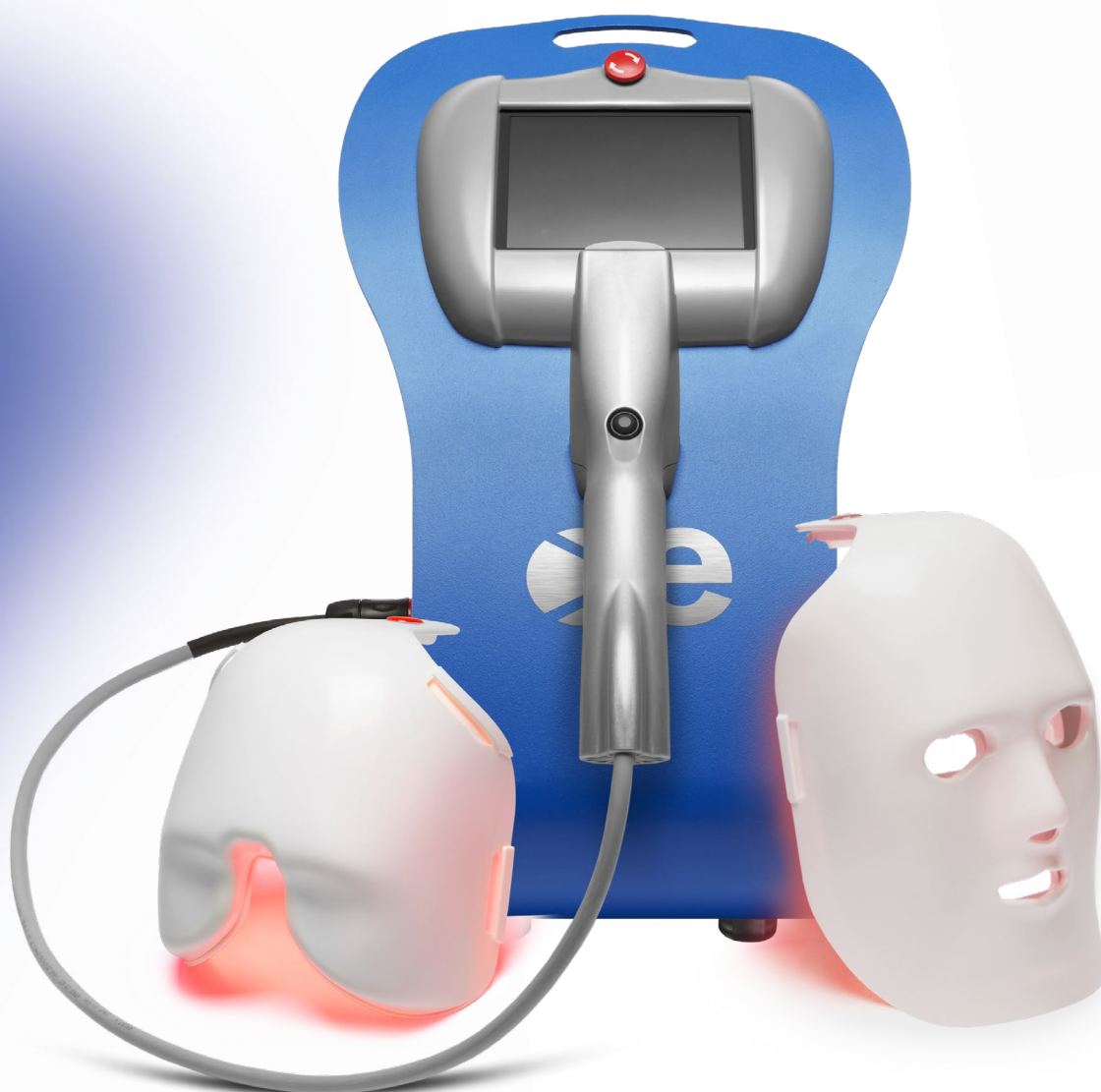


eye-light®

A New Paradigm in Ophthalmology
and Dermatology





© 2024 Espansione Group

Blocco 27, Via Degli Orefici 152
Centergross, Funo (BO)
40050, Italy

VAT NUMBER: IT 00707821203
TAX CODE: 00874760408

①
The
Espansione
Group



— WHY WE'RE HERE

Helping people, through science.
That's the privilege we take pride in.

We have the ambition to establish new paradigms in ophthalmology and dermatology, driven by our desire to provide our customers and their patients with the best, certified medical technologies.

We have always delivered the highest standard in the industry—pushed on by expert craftsmanship and family-owned values coupled with a global mindset and aspiration. Every day, we invest heavily in researching and developing the Espansione Ecosystem of technologies and solutions to achieve our ambition.

— ECOSYSTEM



Technologies

Our technologies are at the very core of the Espansione Ecosystem—they leverage the power of light and its outstanding ability to benefit the human condition.

> LM® LLLT

> OPE® IPL

Solutions

Our technologies are seamlessly built into all our solutions, from diagnosis to treatment. We design, craft and test with the greatest attention and care in Italy.

> eye-light®



— BENEFITS

Ecosystem is the term we use to describe the synergy between our technologies and the solutions that leverage on them.

Every interaction within the Espansione Ecosystem has been designed to provide both patients' and operators' with the best experience possible.

① Integration

Our technologies and solutions are seamlessly integrated for operators and patients to benefit from their unique capabilities. We developed our solutions' software and hardware from scratch to work together as one—every step is as easy as it gets.

② Simplicity

We put great effort and energy in building hassle free solutions. From how we craft our devices and terminals, to the materials we chose, all the way to the design of our solutions' software. Everything has been done to maximize simplicity in utilization.

③ Effectiveness

It's not only about making it simple and easy, though. Our technologies just work. Indeed, the resonance of Espansione technology has been impressive with the scientific community—every day, thought leaders from all over the world leverage the possibilities of the Espansione Ecosystem in their practices.

④ Consistency

Our technologies and solutions are consistently reliable in their ability to deliver. In the words of one of our global key opinion leaders, when asked about what made the Espansione Ecosystem great, he answered "It works, every single time." Consistency is a promise we make our partners and patients—one that we love to live up to.

— WHERE WE'RE GOING

Our ambition isn't limited to that of becoming the undisputed thought leader in diagnosing and treating ocular surface conditions.

Beyond that, we aim at leveraging our know-how and apply it synergically in other fields beyond ophthalmology.

We have already delivered great degrees of innovation to the fields of ophthalmology and dermatology through our patented technology Light Modulation® Low-Level Light Therapy and its seamless integration in the Espansione Ecosystem of solutions.

LM® LLLT has set a new medical standard in painlessly and effectively treating the majority of ocular surface conditions, on top of being extremely effective in its **dermatology** applications.



— WHERE WE ARE

Enabling progress through science for the betterment of all isn't an easy purpose to work towards—yet it's our north star, the guiding principle of all our actions.

That's what guided us for over four decades. That's what moved us to become the one and only company to develop, patent and certify a unique photobiomodulation technology, Light Modulation® LLLT, for use in medical fields such as **ophthalmology** and **dermatology**.

We've done all of this by believing in challenging the status quo, innovating with care and ingenuity, and believing in the power of our people.

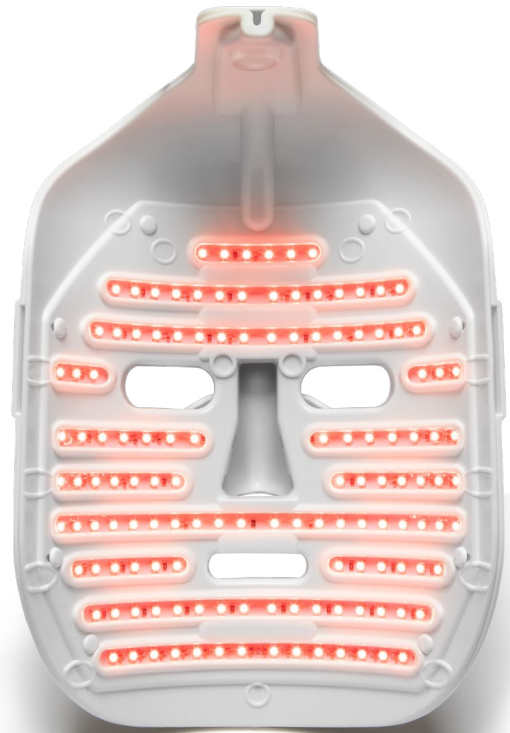


10⁺ Technology
Patents

40⁺ Scientific
Papers

50⁺ Countries

② Technologies



LM[®] LLLT

LM[®] Low-level Light Therapy is a unique, light-based photobiomodulation technology. We developed and patented for medical use the technology originally employed by NASA (i.e., Low-level Laser Therapy) to treat wounds of astronauts in space.

Light Modulation[®] The power of light, cubed.

LM[®] LLLT has nothing to do with Red Light Therapy (RLT), which only acts on the surface of the dermis —instead, LM[®] LLLT works at biological level, generating endogenous heat through powerful LEDs stimulating ATP production in cells.

Discover the Science behind LM[®] LLLT

No pain,
Extreme gains.

Photobiostimulation therapy enabled by LM[®] LLLT is a unique kind of near-infrared light therapy (NILT) that's completely painless for the patient —yet extremely effective in managing a vast number of Conditions.

Different wavelengths (Red, Blue, Yellow, and Infrared*) are available for various use cases, making it a versatile solution for both ocular surface conditions, such as Meibomian Glands Dysfunction in ophthalmology, and diverse skin conditions in dermatology.

CERTIFIED FOR MEDICAL USE

* Available only for Dermatology Use





Maximum convenience, exceptional value.

The degree of simplicity offered by LM[®] LLLT technology to the operator, and the convenience hence provided to the patient benefiting from its therapy is, put simply, unmatched.

These benefits are complemented by LM[®] LLLT exceptional efficacy in treating a spectrum of conditions.

Ophthalmology

In ophthalmology, it extends beyond Meibomian Glands Dysfunction (MGD) to treat various ocular surface issues like Chalazia, Blepharitis, Sjögren's Syndrome.



Dermatology

In dermatology, LM[®] LLLT showcases its effectiveness in addressing inflammatory conditions and age-related signs.



Elevating all practices through unique benefits.

LM® LLLT's potential extends beyond direct treatment of specific conditions, making it a versatile solution for various applications.

Literature underscores its pivotal role, especially in cataract and refractive surgery outcomes, where unresolved ocular surface disease (OSD) poses a significant risk (Labetoulle M. Et Al, 2019).

Within the Espansione Ecosystem, LM® LLLT stands out as the optimal choice, elevating routine practices in both ophthalmology and dermatology fields, showcasing its multifaceted efficacy in enhancing procedures and treatments.

Four critical elements ensure that the LM® LLLT light emission be truly efficient:

- ① An emission at high power on the skin.
- ② A minimal energy dispersion (every centimeter of distance between the LED and the skin increases the dispersion).
- ③ A specific management of the LED light emission (according to the treatment chosen).
- ④ An emission of the LED light both in continuous and pulsed (scattering) mode.

A technology Like no other.

Operators and patients can enjoy the unique benefits of LM® LLLT technology.

- ① It's fast—a treatment lasts 15'
- ② It's painless
- ③ It grants immediate relief to the patient
- ④ It's easy and safe for the operator
- ⑤ It's plug&play—it doesn't require the operator to be constantly present during the treatment

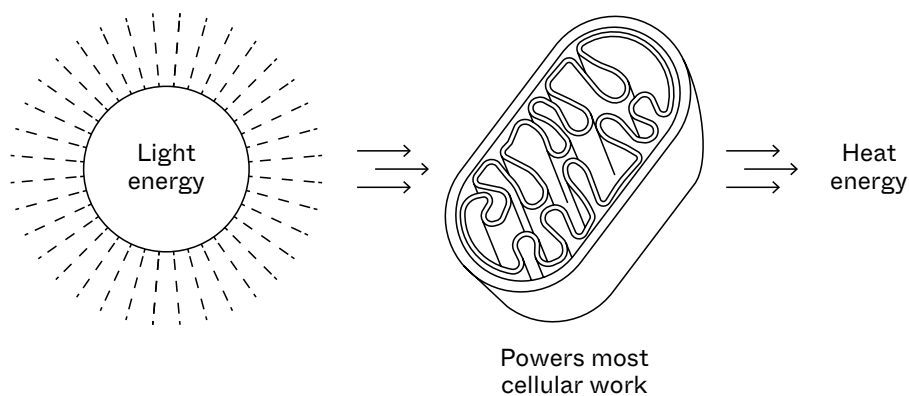




Light Science

LM[®] LLLT is our patented photobiomodulation technology—it works by triggering endogenous heating, stimulating ATP production in both ophthalmological and dermatological applications.

This innovative approach ensures effective and versatile outcomes, whether addressing conditions related to eyelids in ophthalmology or catering to broader applications in dermatology.



Various frequencies.
Endless possibilities.

• Red Light

Ophthalmic Use:

LM® LLLT red light plays an important role in ophthalmology, addressing various conditions such as Dry Eye Disease (DED) / Meibomian Gland Dysfunction (MGD), Chalazion, Sjögren's Syndrome, Stye, Blepharitis, Ocular Surgery with notable effectiveness.

Key Facts for Ophthalmology:

- ① Improves cellular metabolism by increasing ATP production within mitochondria.
- ② Reduces inflammation by regulating antioxidant defenses and mitigating oxidative stress.
- ③ Light-induced activation of transcription factors and signaling pathways.



Dermatologic Use:

In dermatology, LM® LLLT red light demonstrates remarkable efficacy in stimulating cell activity and tissue regeneration.

Key Facts for Dermatology:

- ① The red light penetrates the tissue down to the dermis, directly affecting ATP production.
- ② Photochemical effects stimulate cell activity and the proliferation of fibroblasts and keratinocytes.
- ③ Results include an increase in tissue tonicity, yielding firmer and brighter skin with enhanced hydration and oxygenation.
- ④ LM® LLLT red light is effective in all treatments promoting skin renewal.



This distinction emphasizes the versatility of LM® LLLT, showcasing its tailored applications for both ophthalmology and dermatology, providing effective solutions in each field.

• Blue Light

Ophthalmic Use:

LM® LLLT blue light serves a crucial role in ophthalmology, particularly in addressing conditions such as Demodex, Blepharitis and Rosacea.

Key Facts for Ophthalmology:

- ① Blue light energy is absorbed by porphyrins within bacteria, initiating photosensitization.
- ② Exposure to the light results in photodynamic inactivation, effectively killing bacteria.
- ③ Membrane-bound porphyrin molecules generate singlet oxygen radicals, causing damage to the cell wall of gram-positive bacteria and leading to cell death.
- ④ The relatively weak defense mechanism in bacteria against singlet oxygen contributes to the high efficiency of photodynamic inactivation.



Dermatologic Use:

In dermatology, LM® LLLT blue light targets blocked sebaceous follicles, addressing redness, inflammation, and comedones associated with acne.

Key Facts for Dermatology:

- ① Through the blue light, the system delivers an absorption peak for porphyrins present in the bacteria.
- ② This process initiates a series of chain reactions, generating highly reactive Singlet Oxygen (O₂), selectively destroying the bacterium's RNA sequence without harming surrounding cells.



This distinction highlights the specialized applications of LM® LLLT in both ophthalmology and dermatology, showcasing its versatility in tackling diverse conditions in each field.

● Yellow Light

Ophthalmic Use:

LM® LLLT yellow light proves to be a valuable asset in ophthalmology, offering targeted benefits for specific post-invasive procedures (e.g., Post - Blepharoplasty)

Key Facts for Ophthalmology:

- ① Yellow light acts on mitochondrial respiration, increasing ATP production.
- ② Promotes the release of nitric oxide, aiding in neuro-transmission and tissue repair.
- ③ Decreases the inflammatory response, reducing edema.
- ④ Increases skin elasticity and decreases metalloproteinases activity.

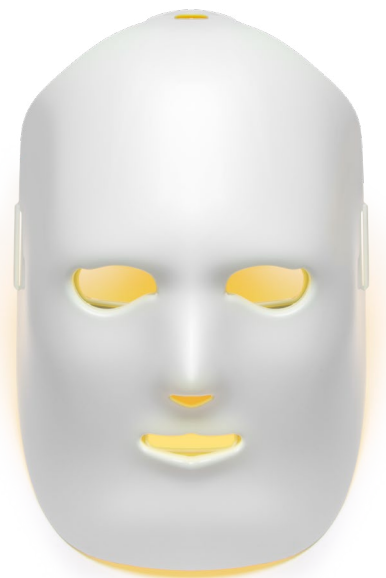


Dermatologic Use:

In dermatology, LM® LLLT yellow light extends its capabilities, providing a holistic approach to drainage and swelling reduction.

Key Facts for Dermatology:

- ① Yellow light acts on mitochondrial respiration and increases ATP production.
- ② Promotes the release of nitric oxide, aiding in neuro-transmission and tissue repair.
- ③ Decreases the inflammatory response by reducing erythema.
- ④ Increases skin elasticity and decreases metalloproteinases activity.
- ⑤ Acts on the lymphatic system, stimulating cell metabolism and promoting a detoxifying action to relieve swelling conditions.
- ⑥ Produces a reduction of edema in various formations.



This tailored approach underscores the adaptability of LM® LLLT, demonstrating its efficacy in both ophthalmology and dermatology fields for targeted and comprehensive care.

Infrared Light*

Dermatologic Use:

In dermatology, the distinctive advantages of infrared light are in the spotlight.

Key Facts for Dermatology:

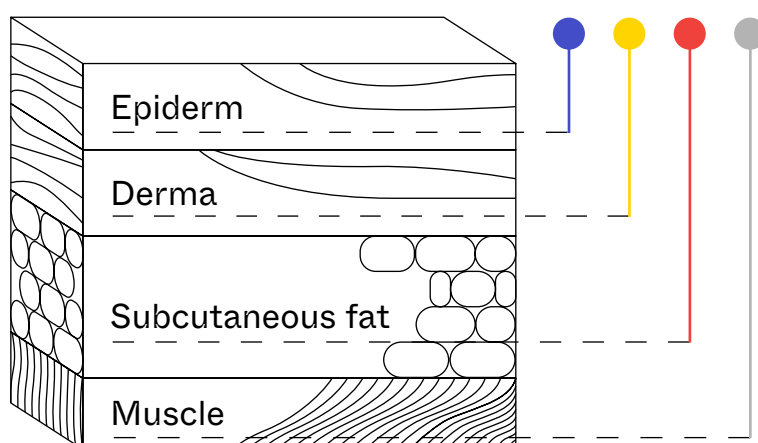
- ① Stimulates vasodilation for increased blood flow in the treated area.
- ② Enhances the delivery of oxygen, nutrients, and essential molecules to cells, promoting tissue repair and regeneration.
- ③ Activates cellular mechanisms responsible for tissue repair and regeneration, particularly effective in cases of deep cutaneous aging.
- ④ Aids in the reduction of scar tissue formation by promoting remodeling of collagen fibers within scars, leading to improved scar appearance and flexibility.



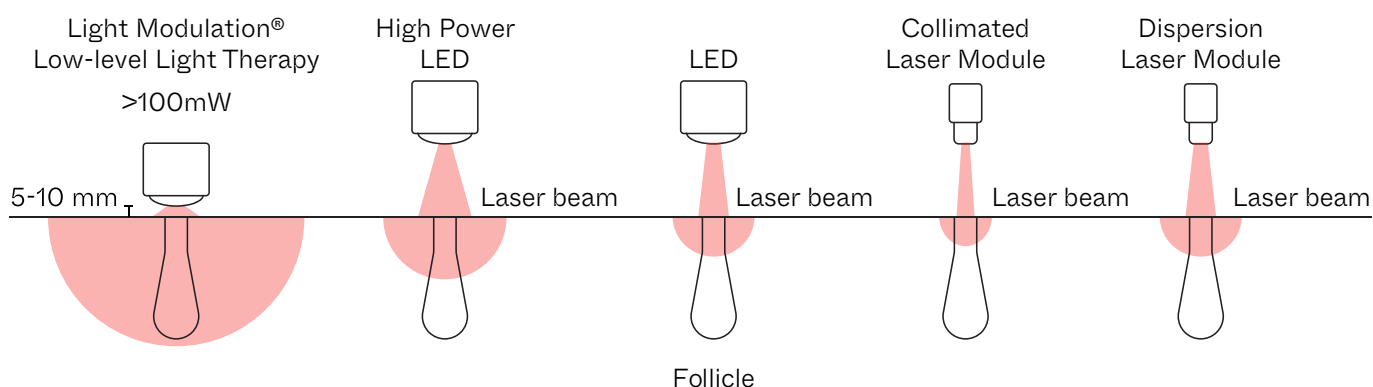
* Available only for Dermatologic Use

— HOW IT WORKS

Cells stimulated by the exclusive LM[®] LLLT technology are different, according to the wavelength used. Higher wavelength corresponds to deeper penetration of light energy.



Benefits





Endogenous Heating

Recently run thermography studies have shown treatment at optimal temperature for inflammation reduction—i.e., 42°C, through LM[®] LLLT.

Light Modulation[®] LLLT triggers endogenous heating stimulating ATP production—and it does so with zero discomfort for the patient.





OPE® IPL*

Optimal Power Energy®
The best IPL on the market.

OPE® IPL is our patented Intense Pulsed Light technology.

We designed OPE® as a polychromatic light whose thermal impulses are calibrated through software to always be emitted at just the right intensity, providing an extremely high degree of safety and effectiveness.

* Available only for Ophthalmology use



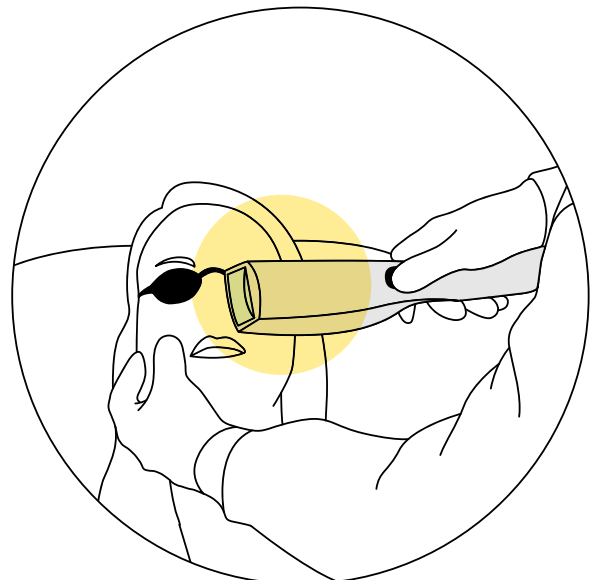
Safe, quick, with no side effects.

We invested heavily in designing an IPL technology that could minimize risk during treatment for the patient whilst maximizing ease of use for the operator administering the therapy—whether we're talking meibomian gland dysfunction (MGD) or skin conditions such as rosacea.



Maximum convenience, exceptional ease of use

OPE® IPL* is the only pulsed light in the world allowing for usage without any protective gel. This is made possible by our patented, software-enabled technology providing a light impulse that's emitted at just the right frequency, every time, throughout every beam. This provides both operators and patients with an invaluable asset: the convenience of an exceptional, frictionless experience.



* Available only for Ophthalmology use

③ Solutions



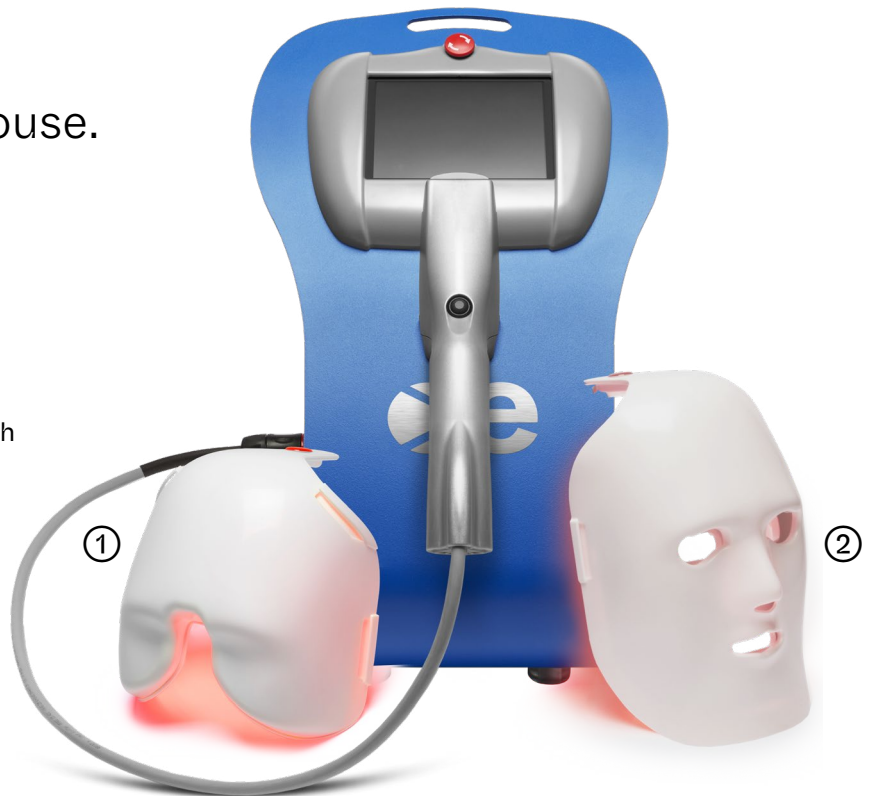
SOLUTIONS > TREATMENT

eye-light®

Our all-in-one powerhouse.

eye-light® is our flagship solution featuring both our core technologies, Light Modulation® LLLT and Optimal Power Energy® IPL*.

This powerful combination offers an optimal, non-invasive treatment approach for a wide range of conditions.



① Ophthalmic Use:

In ophthalmology, eye-light® excels in addressing ocular surface conditions, from Dry Eye Disease (DED) induced by Meibomian Glands Dysfunction (MGD) to managing complex cases like Sjogren's Syndrome.

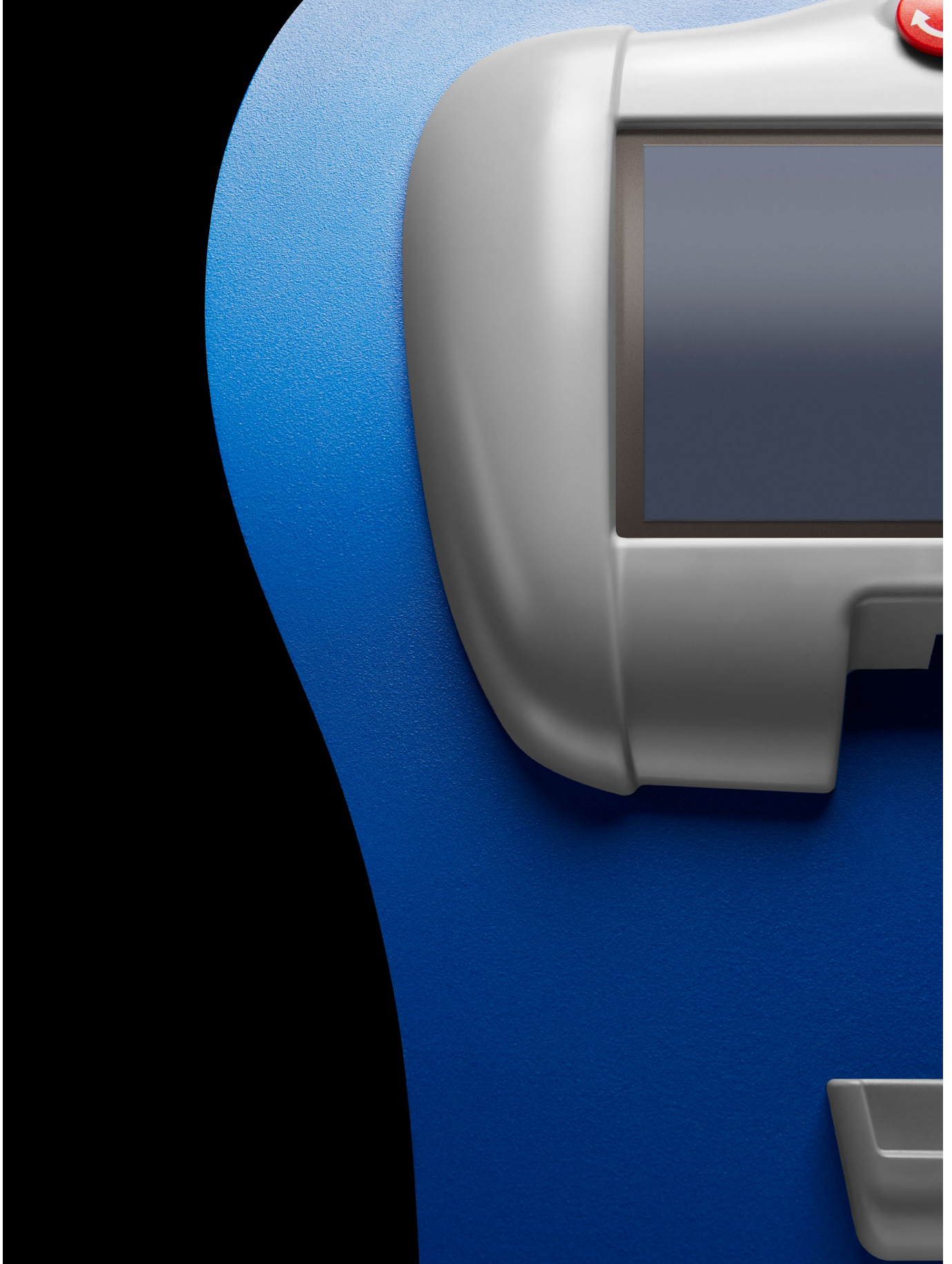
② Dermatologic Use:

Beyond its success in ophthalmology, eye-light® demonstrates remarkable versatility, providing non-invasive treatment for diverse dermatologic conditions.

Light Modulation® LLLT is the key player in delivering effective and targeted therapy, making it an essential tool for overall wellness.

This holistic approach showcases eye-light® as a comprehensive solution for both ocular and dermatologic wellness, emphasizing its effectiveness in tailored applications across multiple fields.

* Available only for Ophthalmology use



Our eye-light® solution was built to last and keep on delivering value to practitioners and patients alike. A beautifully crafted, durable stainless steel body houses a technological wonder, developed entirely in-house to be future-proof, thanks to an upgradable operating system.



Hardware and software work hand in hand to provide effective, painless care to patients, whilst being extremely easy to program and operate.

SOLUTIONS > TREATMENT



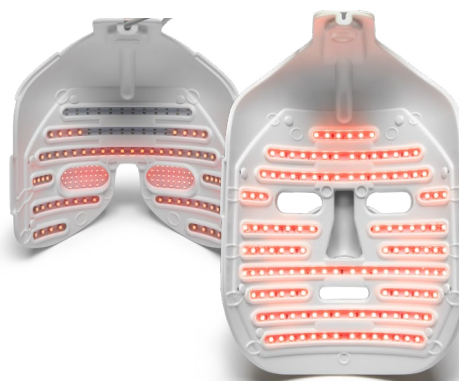
About OPE® IPL*

Leveraging OPE® IPL on eye-light® is as easy as turning on the flashlight on your phone. The first step of most treatments consists in few, painless shots of light around the eye, focusing on the lower eyelid.

Our OPE® IPL technology improves blood circulation by dissipating blood vessels, improving the secretion of anti-inflammatory cytokines.

* Available only for Ophthalmology use

Innovative and dynamic, eye-light® stands as a testament to the cutting-edge advancements in Light Modulation® LLLT technology, providing comprehensive solutions for both ophthalmic and dermatologic well-being.



About Light Modulation® LLLT

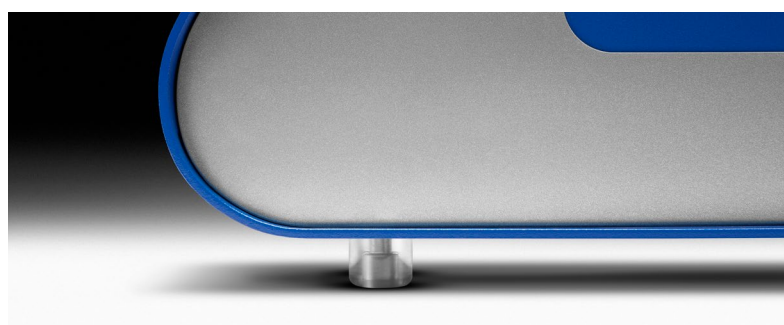
Our Light Modulation® LLLT technology gets unleashed in eye-light®, making it an unparalleled solution for a spectrum of applications.

Ophthalmic Use:

In ophthalmology, eye-light® harnesses the full potential of our Red Light, setting itself apart as the exclusive solution featuring Blue and Yellow LM® LLLT technologies. This unique combination empowers eye-light® to administer photobiostimulation therapy effectively, addressing a wide array of ocular surface diseases.

Dermatologic Use:

Expanding its capabilities beyond ophthalmology, eye-light® stands as the only solution incorporating Red, Blue, Yellow and Infrared LM® LLLT technologies for dermatologic use. This comprehensive approach enables eye-light® to administer photobiomodulation therapy tailored to dermatologic conditions, showcasing its versatility in promoting skin health and wellness.



④

Application fields and Protocols

- a. Ophthalmology
- b. Dermatology

Light Modulation® LLLT

a. Ophthalmology



LM[®] LLLT & OPE[®] IPL

Beyond the certified use of LM[®] LLLT and OPE[®] IPL in treating MGD-induced DED, prominent though leaders in ophthalmology worldwide employ our technologies to manage a wide range of ocular surface conditions and beyond.

MGD/DED

Dry Eye Disease (DED) induced by Meibomian Glands Dysfunction (MGD) is a tear film disorder which can be produced by excessive evaporation of tears in over 86% of cases. The malfunction or obstruction of Meibomian glands, responsible for the lipid layer, leads to insufficient oily components in the tear film, resulting in quicker evaporation, ocular surface damage, and eye discomfort.

Blepharitis

Blepharitis is an ophthalmologic condition marked by inflammation of the eyelid margins. Anterior blepharitis is linked to bacterial overgrowth, creating a biofilm that becomes food for Demodex, causing eyelid inflammation. Meibomian gland dysfunction contributes to posterior blepharitis. Viral factors like Herpes simplex and Varicella zoster, along with seborrheic diseases, may result in chronic blepharitis often associated with Dry Eye.

Chalazion

Chalazion, the most common inflammatory eyelid lesion, results from the noninfective obstruction of a meibomian gland. This blockage leads to the accumulation of irritating lipidic compounds, causing inflammation in surrounding lid tissues. Timely diagnosis and treatment are crucial to prevent chronic complications or the development of serious inflammatory lesions such as sty.

Demodex

Demodex, the most prevalent human ectoparasite, resides in eyelash follicles and is directly linked to eye pathologies like rosacea, chalazion, sty, or chronic blepharitis (often associated with Dry Eye Disease). Routine slit lamp examinations may not clearly detect Demodex, leading to unclear diagnoses and ineffective treatments for patients.

Sjogren's Syndrome

Sjogren's Syndrome is an autoimmune disease, where the body's white blood cells attack healthy tissue and organs. With this disease, the immune system attacks, among many other things, the glands that keep our eyes and mouth lubricated. This is why dry eyes are very common with Sjogren's syndrome. Our technologies were created to stimulate the eyelids mucous membranes, allowing us to treat the syndrome efficiently and painlessly, without surgery, thus achieving maximum patient satisfaction.

Ocular Rosacea

Rosacea is an ongoing skin disease that can cause redness to your face. Sometimes rosacea affects the eyes. This is called ocular rosacea, and its signs and symptoms can include, red, burning or watering eyes, the feeling like something is stuck in your eye, redness and swelling on your eyelids and at the base of eyelashes, clogging of the oily glands of your eyelids, chalazion or sty. Some people have rosacea affecting their skin but no symptoms of ocular rosacea. Others have ocular rosacea but no skin symptoms. People can also have both forms of rosacea. Women are more likely than men to have rosacea.

LM[®] LLLT & OPE[®] IPL

Beyond the certified use of LM[®] LLLT and OPE[®] IPL in treating MGD-induced DED, prominent though leaders in ophthalmology worldwide employ our technologies to manage a wide range of ocular surface conditions and beyond.

Stye

Stye or hordeolum is a common type of infection of the sebaceous glands of the eyelid that results in a lump. The stye can be distinguished from a chalazion, which tends to imply less inflammatory response and follows a more chronic course. Staphylococcus bacteria is responsible for most of these infections. When a Meibomian gland becomes acutely infected, it produces an internal hordeolum while an external hordeolum represents a localized formation of follicle abscesses. After one or two days the external stye shows on the lid margin. Generally a small boil is visible close to the lash root, surrounded by hyperemia, swelling and oedema. In two to four days the lesion fistulates with secretions.

Post-blepharoplasty

Blepharoplasty consists of an eyelid surgery with the aim of reducing excess skin and orbital fat around the eyelids, which can make the eye look older and even reduce vision. One of the most frequent postoperative complications of this surgery is dry eye, especially if the patient experienced dry eye symptoms before.

Cataract & Refractive Surgery

Surgery, although minimally invasive, inevitably alters the equilibrium condition of homeostasis, or in most cases aggravates a pre-existing tear dysfunction condition. About two thirds of patients undergoing eye surgery suffer from dry eye. Following the operation, there is also a worsening of the Meibomian Gland Disease (MGD), due to the inevitable inflammatory state resulting from the surgery and the damage caused mechanically and directly by the blepharostat (often excessive hyperextension on the eyelids). Furthermore, close to 40% of patients without preexisting DED develop iatrogenic DED after cataract surgery. The symptoms of dry eyes can last from one month to one year. As a result, you end up with what is commonly known as 20/20 unhappy patients.

Moreover, in order to achieve optimum surgical results, biometry and keratometry need to be performed on the pristine cornea surface, and the topography of the cornea needs to be accurately assessed. Among the most common causes of incorrect outcomes are ocular surface disorders (OSD), including dry eye disease (DED). According to studies, about 10% of refractive errors after cataract surgery are caused by errors in keratometric measurements. As a result, several studies have demonstrated that preoperative treatment of DED significantly improved preoperative corneal surface measurement accuracy.

Furthermore, blepharitis is associated with acute-onset postoperative endophthalmitis among patients undergoing cataract surgery. Hence, treating eyelid margin disease in advance of surgery is prudent in order to prevent postoperative complications.

MGD /DED

Meibomian Gland Dysfunction
/Dry Eye Disease

Technologies

OPTION ①



OPE® IPL



LM® LLLT, Red

OPTION ②



LM® LLLT, Red

OPE® IPL, the only pulsed light worldwide allowing for usage without any protective gel, applied to the periocular region, penetrates the skin resulting in controlled heating and melting of meibomian glands blockage.

Through the red LM® LLLT there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity.

The combined use of both technologies lead to:

- > Improved tear quality
- > Healthier flow of oils onto the ocular surface
- > Enhanced tear composition
- > Symptoms reduction for improved ocular comfort



Procedure

- > If the patient wears contact lenses, they should remove before the treatment
- > Remove make-up from the patient's face and eyelash extensions
- > Remove earrings and other metallic piercings
- > Remove hearing aids
- > For OPE® IPL cover any mole or hyperpigmentation with white patch or white pencil
- > During OPE® IPL treatment, ensure the patient wears protective goggles, and the operator wears the necessary protective glasses
- > Administer the OPE® IPL treatment to the periocular area by applying four shots from nasal to temporal, with the fifth shot overlapping
- > Remove the protective goggles and apply the Red LM® LLLT mask, for a 15-minute light treatment

MGD /DED

Meibomian Gland Dysfunction
/Dry Eye Disease

Application

OPTION ① — OPE® IPL followed by LM® LLLT

OPE® IPL LM® LLLT, Red

PATHOLOGY	TECHNOLOGY	RECOMMENDED PROTOCOL	
		> Number of Treatments	> Frequency (Days Apart)
MGD/DED Meibomian Glands Dysfunction Dry Eye Disease	OPE® IPL + LM® LLLT	1 to 3	5 to 10
	RED	2	
	BLUE	3	
	YELLOW	3 w/ Glands Expression (Recommended)	
	> Meiboscale™ Degree 1 > Meiboscale™ Degree 2 > Meiboscale™ Degree 3 > Meiboscale™ Degree 4	4 w/ Glands Expression (Highly Recomm.) + 1 Maintenance Treatment (All Levels)	

3 sessions are generally required to achieve a maintenance level.

OPTION ② — LM® LLLT only

LM® LLLT, Red

This protocol is preferred in patients who have contraindications to receiving IPL treatment (e.g., patients with very light or dark pigmentation, patients on photosensitizing medications).

Two to four treatment sessions depending on the severity of MGD are recommended, ideally, 2 to 10 days apart (i.e., a full cycle can take as little as one solar week).

PATHOLOGY	TECHNOLOGY	RECOMMENDED PROTOCOL	
		> Number of Treatments	> Frequency (Days Apart)
MGD/DED Meibomian Glands Dysfunction Dry Eye Disease	OPE® IPL LM® LLLT	2 to 4	2 to 10
	RED	2	
	BLUE	3	
	YELLOW	3 w/ Glands Expression (Recommended)	
	> Meiboscale™ Degree 1 > Meiboscale™ Degree 2 > Meiboscale™ Degree 3 > Meiboscale™ Degree 4	4 w/ Glands Expression (Highly Recomm.) + 1 Maintenance Treatment (All Levels)	

A maintenance treatment session is recommended on a 6-months interval for all patients.

Blepharitis

Characterized by an inflammation of the eyelid margins. Anterior blepharitis is usually associated with an infection that produces an overgrowth of bacteria that creates a biofilm that serves as food for Demodex mites.

Technologies

OPTION ①



OPE® IPL



LM® LLLT, Blue



LM® LLLT, Red

OPE® IPL, the only pulsed light worldwide allowing for usage without any protective gel, applied to the periocular region, penetrates the skin resulting in controlled heating and melting of meibomian glands blockage.

LM® LLLT blue light activates porphyrins in bacteria, inducing photodynamic inactivation, effectively killing bacteria by damaging their cell walls.

OPTION ②



LM® LLLT, Blue



LM® LLLT, Red

Through the red LM® LLLT there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity.

The combined use of both technologies lead to:

- > Improved tear quality
- > Symptoms reduction for improved ocular comfort
- > Healthier lipid flow



Procedure

- > If the patient wears contact lenses, they should remove before the treatment
- > Remove make-up from the patient's face and eyelash extensions
- > Remove earrings and other metallic piercings
- > Remove hearing aids
- > For OPE® IPL cover any mole or hyperpigmentation with white patch or white pencil
- > During OPE® IPL treatment, ensure the patient wears protective goggles, and the operator wears the necessary protective glasses
- > Administer the OPE® IPL treatment to the periocular area by applying four shots from nasal to temporal, with the fifth shot overlapping
- > Remove the protective goggles and apply the Red LM® LLLT mask, for a 15-minute light treatment



Blepharitis

Characterized by an inflammation of the eyelid margins. Anterior blepharitis is usually associated with an infection that produces an overgrowth of bacteria that creates a biofilm that serves as food for Demodex mites.



Application

OPTION ① — OPE® IPL followed by LM® LLLT Blue + LM® LLLT Red



OPE® IPL



LM® LLLT, Blue



LM® LLLT, Red

PATHOLOGY	TECHNOLOGY	RECOMMENDED PROTOCOL	
		> Number of Treatments	> Frequency (Days Apart)
Blepharitis	OPE® IPL + LM® LLLT	2 to 3	5 to 10
	BLUE > RED YELLOW		

2 to 3 sessions are recommended, ideally 5 to 10 days apart. First 15 minutes of Blue LM®LLLT mask, followed by 15 minutes of Red LM®LLLT.

OPTION ② — LM®LLLT-only



LM® LLLT, Blue



LM® LLLT, Red

This protocol is preferred in patients who have contraindications to receiving IPL treatment

(e.g., patients with very light or dark pigmentation, patients on photosensitizing medications).

PATHOLOGY	TECHNOLOGY	RECOMMENDED PROTOCOL	
		> Number of Treatments	> Frequency (Days Apart)
Blepharitis	OPE® IPL LM® LLLT	3 to 4*	5 to 10*
	BLUE > RED YELLOW		

*Depending on the severity of blepharitis, 3 to 4 sessions are recommended, ideally 5 to 10 days apart. First 15 minutes of Blue LM®LLLT mask, followed by 15 minutes of Red LM®LLLT.

Chalazia & Stye



Technologies



High thermal impact, OPE® IPL is not to be used.



LM® LLLT, Red

Through the red LM® LLLT there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity.

The use of the technology leads to:

- > Symptoms reduction for improved ocular comfort



Procedure

- > If the patient wears contact lenses, they should remove before the treatment
- > Remove make-up from the patient's face and eyelash extensions
- > Remove earrings and other metallic piercings
- > Remove hearing aids
- > Apply the Red LM® LLLT mask, for a 15-minute light treatment



Application



High thermal impact, OPE® IPL is not to be used.

2 to 4 sessions of treatment are recommended depending on the clinical appearance and history of chalazion/stye, ideally, 4 to 7 days apart. Most chalazions start to resolve within one week after the first session.

If the chalazion is particularly large or has been there for a long time, a second session within 3 to 4 days is recommended:

- > 15 minutes of Red LM® LLLT.

PATHOLOGY	TECHNOLOGY			RECOMMENDED PROTOCOL	
				> Number of Treatments	> Frequency (Days Apart)
Chalazion	OPE® IPL	LM® LLLT		2 to 4	4 to 7
		RED	BLUE YELLOW		



Demodex

Characteristic collarettes or cylindrical dandruff (CD) around the eyelash base are considered to be a sign of ocular demodicosis.

Technologies

 LM® LLLT, Blue

 LM® LLLT, Red

LM® LLLT blue light activates porphyrins in bacteria, inducing photodynamic inactivation, effectively killing bacteria by damaging their cell walls.

Through the Red LM® LLLT there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity

The combined use of light leads to:

- > Symptoms reduction for improved ocular comfort
- > Antibacterial effect

Procedure

- > If the patient wears contact lenses, they should remove before the treatment
- > Remove make-up from the patient's face and eyelash extensions
- > Remove earrings and other metallic piercings
- > Remove hearing aids
- > Apply the Blue LM® LLLT, for a 15-minute light treatment followed by other 15-minutes treatment with Red LM® LLLT

Application

2 to 4 sessions of treatment are recommended depending on the clinical appearance and response of the patient, ideally, 5 to 10 days apart.

 **High thermal impact, OPE® IPL is not to be used.**

15 minutes of Blue LM® LLLT followed by 15 minutes of Red LM® LLLT.

PATHOLOGY	TECHNOLOGY	RECOMMENDED PROTOCOL	
		> Number of Treatments	> Frequency (Days Apart)
Demodex	OPE® IPL		
	LM® LLLT	4 to 5	5 to 10
	BLUE > RED		
	YELLOW		

Post-blepharoplasty

Blepharoplasty consists of eyelid surgery with the aim of reducing excess skin and orbital fat around the eyelids, which can make the eye look older and even reduce vision. One of the most frequent postoperative complications of this surgery is dry eye, especially if the patient experienced dry eye symptoms before.



Technologies



LM® LLLT, Red



LM® LLLT, Yellow

Red LM® LLLT enhances cellular metabolism, boosting ATP production and mitigating inflammation through improved antioxidant defenses and signaling pathways.

Yellow LM® LLLT enhances mitochondrial respiration, boosts ATP production, and aids neurotransmission and tissue repair by releasing nitric oxide. It also reduces inflammation and edema, improving skin elasticity and reducing metalloproteinase activity.

The combined use of both technologies lead to:

- > Inflammation reduction
- > Symptoms reduction for improved ocular confort
- > Edema reduction
- > Enhanced tissue reparation



Procedure

- > If the patient wears contact lenses, they should remove before the treatment
- > Remove make-up from the patient's face and eyelash extensions
- > Remove earrings and other metallic piercings
- > Remove hearing aids
- > Apply the Red LM® LLLT, for a 15-minute light treatment followed by other 15-minutes treatment with Yellow LM® LLLT



Application

⚠ High thermal impact, OPE® IPL is not to be used.

2 sessions of treatment are recommended, the first one to be performed immediately after the surgery, and the second one to be performed 4 to 7 days

after the surgery. 15 minutes of Red LM® LLLT followed by 15 minutes of Yellow LM® LLLT.

PATHOLOGY	TECHNOLOGY		RECOMMENDED PROTOCOL	
			> Number of Treatments	> Frequency (Days Apart)
Post-blepharoplasty	OPE® IPL	LM® LLLT RED > YELLOW	2	1x Immediately Post-Surgery 1x 4 to 7 Post-Surgery

Rosacea

Technologies

OPTION ①



OPE® IPL



LM® LLLT, Blue

OPE® IPL, the only pulsed light worldwide allowing for usage without any protective gel, applied to the periocular region, penetrates the skin resulting in controlled heating and melting of meibomian glands blockage.

LM® LLLT Blue light activates porphyrins in bacteria, inducing photodynamic inactivation, effectively killing bacteria by damaging their cell walls.

Red LM® LLLT improves cells metabolism due to increased ATP production within mitochondria. Reduces inflammation by regulating antioxidant defenses and reducing oxidative stress. Light-induced activation of transcription factors and signaling pathways.

OPTION ②



LM® LLLT, Blue



LM® LLLT, Red

The combined use of light leads to:

- > Tear quality improvement
- > Symptoms reduction
- > Healthier lipid flow
- > Antibacterial effect



Procedure

- > If the patient wears contact lenses, they should remove before the treatment
- > Remove make-up from the patient's face and eyelash extensions
- > Remove earrings and other metallic piercings
- > Remove hearing aids
- > For OPE® IPL cover any mole or hyperpigmentation with white patch or white pencil
- > During OPE® IPL treatment, ensure the patient wears protective goggles, and the operator wears the necessary protective glasses
- > Administer the OPE® IPL treatment to the periocular area by applying four shots from nasal to temporal, with the fifth shot overlapping
- > Remove the protective goggles and apply Blue LM® LLLT, for a 15-minute light treatment

Rosacea

Application

OPTION ① — OPE®IPL followed by LM®LLLT

OPE® IPL
 LM® LLLT, Blue

PATHOLOGY	TECHNOLOGY	RECOMMENDED PROTOCOL	
		> Number of Treatments	> Frequency (Days Apart)
Rosacea	OPE® IPL + LM® LLLT	3 to 5	5 to 10
	RED BLUE YELLOW		

3 to 5 joint sessions are recommended, OPE® IPL first followed by Blue LM® LLLT, 5 to 10 days apart.

OPTION ② — LM®LLLT-only

LM® LLLT, Blue
 LM® LLLT, Red

This protocol is preferred in patients who have contraindications to receiving IPL treatment

(e.g., patients with very light or dark pigmentation, patients on photosensitizing medications).

PATHOLOGY	TECHNOLOGY	RECOMMENDED PROTOCOL	
		> Number of Treatments	> Frequency (Days Apart)
Rosacea	OPE® IPL LM® LLLT	4 to 5	5 to 10
	BLUE > RED YELLOW		

4 to 5 treatment sessions are recommended ideally 5 to 10 days apart. First 15 minutes of blue mask LM®LLLT, followed by 15 minutes of red LM®LLLT.

Maintenance treatment cycle / session can be scheduled 6 months after the first cycle. In most severe cases, follow-up can happen quarterly.



Sjögren's Syndrome

Technologies



OPE® IPL



LM® LLLT, Red

OPE® IPL, the only pulsed light worldwide allowing for usage without any protective gel, applied to the periocular region, penetrates the skin resulting in controlled heating and melting of meibomian glands blockage. Through the red LM® LLLT there is a stimulation of mitochondria with consequent

production of ATP and an increase and improvement of cellular activity.

Our technologies were created to stimulate the eyelids mucous membranes, allowing us to treat the syndrome efficiently and painlessly, without surgery, thus achieving maximum patient satisfaction.

The combined use of both technologies leads to:

- > Improved tear quality
- > Healthier flow of oils onto the ocular surface
- > Enhanced tear composition
- > Symptoms reduction for improved ocular comfort

Procedure

- > If the patient wears contact lenses, they should remove before the treatment
- > Remove make-up from the patient's face and eyelash extensions
- > Remove earrings and other metallic piercings
- > Remove hearing aids
- > For OPE® IPL cover any mole or hyperpigmentation with white patch or white pencil
- > During OPE® IPL treatment, ensure the patient wears protective goggles, and the operator wears the necessary protective glasses
- > Administer the OPE® IPL treatment to the periocular area by applying four shots from nasal to temporal, with the fifth shot overlapping
- > Remove the protective goggles and apply the Red LM® LLLT mask, for a 15-minute light treatment

Application

PATHOLOGY	TECHNOLOGY	RECOMMENDED PROTOCOL	
		> Number of Treatments	> Frequency (Days Apart)
Sjögren's Syndrome	OPE® IPL + LM® LLLT	4 to 5	5 to 10
	RED BLUE YELLOW		

A maintenance treatment session is recommended on a 6-months interval for all patients.

Cataract & Refractive Surgery

One of the most important risk factors for Dry Eye are some ocular surgeries, such as cataract and refractive surgeries, like nearsightedness (myopia), farsightedness (hyperopia), presbyopia or astigmatism—being LASIK (i.e., laser-assisted in situ

keratomileusis) the most popular method applied. After performing this type of surgery, most patients experience some eye disorders associated to the surgery, especially Dry Eye Disease (DED).



Technologies



LM® LLLT, Red

Red LM® LLLT improves cells metabolism due to increased ATP production within mitochondria. Reduces inflammation by regulating antioxidant defenses and reducing oxidative stress. Light-induced activation of transcription factors and signaling pathways.

Through the red LM® LLLT there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity.

The use of light leads to:

- > Inflammation reduction
- > Enhanced tissue reparation
- > Edema reduction
- > Symptoms reduction for improved ocular comfort



Procedure

- > If the patient wears contact lenses, they should remove before the treatment.
- > Remove make-up from the patient's face and eyelash extensions
- > Remove earrings and other metallic piercings
- > Remove hearing aids
- > Apply the Red LM® LLLT mask for a 15-minute light treatment



Cataract & Refractive Surgery

One of the most important risk factors for Dry Eye are some ocular surgeries, such as cataract and refractive surgeries, like nearsightedness (myopia), farsightedness (hyperopia), presbyopia or astigmatism—being LASIK (i.e., laser-assisted in situ

keratomileusis) the most popular method applied. After performing this type of surgery, most patients experience some eye disorders associated to the surgery, especially Dry Eye Disease (DED).

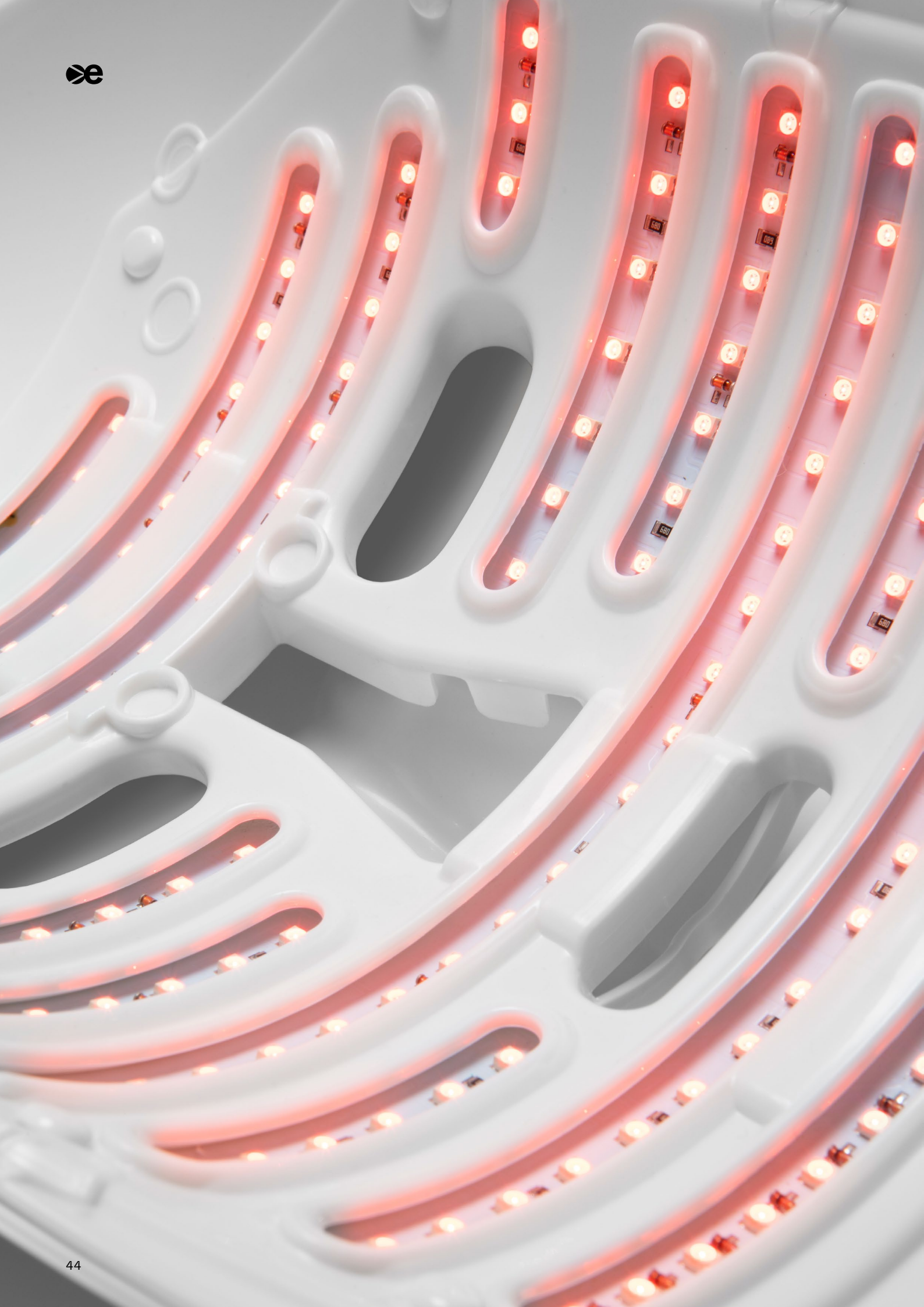
Application

PATHOLOGY	TECHNOLOGY			RECOMMENDED PROTOCOL	
				> Number of Treatments	> Frequency (Days Apart)
Pre-/Post-Surgery Cataract/ Refractive	OPE® IPL	LM® LLLT		1 to 2	5 to 10
		RED	BLUE YELLOW		

In healthy subjects, 2 sessions of treatment are recommended, the first one to be performed 7 (± 2 days) before the surgery, and the second one to be performed 7 (± 2 days) after the surgery.

15 minutes of Red LM® LLLT.

In patients presenting DED symptomatology before surgery, DED shall be addressed as per MGD/DED protocol before considering surgery.



Light Modulation® LLLT

b. Dermatology



Light Modulation® LLLT

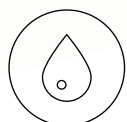
Light Modulation® LLLT releases low intensity energy, without thermal effects or ablation on the skin surface. Photostimulation induced by LM® LLLT, favors the absorption of the active ingredients by tissues. Cellular receptivity to cosmetics is faster and improved.



Antiaging

The skin is subject to a non-predictable intrinsic ageing process, conditioned ultimately by several exogenous factors. These include ultraviolet radiation that accelerates skin ageing (photo-ageing). However, chrono aging and photoaging share many molecular similarities. The formation of reactive oxygen species and the induction of metalloproteinase matrices are central aspects of skin ageing.

Red LM® LLLT light stimulates cell activity and the proliferation of fibroblasts and keratinocytes, promoting production of new collagen and elastin and accelerates skin renewal. Red LM® LLLT light significantly activates cells in the inflammatory phases (mast cells, neutrophils and macrophages) and speeds up the process of remodeling and tissue repair.

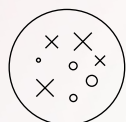


Re-Hydration

Maintaining the skin's water balance is essential for young, supple and firm skin.

Exposure to external factors can damage the stratum corneum, interrupting the skin's normal hydration process and thus causing dryness, premature ageing, loss of tone and elasticity, worsening the overall appearance. This phenomenon is aggravated with the passage of time, when the slowdown in the activity of fibroblasts in the dermis and keratinocytes in the stratum corneum is associated with a physiological decrease in the production of natural hydration factor and hyaluronic acid.

Red LM® LLLT light stimulates the activity of fibroblasts and keratinocytes, leading to an increase in hydration levels.



Sensitive Skin

Sensitive skin is more prone to skin disorders such as couperose and rosacea. Couperose is a skin blemish, mostly of the face, which leads to the formation of reddish patches due to abnormal dilation of blood capillaries.

Red LM® LLLT light acts on sensitive skin by reducing erythema, inflammation, redness and telangiectasia.

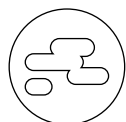


Acne

Aimed at acne-prone skin of all ages and phototypes, the treatment eliminates clogged pores, reduces their size, soothes inflamed and irritated skin, balances sebum production and treats acne lesions.

Blue LM® LLLT light neutralizes the acne bacterium in clogged pores.

Red, in sequence, has an anti-inflammatory action that reduces the redness associated with acne lesions. Red LLLT light, on the other hand, encourages tissue repair of any scars and promotes healthier, more balanced skin. It also improves its responsiveness to topical treatments.



Seboregulation

LM® LLLT photobiostimulation can eliminate clogged pores, reduce their size and balance sebum production.

Blue LM® LLLT light can regulate multicellular behavior by intervening in the intercellular communication mechanism of bacteria through blue light receptors and inhibit organic film formation.

Light Modulation® LLLT

Light Modulation® LLLT releases low intensity energy, without thermal effects or ablation on the skin surface. Photostimulation induced by LM® LLLT, favors the absorption of the active ingredients by tissues. Cellular receptivity to cosmetics is faster and improved.



Tricology

Androgenic alopecia is a condition characterized by miniaturization of hair follicles and their reduced activity, which slows down the active phase of hair growth (ANAGEN), leading to progressive thinning over time. It appears between the ages of 20 and 40 and is more common in men.

Trichology treatment with Red LM® LLLT light reactivates the vascularization of the scalp, which is decisive for the supply of essential elements for nourishing the hair.

At the base of the follicle there is an upward-facing recess containing a connective structure rich in blood vessels, lymphatic and nerve structures, called the papilla, whose task is to provide sustenance, nourishment and endocrine control of the cells of the hair matrix.

Correct vascularization, stimulated by red LED light, not only decreases the stiffening of the tissue around the follicle, thus counteracting micro-irritations, but is also essential for the distribution of nutrients, such as vitamins, minerals, amino acids and proteins in the scalp; without the necessary oxygenation by the blood, the cells of the hair follicle's matrix compromise their functionality.

Red LED light activates Cytochrome C Oxidase, resulting in increased mitochondrial electron transport, and increased cellular APT.

This promotes the differentiation of the stem cells that make up the bulge, bringing the hair follicles from the telogen phase to the anagen phase (growth of the new hair), controlled by complex cellular biochemical mechanisms, involving growth factors, interleukins, specific enzymes and particular amino acids.



Psoriasis

Psoriasis is a chronic inflammatory condition of the skin, due to an irregular immune response and characterized by an abnormal cell turnover of the stratum corneum. People with psoriasis often present with painful irritations, rough and scaly plaques on various parts of the body.

To date, the causes remain unknown, so it is only possible to intervene by alleviating the symptoms. Red LM® LLLT light improves the normal immune response, thus reducing the inflammatory state, and stimulates endorphins that relieve the itching sensation. Subsequently, Red LM® LLLT light stimulates ATP production in the mitochondria of the fibroblasts, the energy centre of the cell.

The increase in energy speeds up skin regeneration through the production of collagen and elastin. Finally, the combined action of red and yellow light regularises cell surface turnover, restoring the skin barrier.



Lifting

Technologies

LM[®] LLLT, Red

Through the wavelength in use there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity. Thanks to this stimulation you will have:

- > Production of elastin and collagen
- > Recall of hydration on surface
- > Increased capillary blood circulation and improvement of new capillaries formation; this in turn provides additional oxygen and nutrients to the skin

Effects

- > Bio-revitalisation
- > Skin brightening
- > Wrinkle reduction
- > Treatment of photo-aging
- > Increased healing of wounds (or similar)

Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Red LM[®] LLLT

Maintenance

After 6 months, 4 treatments, 1 per week.

Application

	Week 1	Week 2	Week 3	Week 4
LM [®] LLLT Red Mask 	2 Application	2 Application	1 Application	1 Application

Periorbital Wrinkles*

Technologies



LM[®] LLLT, Red



LM[®] LLLT, Yellow

Through the red wavelength there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity. This leads to a deep stimulation of elastin and collagen resulting in toning and remodeling of periorbital area.

The yellow wavelength acts on the lymphatic system stimulating cell metabolism and promoting a detoxifying action to alleviate swelling conditions.

Effects

- > Bio-revitalization
- > Wrinkles deep reduction
- > Skin toning
- > Elastin and collagen production

Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply first Red LM[®] LLLT, followed by Yellow LM[®] LLLT treatment

Maintenance

After 4/6 months, 1 sessions in one week.

Application

	Week 1	Week 2	Week 3	Week 4
LM [®] LLLT Red 	2 Application	1 Application	1 Application	1 Application
LM [®] LLLT Yellow 	2 Application	1 Application	1 Application	1 Application

First red mask followed by the yellow one, in the same session.

*= FDA 510k

Post-Blepharoplasty

Technologies

-  LM[®] LLLT, Red
-  LM[®] LLLT, Yellow

It is a treatment that acts on the lymphatic system stimulating cell metabolism and promoting a detoxifying action to alleviate swelling conditions.

Effects

- > Acceleration of healing process
- > Reduction of post-surgery edema

Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply first Red LM[®] LLLT, followed by Yellow LM[®] LLLT in the same session

Maintenance

After 6 months, apply Lifting Protocol for 4 weeks

Application

	No. Treatments	Frequency
LM [®] LLLT Red + Yellow  	2	1x Immediately Post-Surgery 1x 4 to 7 Post-Surgery

Intensive Lifting

Technologies

LM® LLLT, Red

LM® LLLT, Infrarered

Through the red wavelength there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity. Thanks to this stimulation you will have:

- > Production of elastin and collagen
- > Recall of hydration on surface
- > Increased capillary blood circulation and improvement of new capillaries formation; this in turn provides additional oxygen and nutrients to the skin

Through the infrared wavelength there is a deep stimulation of elastin and collagen.

Effects

- > Bio-revitalisation
- > Skin brightening
- > Reduction of superficial and medium-deep wrinkles
- > Treatment of photo-ageing
- > Increased healing of wounds (or similar)
- > Deep toning
- > Oval remodeling

Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply first Red LM® LLLT, followed by Yellow LM® LLLT in the same session

Maintenance

After 6 months, apply Lifting Protocol for 4 weeks

Application

		Week 1	Week 2	Week 3	Week 4
LM® LLLT Red		2 applications (3 days apart)	1 Application	1 Application	1 Application
LM® LLLT Infrared		/	1 Application	1 Application	1 Application

In the same session apply first Red LM® LLLT for 15 minutes followed by Infrared LM® LLLT for other 15 minutes when requested.

Drainage & Brightness

Technologies

LM[®] LLLT, Yellow

It is a treatment that acts on the lymphatic system stimulating cell metabolism and promoting a detoxifying action to alleviate swelling conditions.

Effects

- > Reduction of edema of various formations (e.g., cortisone, surgery)

Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Yellow LM[®] LLLT
- > To enhance the effect of the treatment, two adjunctive applications of Red LM[®] LLLT are recommended in week 4

Maintenance

After 4/6 months, 2 sessions in one week

Application

	Week 1	Week 2	Week 3	Week 4
LM [®] LLLT Yellow 	1 Application	1 Application	2 Application	/

RECOMMENDATION:

Two applications of Red LM[®] LLLT at week 4 will enhance the effects of the Yellow LM[®] LLLT.

Deep Toning

Technologies

LM[®] LLLT, Infrared

Through the infrared wavelength there is a deeper stimulation of mitochondria with consequent and improvement of cellular activity .

This leads to a deep stimulation of elastin and collagen resulting in toning and remodeling of face oval.

Effects

- > Deep toning
- > Oval remodeling

Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Infrared LM[®] LLLT

Maintenance

After 4/6 months, 2 sessions in one week

Application

	Week 1	Week 2	Week 3	Week 4
LM [®] LLLT Infrared 	2 Application	1 Application	1 Application	1 Application

Impure Skin & Acne Vulgaris*



Technologies



LM® LLLT, Blue

It is a treatment that stimulates cellular activity by generating porphyrin that is the natural fighter of bacteria that contributes to acne formation. It produces a bacteriostatic effect on skin.



Effects

- > Normalizing impure and oily skins
- > Reducing of pore dilation and drying the pimples.



Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Blue LM® LLLT



Maintenance

After 4/6 months, 2 sessions in one week



Application

	Week 1	Week 2	Week 3	Week 4
LM® LLLT Blue 	2 Application	2 Application	1 Application	1 Application

*= FDA 510k

Rosacea

Technologies

 LM[®] LLLT, Red

 LM[®] LLLT, Blue

Rosacea is a persistent skin condition marked by facial flushing and acne-like eruptions, often affecting the nose, cheeks, chin, or forehead. More common in women.

Red light stimulates mitochondria, boosting ATP production and cellular activity.

Blue light enhances cellular activity, prompting porphyrin production, a natural bacteria fighter, for a bacteriostatic effect on the skin.

Effects

- > Reduction of inflammation
- > Reduction of visible broken capillaries or damaged skin
- > Hydration

Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Red LM[®] LLLT followed by Blue LM[®] LLLT
- > To enhance the result, 2 Red LM[®] LLLT applications in week 2 and week 4 as adjunctive treatment are recommended

Maintenance

After 4/6 months, 2 sessions in one week

Application

No. Treatments		Frequency
LM [®] LLLT Blue + Red	 	4 to 5
		5 to 10

RECOMMENDATION:

Two treatments with the red mask as adjunctive treatment in week 2 and week 4 will enhance the skin's texture, making it more even and radiant.

Couperose



Technologies



LM® LLLT, Red

Through the wavelength in use there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity.

Thanks to this stimulation you will have:

- > Recall of hydration on surface
- > Increased capillary blood circulation and increased formation of new capillaries; this in turn provides additional oxygen and nutrients to accelerate the natural processes of tissue healing
- > Increased replacement of damaged cells



Effects

- > Reduction of inflammation
- > Reduction of visible broken capillaries
- > Hydration.



Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Infrared LM® LLLT



Maintenance

After 4/6 months, 2 sessions in one week



Application

	Week 1	Week 2	Week 3	Week 4
LM® LLLT Red 	2 Application	2 Application	1 Application	1 Application

Superficial Wrinkles*

Technologies



LM® LLLT, Red



LM® LLLT, Yellow

Through the red wavelength there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity. This leads to a deep stimulation of elastin and collagen resulting in toning and remodeling of periorbital area.

The yellow wavelength acts on the lymphatic system stimulating cell metabolism and promoting a detoxifying action to alleviate swelling conditions.

Effects

- > Bio-revitalization
- > Wrinkles deep reduction
- > Skin toning
- > Elastin and collagen production

Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Red LM® LLLT followed by Yellow LM® LLLT in the same session

Maintenance

After 4/6 months, 1 sessions in one week

Application

	Week 1	Week 2	Week 3	Week 4
LM® LLLT Red 	2 Application	1 Application	1 Application	1 Application
LM® LLLT Yellow 	2 Application	1 Application	1 Application	1 Application

*= FDA 510k

Superficial Teleangiectasia



Technologies



LM® LLLT, Red

Through the red wavelength there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity. Thanks to this stimulation you will have:

- > Production of elastin and collagen
- > Recall of hydration on surface
- > Increased capillary blood circulation and improvement of new capillaries formation; this in turn provides additional oxygen and nutrients to the skin



Effects

- > Bio-revitalisation
- > Capillaries reduction; this in turn provides additional oxygen to the skin.



Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Red LM® LLLT



Maintenance

after 4/6 months, 1 sessions in one week



Application

	Week 1	Week 2	Week 3	Week 4
LM® LLLT Red	2 Application	1 Application	1 Application	1 Application

Epidermal Pigmented Lesions*

Technologies

LM[®] LLLT, Red

Through the wavelength in use there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity.

Thanks to this stimulation you will have:

- > Rebalancing of melanin production by melanocytes
- > Increased replacement of damaged cells

Effects

- > Complexion uniformity
- > Clearing hyperpigmentations

Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Red LM[®] LLLT

Maintenance

After 4/6 months, 2 sessions in one week

Application

	Week 1	Week 2	Week 3	Week 4
LM [®] LLLT Red 	1 Application	1 Application	1 Application	1 Application

*= FDA 510k

(Acne) Scarring



Technologies



LM® LLLT, Red

Through the wavelength in use there is a stimulation of mitochondria with consequent production of ATP and an increase and improvement of cellular activity. Thanks to this stimulation you will have:

- > Production of elastin and collagen
- > Decreased inflammation



Effects

- > Bio-revitalisation
- > Skin brightening
- > Wrinkle reduction
- > Treatment of photo-aging
- > Increased healing of wounds (or similar)



Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Red LM® LLLT



Maintenance

after 4/6 months, 1 sessions
in one week



Application

	Week 1	Week 2	Week 3	Week 4
LM® LLLT Red 	2 Application	1 Application	1 Application	1 Application

Filler

Technologies



LM® LLLT, Red



LM® LLLT, Infrarered

The use of LM® LLLT pre-and post-fillers treatment enhances clinical results when compared to matched controls.

Used with fillers, additional light treatments decrease incidence of hematoma formation and provide the additional benefits of enhanced overall skin rejuvenation.

The light treatment provides the skin with supplementary vascular activity and achieves a healthier, plumper skin appearance.

Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Red LM® LLLT followed by Infrared LM® LLLT where indicated

Application

	1 Day Prior	Treatment Day	1 Day Post	7 Days Post
Filler Treatment	/	Filler Treatment	/	/
LM® LLLT Red 	/	1 Application	1* Application	1* Application
LM® LLLT Infrared 	1 Application	/	1* Application	1* Application

*In the same session apply first Red LM® LLLT for 15 minutes followed by Infrared LM® LLLT for 15 minutes more.

Botox™ Enhancement

Technologies

 LM® LLLT, Red

 LM® LLLT, Infrarered

The use of LM® LLLT treatment pre- and post- botox injection enhances clinical results when compared to matched controls.

Used with botox injections, red light treatment minimizes the possibility of bruising or swelling at the injection site and provides and increased longevity to the effects of the botox.

The light treatment provides the skin with supplementary vascular activity and achieves a healthier, plumper skin appearance.

Procedure

- > Remove make-up from the patient's face and eyelash extensions
- > Clean the skin with a suitable skin cleanser (ex. Salicylic acid wash)
- > Apply Red LM® LLLT followed by Infrared LM® LLLT where indicated

Application

	1 Day Prior	Treatment Day	1 Day Post	7 Days Post
Filler Treatment	/	Botox Treatment	/	/
LM® LLLT Red 	/	1 Application	1* Application	1* Application
LM® LLLT Infrared 	1 Application	/	1* Application	1* Application

*In the same session apply first Red LM® LLLT for 15 minutes followed by Infrared LM® LLLT for 15 minutes more.

Before & After



- ① Forehead wrinkles: extremely reduced
- ② Eye-contour wrinkles: smoothed less noticeable
- ③ Labial fold: disappeared
- ④ Chin wrinkles: reduced, less noticeable

- ⑤ Lips: treated side has improved tone, lifted up
- ⑥ Expression wrinkles around the mouth: reduced, less visible
- ⑦ Face contour: lifted up

→ Get in touch for more before&after shots.

Bibliography

1. Using photobiomodulation to treat premature aging - Leonardo Marini, MD et al – Prime Journal, 2013
2. Low Level Laser Therapy or LLLT or photobiomodulation in the therapy of dry eye and eyelid ectropion – Romina Fasciani, MD, Francesco Boselli, MD – EyeDoctor, 2022
3. Combined Low Level Light Therapy and Intense Pulsed Light Therapy for the treatment of dry eye in patients with Sjogren's Syndrome - Mateo Di Marino, MD et al Hindawi Journal of Ophthalmology, 2021
4. Light on a new treatment for dry eye disease and post-blepharoplasty – M. Pinto MD, et al - Topcon Symposium, Paris 2018
5. Evaluation of light-emitting diode (835 nm) application over human gingival fibroblast: An in-vitro study – M. Roncati MD, D. Lauritano MD, F. Cura MD, F. Carinci MD – Journal of Biological Regulators & Homeostatic Agents, 2016
6. Trichobiologht: A new, effective protocol in the treatment of androgenetic alopecia and telogen effluvium – Domenicao Piccolo MD et al – Dermatologic Therapy, 2021
7. Improvement of skin texture - P. Mezzana MD - High and Low intensity lights and multidrugs biostimulation Laser Med Sci DOI 10.1007/s10103-007-0456-8 Feb. 2007
8. Decrease of periorbital wrinkles depth - Dr. Cavagna - Dermocosmesi integrata 2011
9. The role of photobiostimulation in the treatment of male and female androgenetic alopecia: preliminary results on the use of an innovative equipment - Valeriani MD, Mezzana MD 2010
10. Face Photorejuvenation with young again® technology - A. Luverà MD, M.T. Luverà MD, E. Cervadoro MD, G. Cervadoro MD. - AMWC 2012 – Montecarlo
11. Photorejuvenation and PDT by a new LED technique at close distance - C. Canci MD, P. Mezzana MD U.S.I. - Unione Sanitaria Internazionale Clinic Marco Polo - Rome 2012
12. Predominatly non-thermal facial skin photorejuvenation using a sequentially combined CW-PW facial mask - L. Marini MD Trieste, Kronic MD University of Illinois, Chicago AMWC 2012 – Montecarlo
13. young again® - LED it be, biostimolazione eudermica natural - Dr. R. Cavagna - Parma LNE March 2011
14. young again® Technology - Dr. P. Mezzana - AMWC April 2010 – Montecarlo
15. Mitochondrial signal transduction in accelerated wound and retinal healing by near-infrared light therapy - Janis T. Eells, Margaret T.T. Wong-Riley, James VerHoeve, Michele Henry, Mary V. Buchman, Mary P. Kane, Lisa J. Gould, Rina Das, Marti Jett, Brian D. Hodgson, David Margolis, Harry T. Whelan – Mitochondrion 4 (2004) 559-567
16. Near Infrared (NIR) transfacial led therapy (Light Modulation®) an new adjuvant treatment in post-surgical and chronic periodontal patients – Giovanni Mauro MD, Pierluigi Casella DDS IDS 2015
17. Photobiostimulation with infrared led light (Light Modulation® technology) as an adjunctive therapy in maintenance recall: a preliminary study Marisa Roncati, B.S., R.D.H.; D.D.S. IDS 2015
18. Effect of NASA Light-Emitting Diode Irradiation on Wound healing - Robert L. Smits Jr. M.D, Ellen V. Buchmann B.S., Scott J. Turner M.S., Joan Cwiklinski M. S. – Dept. of Neurology, Medical College of Wisconsin, Milwaukee, Wisconsin - Harry T. Whelan M.D., Noel T. Whelan B.S., - Dept. of Neurology and Plastic Surgery, Medical College of Wisconsin, Milwaukee, Wisconsin, NASA -Marshall Space Flight Center, Alabama - David A. Margolis M.D.- Children's Hospital of Wisconsin - Ron Ignatius, Todd Martin B.S. –Quantum Devices Inc., Barneveld, Wisconsin - Alan F. Philippi M.D., William R. Graff Ph. D - Naval Special Warfare Group TWO, Norfolk, Virginia – Brian Hodgson D.D.S. - Children's Hospital of Wisconsin, 4th Dental battalion, 4th Force Service group, USMCR, Marietta, Georgia – Lisa Gould M.D., Ph.D., Mary Kane B.S., Gina Chen B.S. – Dept. of plastic Surgery, Medical College of Wisconsin, Milwaukee, Wisconsin - James Caviness M.D. – Submarine Squadron ELEVEN, San Diego, California – Helen Stinson, Vita Cevenini B.S. – NASA –Marshall Space Flight Center, Alabama. - Journal of Clinical Laser Medicine & Surgery, Vol. 19, No. 6, 2001

19. Efficacy and safety of monochromatic phototherapy in patients with gingivitis - Lena Persson DDS, et al
20. Inflammatory cytokines are suppressed by light-emitting diode irradiation of P.gingivalis LPS-treated human gingival fibroblasts - HongRan Choi, et al
21. Anti-infective therapy of peri-implantitis with adjunctive local drug delivery or photodynamic therapy: 12-month outcomes of a randomized controlled clinical trial- Mario Bassetti, et al
22. Photodynamic inactivation of Streptococcus mutans and Streptococcus sanguinis biofilms in vitro - Cristiane Aparecida Pereira, et al
23. Modulation of Lipopolysaccharide-induced NF- κ B Signaling Pathway by 635 nm Irradiation via heat Shock Portien 27 in Human Gingival Fibroblast cells - WonBong Lim, et al
24. Antimicrobial effect of photodynamic therapy using high-power blue light-emitting diode and red-dye agent on Porphyromonas gingivalis - Chui C, et al
25. Treatment of chronic periodontitis by laser and LED-PDT light - An in vivo study - Dr. G. Karakitsos & Dr. J. Karakitsos Kurz
26. Controlling periodontal bone levels with multiple LED irradiations - Po-Chun Chang, et al
27. Effect of photoactivated disinfection with a light-emitting diode on bacterial species and biofilms associated with periodontitis and peri-implantitis - Sigrun Eick DMD, et al
28. Irradiation by light-emitting diode light as an adjunct to facilitate healing of experimental periodontitis in vivo - Chang P-C, et al
29. Photoactivated disinfection using light-emitting diode as an adjunct in the management of chronic periodontitis: a pilot double-blind split-mouth randomized clinical trial - Bassir SH, et al
30. Adjunctive photodynamic therapy to non-surgical treatment of chronic periodontitis: a systematic review and meta-analysis- Sgolastra F., et al
31. Topical Photodynamic therapy is very effective for oral verrucous hyperplasia and oral erythroleukoplakia - Hung-Pin Lin, et al
32. Multi light and drugs: a new technique to treat photo-aging - Paolo Mezzana, MD
33. Photobiostimulation (PBS) with Infrared LED light (E-LIGHT® D technology) as an adjunctive therapy in chronic periodontitis: A preliminary study - Giovanni Mauro, MD, AMWC Montecarlo 2014
34. New perspectives in photobiomodulation - Maria Teresa Luverà, MD - AMWC Montecarlo, 2014
35. Low intensity lights and bio-mimetic peptides: a new technology to prevent and treat photoaging - P. Mezzana, MD, C. Canci, MD - AMWC Montecarlo, 2014
36. A new PDT technique in Actinic Keratosis treatment and in NMSC (Non Melanoma Skin Cancer) prevention - P. Mezzana MD, C. Canci, MD - AMWC Montecarlo 2013
37. Acne treated with young again® technology - M.T. Luverà, MD, A. Luverà, MD - AMWC Montecarlo 2013
38. Face photorejuvenation with EPI-C® MED - young again® technology - A. Luverà, MD, E. Cervadoro, MD, G. Cervadoro MD- AMWC Montecarlo, 2012
39. Predominantly non-thermal skin photorejuvenation using a sequentially combined CW-PW near infrared 840nm-880nm facial mask - Leonardo Marini, SDC - AMWC Montecarlo, 2012
40. Photorejuvenation by PDT through a new LED 624nm technique - young again® technology- EPI-C® MED device - P. Mezzana, MD, C. Canci, MD - AMWC 2012
41. young again® project - Cellular vitality & longevity - Roberto cavagna, MD - AMWC Montecarlo, 2011
42. young again® technology- Introduction - P. Mezzana, MD - AMWC Montecarlo, 2010





science onward



© 2024 Espansione Group

Blocco 27, Via Degli Orefici 152
Centergross, Funo (BO)
40050, Italy

VAT NUMBER: IT 00707821203
TAX CODE: 00874760408

