA	Zoom optical, CUBE 4 Plus only
MP513-USA	Distal piece
PF002P-USA	Goggles
MP503-USA	Dark goggles
MP130GC-USA	Warning sign
13-00170-US	Operating manual
E6254473-USA	Power supply
MP111B-USA	Power cord, USA/Canada

### Optional Accessories

MP041P-USA	ENT handpiece
MP475-USA	Optical Plus, 40mm
PF094-USA	Trolley
PF115-USA	Extend Plus and Trolley
IM017A-USA	Transport case
MP478-USA	Child goggles
PF067-USA	CUBE 4 wireless foot pedal (on special order)



DJO, LLC | 1430 Decision Street | Vista | CA 92081-8553 | U.S.A.

[www.DJGlobal.com](http://www.DJGlobal.com)

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