Q.Light® PRO UNIT – Phototherapy for health and beauty professionals

The Q.Light® PRO UNIT treatment system is designed for use by health and beauty professionals. It complies with the medical product standards in the EEC according the regulation 93/42. The Q.Light® PRO UNIT is very easy to use due to its compact design and the flexible filter system.

The optical system with special light source and patented technology, offers an ideal spectrum for various applications in the field of light and Phototherapy. An electronic timer allows to operated the system applying always the right dose.

The system may be equipped with different tripods for both mobile and stationary use.

The main applications for the Q.Light® PRO UNIT system are:

- PAIN CARE
- SAD CARE
- ACNE CARE
- WOUND CARE

The system can also be used as a colour therapy device.
A 6 colour filter modules set is available: red – orange – yellow – green blue – violet

Technical features of Q.Light® PRO UNIT

| Digital display | yes |
| Modules         | WOUND CARE, ACNE CARE, PAIN CARE, SAD CARE 6 Colour Filter Modules for Colour Therapy |
| Treatment Area Ø standard | 5 – 40 cm variable |
| Light Source    | Patented full spectrum natural daylight light source |
| Spectrum        | 385 – 1700 nm |
| Polarization    | ≥ 98 % |
| Visible Light emission | Visible light between 385 – 780 nm |
| Infrared emission | Near infrared between 780 – 1700 nm |
| UV emission     | none |
| Light Temperature | Optimized power distribution over the complete spectrum. |
| Certification   | ISO 9001 & EN 13485 |
| CE Mark         | 1275 |

activates microcirculation
Light quality and power density **Q.Light® PRO UNIT**

**Q.Light®** Emission Spectrum with patented light source technology

Relative Transmission in %

![Graph showing the emission spectrum with filter exclusion and inclusion of IR wavelengths.]

Additional technical data for **Q.Light® PRO UNIT**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>230 V, 50 - 60 Hz</td>
</tr>
<tr>
<td>Power Supply</td>
<td>60 VA max.</td>
</tr>
<tr>
<td>Safety Class</td>
<td>II, Type B</td>
</tr>
<tr>
<td>Average treatment Power density</td>
<td>40 mW/cm², 2.4 Joule/cm² (min.) at standard treatment distance</td>
</tr>
<tr>
<td>Weight</td>
<td>1.200 g</td>
</tr>
<tr>
<td>Size</td>
<td>260 x 158 x 173 mm (L x B x H)</td>
</tr>
<tr>
<td>Guarantee</td>
<td>12 month from delivery date on</td>
</tr>
</tbody>
</table>

**Q.Light® PRO UNIT** features

- On/Off
- Adjustable Ø of treatment area
- Slot for treatment module
- Digital display
- Zeiss lens & Polarization Filter

**Q.Light®** - Treatment parameters & Treatment dose in min. for **Q.Light® PRO UNIT**

<table>
<thead>
<tr>
<th>Device</th>
<th>Polarization degree</th>
<th>Treatment distance</th>
<th>Treatment diameter</th>
<th>Ø Dose in min.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q.Light® PRO UNIT</strong></td>
<td>≥ 98 %</td>
<td>40 cm</td>
<td>10 - 40 cm</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30 cm</td>
<td>7 - 30 cm</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 cm</td>
<td>5 - 30 cm</td>
<td>5</td>
</tr>
</tbody>
</table>

defined spectrum
General information about Q.Light® Photo Therapy

Q.Light® Light Therapy is efficacious in all phases of healing: It arrests inflammations, alleviates pain, activates the immune response, improves perfusion and revascularization, increases lymphatic drainage and improves the metabolism and regulates the hormonal system. All of these effects support the body’s power of self-healing, since they have a significant positive influence on many health disorders.

The Q.Light® spectrum is clearly defined. It contains no ultraviolet rays and provides consistent energy and is similar to laser light. Unlike natural light, it is not subject to diurnal or seasonal variations. Thus, its dosage can be individually determined to fit the indication concerned. The virtually cold Q.Light® beam is polarized within a spectrum of 385 to 1700 nm. Based on a power density of 40 mW/cm² at standard treatment distance, it penetrates deep into the tissue.

With the specific Q.Light® treatment filter modules there is always the right spectrum available to achieve best possible treatment results. The patented light source and technological surrounding offers ideal parameters for photo therapy and light therapy applications.

Q.Light® Light Therapy offers enormous relief for patients, doctors and nursing staff. As individual treatment sessions are very short, it can easily be integrated into standard treatment programs. Light Therapy is applied for a few minutes at a time – it doesn’t need more to take its beneficial effect.

How to treat with Q.Light® PRO UNIT

For optimal results, the Q.Light® therapy with specialized treatment modules should be applied on a daily base. The average dose applied e.g. to wounds must be min. 12 J/cm². The light beam is directed in a right angle to the area to be treated. Only after treatment area has been properly cleansed, the patient’s regenerative capacity is activated by Light therapy. Then, healing takes place in various interlinking phases.

In general, one session a day, up to 20 sessions within 4 weeks in average. Operation takes about 4 ~ 15 minutes to treat each area for 1 session.

Q.Light® Photo Therapy is specially designed for the treatment of wounds, pain, skin problems and psychological disorders.

Q.Light® has no side effects. It is very safe system.

Radiation is not recommended for people who are extremely sensitive to light and women in pregnancy.

optimized treatment results
Q.Light® PRO UNIT Indication Filter Set - 4 specialized treatment modules

The Q.Light® PRO UNIT offers specialized treatment modules which allows to treat specific indications always with the right and best spectrum. Just insert the module into the foreseen module slot in the Q.Light® PRO UNIT device and you are set for the treatment. The following specialized treatment modules are available:

**PAIN CARE**

The Q.Light® PAIN CARE module is specially designed for the application of the following applications:

- Rheumatologic diseases, chronic Pain

**ACNE CARE**

The Q.Light® ACNE CARE module is specially designed for the following applications:

- mild and moderate
- Common Acne and Acne Vulgaris

**SAD CARE**

The Q.Light® SAD CARE system is specially designed for the following applications:

- SAD / Seasonal Effective Disorder, Depressions

**WOUND CARE**

The Q.Light® WOUND CARE module is specially designed for the following applications:

- Stasis Ulcers, Decubitus Ulcers, Pressure sores, Diabetic Gangrene, Surgical Wounds, Injury wounds, Burns

Q.Light supports cell proliferation
Q.Light® Light Therapy for pain care and the treatment of chronic pain

The Q.Light® PAIN CARE module is specially designed for the application of pain care treatments in medical practices, clinics, specialized treatment centres, nursing homes/services and for treatment at home.

The main applications for the Q.Light® PAIN CARE therapy are:

- Rheumatologic diseases
- Chronic pain
- Back problems

Device and module for PAIN CARE:

Q.Light® PRO UNIT

Q.Light® PAIN CARE module

Technical features of Q.Light® PAIN CARE module

<table>
<thead>
<tr>
<th>Module</th>
<th>PAIN CARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powering Light Source</td>
<td>Patented full spectrum natural daylight light source</td>
</tr>
<tr>
<td>Spectrum</td>
<td>580 – 1700 nm</td>
</tr>
<tr>
<td>Polarization</td>
<td>≤ 0 %</td>
</tr>
<tr>
<td>Visible Light emission</td>
<td>Visible light between 580 – 780 nm</td>
</tr>
<tr>
<td>Infrared emission</td>
<td>Near infrared between 780 – 1700 nm</td>
</tr>
<tr>
<td>UV emission</td>
<td>none</td>
</tr>
<tr>
<td>Light Temperature</td>
<td>Optimized power distribution over the complete spectrum.</td>
</tr>
<tr>
<td>Certification</td>
<td>ISO 9001 &amp; EN 13485</td>
</tr>
<tr>
<td>CE Mark</td>
<td>1275</td>
</tr>
</tbody>
</table>

activates microcirculation
**Light quality & power density of Q.Light® PAIN CARE module**

**Q.Light® emission spectrum with patented light source technology**

![Graph showing transmission in %](image)

- 560 nm
- 780 nm
- 1700 nm

**Research Backup on pain care**

**The use of monochromatic Infrared Energy Therapy in Podiatry.**

**Podiatry**

Carnegie D.


**Restoration of sensation, reduced pain, and improved balance in subjects with diabetic peripheral neuropathy: a double-blind, randomized, placebo-controlled study with monochromatic near-infrared treatment - Emerging Treatments and Technologies**

by David R. Leonard, M. Hamed Farooqi, Sara Myers

Published: Diabetes Care, Jan, 2004

**Risk of falls in elderly patients is markedly reduced through improvement in sensation, balance, and gait with infrared photo energy, and other physical therapy (Abstract).**

Kochman AB:

Published: J Geriatric Phys Therapy 25:29, 2002

**Changes of cytokine content in human blood after ist in vivo and invitro exposure to visible polarized light at therapeutic dose.**

K.A. Samoilova, D.I.Sokolov, K.D.Obolenskaya.


---

**Q.Light® treatment parameters & treatment dose in min. with Q.Light® PAIN CARE module**

<table>
<thead>
<tr>
<th>Device</th>
<th>Polarization degree</th>
<th>Treatment distance</th>
<th>Treatment diameter</th>
<th>Therapy dose in min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.Light® PRO UNIT</td>
<td>≥ 98 %</td>
<td>40 cm</td>
<td>10 - 40 cm</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30 cm</td>
<td>7 - 30 cm</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 cm</td>
<td>5 - 20 cm</td>
<td>7</td>
</tr>
</tbody>
</table>

**defined spectrum**

*Made in Switzerland*
Systemic mechanisms of anti-inflammatory, immunomodulating effects of visible and near infrared light

Research on wound healing with visible light demonstrates that influences are directed to the blood makeup through action on the superficial skin micro-vessels.

The overall action can be described as the following:
Irradiated blood is able to influence the total volume of blood in the body within a time of 90 minutes. Continuation of changes are observed to be continued, at a slower rate, for up to 24 hours after irradiation. The dose of emitted light applied for treatment is 12 J/cm² with a wavelength of 400-1700 nm and a polarisation degree of 95%.

The treatment result can be summarised as the following:
- Immediate effect on blood changes are due to transcutaneous photomodification with a fast (30-90 minutes) translation of light-induced changes to the whole circulating volume of blood.
- Changes in blood cells and plasma of the entire circulating blood are induced.
- Increased functional activity of monocytes, granulocytes, lymphocytes, platelets, improvement of rheologic transport and gas-transport properties of erythrocytes.
- Induced lipid peroxidation levels in the erythrocyte membrane and plasma.
- Modified haemostasis.
- Significant decreases in the plasma content of pro-inflammatory cytokines and increased levels of anti-inflammatory IL10 and IFN-g. modulated growth content factors and increased growth-promoting plasma properties for keratinocytes, endothelialcytes, fibroblasts and radiation damaged autologous cells.

The changes demonstrated regulatory character of visible light therapy and it's therapeutic efficacy for pain care even in cases of chronic pain.

Q.Light® is effective to treat pain

Q.Light® supports anti-inflammatory process
The deep red beam for physiotherapy, rehabilitation & sports medicine

General information on Q.Light® PAIN CARE

The Q.Light® Therapy System is suited for use in prophylactic treatment therapies and rehabilitation. It is a practicable high tech method of treatment. This innovative medical technology, made in Switzerland, is already used by medical professionals in many countries. Anyone can benefit from this effective and low cost treatment.

From the physical point of view, the deep red beam is visible incoherent daylight. Without ultraviolet radiation, this specialized light spectrum acts on the organism specifically to treat pain.

Q.Light® is becoming increasingly popular in physiotherapy, rehabilitation and sports medicine.

The resulting biopositive effects strengthen the defense forces and the entire metabolism is stimulated in addition to the inflammation-retarding and pain-relieving effects. Q.Light® treatment has shown that it can succeed in reducing pain where classic treatment methods have failed.

Q.Light® provides consistent intensity, as already well known in photo therapy, based on an exactly defined spectrum that has been adjusted for pain treatment. The system works with an energy output of 40 mW/cm² and a spectrum of 385 to 1700 nm.

Moreover, Q.Light® therapy will certainly play an important role in individual health care due to its ease of use and reasonable price.

How to treat pain with Q.Light®

General pain care

For optimal results the Q.Light® PAIN CARE therapy should be applied on a daily base. The average dose applied to the region of pain is around 12 J/cm² to 24 J/cm². The light beam is directed at a right angle to the area to be treated. Q.Light® therapy can be an ideal complementary treatment to a variety of pain management programs. It's beneficial influence can affect the patient's general condition and pain symptoms. This kind of adjuvant treatment is apt to achieve reduction from pain on motion, radiation and intensity. Q.Light® therapy is applied for just a few minutes - 10 to 15 minutes exposure time per treatment is ideal, mainly twice a day, but in acute stages sometimes three to four times per day. Direct the light onto the area to be treated from a distance of approximately 30 to 40 cm. In cases of joint treatment it is possible to extend the therapy without danger.

Side effects or contraindications have not been reported.
Q.Light® Light Therapy for general SAD care and the treatment of depressions.

The Q.Light® SAD CARE module is specially designed for the application of neurological treatments in medical practices, clinics, specialized treatment centers, nursing homes/services and for the treatment at home.

The main applications for the Q.Light® SAD CARE therapy are:

- SAD / Seasonal Affective Disorder
- Depressions

Device and module for SAD CARE:

Q.Light® PRO UNIT

Q.Light® SAD CARE module

Technical features of Q.Light® SAD CARE module

<table>
<thead>
<tr>
<th>Module</th>
<th>SAD CARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Area Diameter Ø in cm</td>
<td>5 – 40 cm variable</td>
</tr>
<tr>
<td>Light Source</td>
<td>Patented natural daylight spectrum light source</td>
</tr>
<tr>
<td>Spectrum</td>
<td>420 – 780 nm</td>
</tr>
<tr>
<td>Polarization</td>
<td>≤ 0 %</td>
</tr>
<tr>
<td>Visible Light emission</td>
<td>Visible light between 420 – 780 nm</td>
</tr>
<tr>
<td>Infrared emission</td>
<td>No infrared</td>
</tr>
<tr>
<td>UV emission</td>
<td>No UV</td>
</tr>
<tr>
<td>Light Temperature</td>
<td>Optimized power distribution over the complete spectrum. Practically cold light</td>
</tr>
<tr>
<td>Certification</td>
<td>ISO 9001 &amp; EN 13485</td>
</tr>
<tr>
<td>CE Mark</td>
<td>1275</td>
</tr>
</tbody>
</table>

activates neurotransmitters
Light quality & power density of Q.Light® SAD CARE module

Q.Light® emission spectrum with patented light source technology

Transmission in %

420 nm 780 nm

Q.Light® treatment parameters & treatment dose in min. with Q.Light® SAD CARE module

<table>
<thead>
<tr>
<th>Device</th>
<th>Treatment distance</th>
<th>Treatment diameter</th>
<th>Lux</th>
<th>Therapy dose in min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.Light® PRO UNIT</td>
<td>20 cm</td>
<td>20 cm</td>
<td>2'500</td>
<td>240</td>
</tr>
<tr>
<td></td>
<td>10 cm</td>
<td>10 cm</td>
<td>10'000</td>
<td>30</td>
</tr>
</tbody>
</table>

Research Backup on SAD

Light suppresses melatonin secretion in humans
Lewy, A J, Wehr TA, Goodwin FK, Newsome DA, Markey SP.
Published: Science. 1980; 210:1267-1269.

A description of the syndrome and preliminary findings with light therapy
Resenthal NE, Sack DA, Gillin JC, et al. Seasonal affective disorder.
Published: Arch Gen Psych. 1984; 41:72-80

Canadian consensus for the treatment of seasonal affective disorder
Lam RW, Levit A (eds.).
Canadian J of Diagnosis 1998; Supplement; 2 – 15:

Lichttherapie 3. edition
Zulley J, Wirz-Justice, A (eds). Regensburg:
S. Rodner Verlag, 1999

Beginning to see the light.
Wirz-Justice A,
Commentary. Arch Gen Psychiatry 1998; 55:661-662; auch alle Originalartikel pp 875 – 896

Seasonal Affective Disorder and Beyond: Light treatment for SAD and non SAD conditions

defined spectrum
**Neuroimmunomodulating effects induced by visible light**

The immune system is susceptible to a variety of stresses. Recent work in neuroimmunology has begun to define how mood alteration, stress, the seasons, and daily rhythms can have a profound effect on immune response through hormonal modifications. Central to these factors may be light through an eye-brain hormonal modulation.

By human beings, only visible light (400-700 nm) is received by the retina of the eye. This light energy is then transduced and delivered to the visual cortex and, by an alternative pathway, to the suprachiasmatic nucleus (SCN), the hypothalamic region that directs circadian rhythm. Visible light exposure also modulates the pituitary and pineal glands, leading to neuroendocrine changes. Melatonin, norepinephrine and acetylcholine decrease with light activation, whereas cortisol, serotonin and dopamine levels increase.

The synthesis of vasoactive intestinal polypeptide (VIP), gastrin releasing peptide (GRP) and neuropeptide Y (NPY) has been shown to be modified by light. These induced neuroendocrine changes can lead to alterations in mood and circadian rhythm as well as immune modulation. An alternative pathway for immune modulation by light is through the skin. Visible light (400-700 nm) can penetrate epidermal and dermal layers of the skin and may directly interact with circulating lymphocytes to modulate immune function.

It is therefore important for treatment to control the intensity, dose and wavelength of emitted light.

**Q.Light® is effective to treat SAD symptoms**

In conclusion, light should be regarded as an effective drug with strong potential to cure SAD symptoms. Light is a versatile therapeutic tool that can be combined with other therapies.
Therapeutic guidelines for the treatment of SAD

Seasonal Affective Disorder (SAD)

1. Encourage daily walks outdoors; the patient may look up at the sky but never directly at the sun. Enhance indoor lighting with regular lamps and fixtures.

2. Set a timer on a light to go on early in the morning in the patient’s bedroom. Consider a dawn simulator for a more naturalistic artificial dawn.

3. Initiate Q.Light® therapy with 10,000 lux, starting with 30 minutes ideally in the morning, not later than noontime. Increase the duration if symptoms become more severe, up to 45 minutes twice a day.
   - Aerobic exercises, preferably in combination with exposure to bright light, may be quite helpful.
   - To help the patient manage stress, suggest vacations (preferably in the south) at strategic times, and provide support, counseling, and therapy.

How to treat SAD with Q.Light®

General SAD care

For optimal results with Q.Light® SAD CARE therapy, it is important to apply an effective dose. To receive adequate biological response an average dose is applied to the eyes of 30 min. Minimum treatment distance. The light beam is directed at a right angle to the face. The treatment should be applied on a daily basis. It is not necessary to look directly into the light beam!
One can read a book while receiving light therapy.

Some studies have reported positive responses in patients with nonseasonal depression, premenstrual syndrome (late luteal dysphoria), bulimia, and alcohol withdrawal symptoms. Beneficial results have also been obtained by using the known capacity of light administration and light restriction to shift circadian rhythms.
**Q.Light® Light Therapy for acne treatment**

The **Q.Light® ACNE CARE** module is specially designed for the application of acne treatments in medical practices, clinics, specialized treatment centres, beauty salons and for treatment at home.

The main applications for the **Q.Light® ACNE CARE** therapy are: mild and moderate

- **Common acne**
- **Acne vulgaris**
  - acne comedonica
  - acne papulopustulosa
  - acne conglobata

**Device and module for ACNE CARE:**

**Q.Light® PRO UNIT**

**Q.Light® ACNE CARE module**

**Technical data of Q.Light® ACNE CARE module**

<table>
<thead>
<tr>
<th>Module</th>
<th>ACNE CARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Area Diameter Ø in cm</td>
<td>5 – 40 cm variable</td>
</tr>
<tr>
<td>Powering Light Source</td>
<td>Patented full spectrum natural daylight light source</td>
</tr>
<tr>
<td>Spectrum</td>
<td>385 – 500 nm</td>
</tr>
<tr>
<td>Polarization</td>
<td>≥ 98 %</td>
</tr>
<tr>
<td>Visible Light emission</td>
<td>Visible light between 385 – 500 nm</td>
</tr>
<tr>
<td>Infrared emission</td>
<td>no infrared</td>
</tr>
<tr>
<td>UV emission</td>
<td>no UV</td>
</tr>
<tr>
<td>Light Temperature</td>
<td>Optimized power distribution over the complete spectrum. Practically cold light</td>
</tr>
<tr>
<td>Certification</td>
<td>ISO 9001 &amp; EN 13485</td>
</tr>
<tr>
<td>CE Mark</td>
<td>1275</td>
</tr>
</tbody>
</table>

**excites porphyryin**
Light quality & power density of Q.Light® ACNE CARE module

Q.Light® emission spectrum with patented light source technology

Transmission in %

Research backup on acne

An action spectrum for blue and near ultraviolet inactivation of Propionibacterium acnes; with emphasis on a possible porphyrin photosensitisation.
Kjeldstad B, Jhonsson
Photochemistry-Photobiology 1986; 43(1); 67-70

Singlet oxygen (1 delta g) generation from coproporphyrin in Propionibacterium acnes on irradiation.
Arakane K, Ryu A, Hayashi C, Masunaga T, Schinmoto K, Mashiko S, Nagano T, Hirobe M.

Effect of Visible Light on Reactive Oxygen Species Production
Department of Chemistry and Physics, Department of Life Sciences Bar-Ilan University, Ramat-Gan 52900, Israel

Visible light promotes proliferation of normal skin cells

Improvement of rheologic parameters, ligand- and oxygen-binding capacity of erythrocytes of circulating blood after exposure of the body surface to visible polarized light.

defined spectrum
What is acne?
Cosmetic medicine, also called cosmetology or dermatocosmetics, deals with skin disorders. Dermatocosmetic treatments rank very highly, as they support medical treatments, occasionally even contributing decisive elements to their success. A very good example for skin disorders that both physicians and beauticians are frequently confronted with is common acne or acne vulgaris:

Common acne
Common acne is one of the most widespread skin disorders. It typically begins during puberty, often - but not always - subsiding when patients are in their thirties. Depending on the severity of the disorder, acne vulgaris can take on three different forms:

Acne comedonica
Acne comedonica is characterized by the predominant presence of open and closed comedones appearing in varying numbers and intensities, but mainly in the facial region, which is very distressing for most patients.

Acne papulopustulosa
With the inflammation progressing, painful papules tend to appear, often leaving behind visible scars after healing and thus provoking significant emotional stress. Such is the clinical picture of acne papulopustulosa.

Acne conglobata
The severest form of common acne is acne conglobata. Acne conglobata is characterized by the concurrent presence of comedones, pustules, indurated papules and abscesses with interconnecting sinuses that affect large skin regions. They develop on the back and the nape; in the latter case, it’s called acne inversa. Patients are generally “stigmatized” by numerous scars that can be very pronounced, even disfiguring.

Visual treatment results with visible light in the spectrum from 385 – 500 nm

before

After Light Therapy

before

After Light Therapy

for clear skin
Acne and light therapy mechanisms

**Q.Light® ACNE CARE** has been specially designed for the treatment of acne. It offers the right spectrum and power density to achieve best treatment results.

Acne is a dermatological disease that affects about 40% of the population between 12 and 30 years.

As part of its reproduction and metabolism process, the *Propionibacterium* Acnes (P. Acne bacteria) releases a certain pigment called porphyrin. Porphyrin molecules, once absorbing photons, become chemically active and transform into a state of aggregation that can result in several formations. One of the formations is a free oxygen radical that attacks the cell membrane and leads to the destruction of the P. acne bacterium. The efficacy of this photochemical process is determined by the production rate of excited porphyrin molecules, influenced by the concentration of porphyrin, dose of photons and the wavelength of the photons.

---

**How to treat acne with Q.Light® ACNE CARE**

**General acne care**

Q.Light® ACNE CARE with specified polarized spectrum in the blue range of light has a favorable influence on acne. Scientific studies and empirical reports show individual cases of acne to be significantly reduced or even completely healed by regular exposition to Q.Light® ACNE CARE. As individual treatment sessions are very short, Q.Light® ACNE CARE can easily be integrated into traditional - local or systemic - regimens of acne therapy. The average dose applied is 9.6 J/cm² once a day. For optimal results it is recommended to clean the area to be treated with a mild cleanser. Then direct the Q.Light® beam at a right angle to the treatment area. The treatment time per session is 15 min. at max treatment distance.

**Q.Light® Ampoule Cure “Pure”**

“Pure” is a specially developed ampoule serum for the application to the affected skin area prior to light therapy with Q.Light® ACNE CARE. It should be applied in the first 7 days of treatment to support quick improvements. After, apply an ampoule to the affected skin area every three to four days until acne has totally disappeared. “Pure” also moisturizes and calms the skin at the same time.

---

Q.Light®

*Made in Switzerland*

**regulating photomodulation**
**Q.Light®** Light Therapy for general wound care and the treatment of difficult healing wounds.

The **Q.Light® WOUND CARE** system is specially designed for the application of wound care treatments in medical practices, clinics, specialized treatment centres, nursing homes/services and for treatment at home.

The main applications for the **Q.Light® WOUND CARE** are:

- Stasis Ulcers / Leg Ulcers
- Decubitus Ulcers / Pressure sores
- Diabetic Gangrene
- Surgical Wounds
- Injury wounds
- Burns

Devices and module for WOUND CARE:

**Q.Light® PRO UNIT**  
**Q.Light® WOUND CARE module**

<table>
<thead>
<tr>
<th>Technical features of <strong>Q.Light® WOUND CARE module</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Module</strong></td>
</tr>
<tr>
<td>Treatment Area Ø standard</td>
</tr>
<tr>
<td>Light Source</td>
</tr>
<tr>
<td>Spectrum</td>
</tr>
<tr>
<td>Polarization</td>
</tr>
<tr>
<td>Visible Light emission</td>
</tr>
<tr>
<td>Infrared emission</td>
</tr>
<tr>
<td>UV emission</td>
</tr>
<tr>
<td>Light Temperature</td>
</tr>
<tr>
<td>Certification</td>
</tr>
<tr>
<td>CE Mark</td>
</tr>
</tbody>
</table>

activates microcirculation

*Made in Switzerland*
Light quality & power density of Q.Light® WOUND CARE module

Q.Light® emission spectrum with patented light source technology

Research Backup on wound healing

The effect of polarized-light on wound healing
Department of Plastic Surgery, University Hospital Gent, Belgium
Published: European Journal of Plastic Surgery – 2000

A conservative approach for deep dermal burn wounds using polarised-light therapy
Department of Plastic Surgery, University Hospital Gent, Belgium
Published: British Journal of Plastic Surgery – 2002

On the mechanism of enhancement of wound healing by visible incoherent polarized light: stimulation of the human keratinocyte and fibroblast proliferation in vitro by soluble factors of the circulating blood.
M.I. Blinova, K.A. Samoilova, N.M. Yudintzeva, N.M. Kalmykova:

Effect of NASA Light-Emitting Diode (LED) Irradiation on Wound Healing.
Cevenini V, Stinson H, Ignatius R, Martin T, Cwiklinski J, Philippi AF, Graf
WR, Hodgson B, Gould L, Kane M, Chen G, Caviness J

Q.Light® treatment parameters & treatment dose in min. with Q.Light® WOUND CARE module

<table>
<thead>
<tr>
<th>Device</th>
<th>Polarization degree</th>
<th>Treatment distance</th>
<th>Treatment diameter</th>
<th>Therapy dose in min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.Light® PRO UNIT</td>
<td>≥ 98 %</td>
<td>40 cm</td>
<td>10 – 40 cm</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30 cm</td>
<td>7 – 30 cm</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 cm</td>
<td>5 – 20 cm</td>
<td>3</td>
</tr>
</tbody>
</table>

defined spectrum
Systemic mechanisms of anti-inflammatory, immunomodulating and wound healing effects of visible- and near infrared light.

Research on wound healing with visible light demonstrates that influences are directed to the blood makeup through action on the superficial skin microvessels.

The overall action can be described as the following:
- Irradiated blood is able to influence the total volume of blood in the body within a time from of 90 minutes. Continuation of changes are observed at a slower rate, for up to 24 hours after irradiation. The dose of emitted light applied for treatment is 12 J/cm² with a wavelength of 400 - 1700 nm and a polarisation degree of 95 %.

The treatment result can be summarised as the following:
- Immediate effect on blood changes are due to transcutaneous photomodification with a fast (30-90 minutes) translation of light-induced changes to the whole circulating volume of blood.
- Induced changes in blood cells and plasma of the entire circulating blood.
- Increased functional activity of monocytes, granulocytes, lymphocytes, platelets and improves rheologic transport and gas-transport properties of erythrocytes.
- Induced lipid peroxidation levels in the erythrocyte membrane and plasma
- Modified haemostasis.
- Significant decreases in the plasma content of proinflammatory cytokines and increased levels of anti-inflammatory IL10 and IFN-γ.
- Modulated growth content factors and increased growth-promoting plasma properties for keratinocytes, endothelialocytes, fibroblasts and radiation-damaged autologous cells.

The changes demonstrated regulatory character of visible light therapy and its therapeutic efficacy for wound care even in the case of difficult healing wounds.

Q.LIGHT® supports cell-proliferation
General information on Q.Light® WOUND CARE

Q.Light® Light Therapy is efficacious in the different phases of wound healing, arresting inflammations, alleviating pain, activating the immune response, improving perfusion and revascularization, increasing lymphatic drainage and generally improving the metabolism.

All of these effects support the body's power of self-healing. In the case of chronic wound healing disorders, they have a significant positive influence on pathological wound environments. Wounds can heal if newly formed capillaries increase the blood supply, if increased lymphatic drainage dissipates edemas, if an improved immune response fights infections and metabolism is reactivated. Thus, Q.Light® Light Therapy has a systemic effect, promoting wound healing by restoring formerly disturbed metabolic and regenerative processes.

The spectrum of Q.Light® WOUND CARE is clearly defined. It contains no ultraviolet rays and provides consistent energy. Thus, its dosage can be individually determined to fit the indication concerned. The Q.Light® light beam is polarized within a spectrum of 385 to 1700 nm and produces a power density of 40 mW/cm² at max. treatment distance. The Q.Light® light beam can therefore penetrate deep into the tissue.

Q.Light® Light Therapy is an enormous help for patients, doctors and nursing staff. As individual treatment sessions are very short, it can easily be integrated into standard wound care procedures. After swabbing the wound, light therapy is applied for a few minutes to the wound area — it doesn't need more to take its beneficial effect. Side effects or contraindications have not been reported.

How to treat wounds with Q.Light®

General wound care

For optimal results the Q.Light® WOUND CARE therapy applied on a daily basis. The Q.Light® WOUND CARE light beam technically is polarized, incoherent visible and near infrared light. The average dose applied to wounds must be min. 12 J/cm². The light beam is directed at a right angle to the area under treatment. Only after wounds have been properly cleansed, the patient’s regenerative capacity is activated by light therapy.

Wound healing takes place in three interlinking phases:
- endogenous purification
- granulation
- epithelialization

Burn wounds

The Q.Light® WOUND CARE therapy in many cases reduces the need for surgery in the treatment of deep dermal burns, if applied immediately after submission. Within this group of patients, the use of polarized light accelerates wound healing and allows very early pressure therapy, thus reducing hypertrophic scarring and contractures. No extension of the hospital stay is required because of the better aesthetic and functional results, this especially applies to burns of the hands. Polarized-light therapy has become the first therapy choice for deep dermal burns in many hospitals and burn centers.

optimized treatment results
**Q.Light® PRO UNIT & Colour Filter Set - 6 specialized treatment modules**

The **Q.Light® PRO UNIT** offers special dichroic colour filter modules which allows to use the device also for colour therapy. The brilliant colours are achieved by the patented light source that is powered by the **Q.Light® PRO UNIT**.

**Red Filter Module**

**Characterization**
- Most active and warmest colour

**Global effect**
Activates energy reserves in case of mental and physical exhaustion

**Orange Filter Module**

**Characterization**
- Activity and inspiration

**Global effect**
Stimulates creativity and self-respect especially under stress and depression

**Yellow Filter Module**

**Characterization**
- Intelligence and success

**Global effect**
Strengthens and motivates in tired and moody phases

**Green Filter Module**

**Characterization**
- Balance and hope

**Global effect**
Boosts equilibrium, composure and stamina in weak and restless situations

**Blue Filter Module**

**Characterization**
- Coolest and most relaxing colour

**Global effect**
Reassures and relaxes nervous irritability and stressful strain of all nature

**Violet Filter Module**

**Characterization**
- Individualism and intuition

**Global effect**
Unblocks, relaxes and revives in hopeless moments

There are many ways and techniques of how to apply **Q.Light®** colour light to the human body for therapeutic and wellness purposes. It is advisable to visit colour therapy education courses or seminars. For first information visit [www.QLight.info](http://www.QLight.info)
Q.Light® Light Therapy Systems are certified active medical products based on ISO 9001 & EN 13485 and carry the CE Mark CE 1275. This certification approves Q.Products AG to manufacture and sell Q.Light® Light Therapy products internationally.
Q.Products AG – biotechnology & photomedicine

Q.Products AG develops and manufactures specialized Light Therapy Systems for professional application and for self medication at home. Additionally to the Q.Light® PRO UNIT system we also manufacture the following specialized systems:

Steven Warren Specialist Lecturer and Clinician  BSc ; MSc; Dip Couns; Dip LLLT;

Steven@lighttherapyuk.com

www.LightTherapyUK.com