



Q.Light® WOUND CARE

Q.Light® Light Therapy for general wound care and 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** system are:

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



Two different devices are available for wound care:

Q.Light® PRO UNIT with **WOUND CARE** modules



Q.Light® WOUND CARE



Technical data **Q.Light® WOUND CARE**

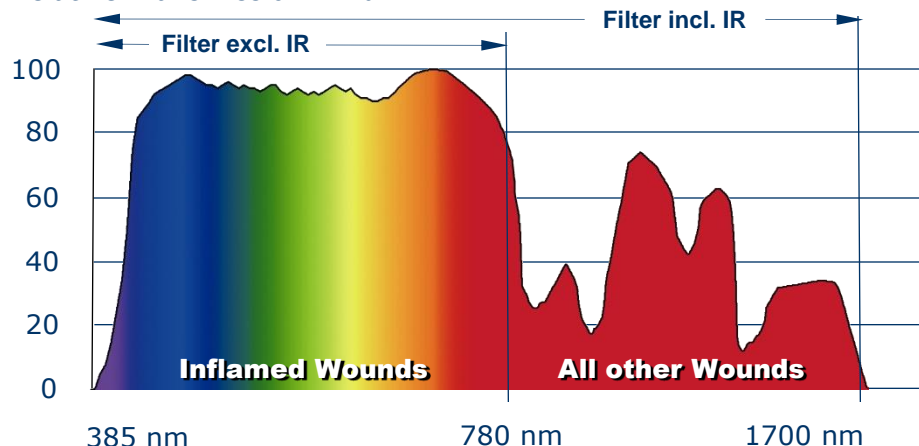
Models	Q.Light® WOUND CARE	Q.Light® PRO UNIT
Digital display	No	Yes
Module	Installed system	WOUND CARE
Ø Standard treatment area	10 cm fixed	5 – 30 cm variable
Spectrum	385 – 1700 nm	
Polarization	≥ 98 %	
ViS emission	Wavelength of 385 – 780 nm	
Infrared emission	Near-infrared radiation of 780 – 1700 nm (optional)	
UV emission	No UV-radiation	
Light temperature	4700 K	
Certification	DIN EN ISO 9001:2008 & EN ISO 13485:2012 + AC:2012	
CE Mark	0197	

activates microcirculation

Spectrum & power density of Q.Light® WOUND CARE systems

Q.Light® emission spectrum with patented light source technology

Relative Transmission in %



Q.Light® - treatment parameters & treatment dose in min. for
Q.Light® WOUND CARE & Q.Light® PRO UNIT with **WOUND CARE** module

Device	Polarization-degree	Treatment-distance	Treatment-diameter	Therapy dose in min.
Q.Light® PRO UNIT	≥ 98 %	30 cm	8 – 30 cm	12
		20 cm	7 – 20 cm	10
		10 cm	5 – 10 cm	6
Q.Light® WOUND CARE	≥ 98 %	15 cm	15 cm	12
		10 cm	10 cm	10
		5 cm	5 cm	6

Additional technical data for Q.Light® WOUND CARE systems

Models	Q.Light® WOUND CARE	Q.Light® PRO UNIT
Medical devices class	IIa	
Voltage	230 V, 50 - 60 Hz	
Power supply	50 VA max.	60 VA max.
Safety class	II, Type B	
Ø Treatment-energy efficiency	40 mW/cm², 2,4 Joule/cm² (min.) at standard treatment distance	
Weight	1'120 g	1'200 g
Size	260 x 158 x 173 mm (L x B x H)	
Guarantee	24 month	

Stand HOME Standwagon STANDARD Standwagon PRO



defined spectrum

General information about **Q.Light®** wound treatment

Q.Light® Phototherapy 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 these effects do 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®** Phototherapy has a systemic effect, promoting wound healing by restoring formerly disturbed metabolic and regenerative processes.

The **Q.Light® WOUND CARE** spectrum is clearly defined, without ultraviolet rays and provides consistent energy in the range 385 - 1700 nm, polarized. The dose may be adjusted individually. The radiation emitted by **Q.Light® WOUND CARE** system has a power density of about 40 mW/cm² at the standard distance of 20 cm and treatment penetrates deep into the tissue. It is also possible to treat infected wounds or burns without infrared radiation (Filter module **Q.Light® WOUND CARE excl. IR**).

Q.Light® Phototherapy can be optimally combined with standard wound care and thus represents an integratable treatment with a significant improvement in wound healing.
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 is to be applied on a daily basis. The average dose should be at least 12 J/cm², that is 10 minutes at a power density of 40 mW/cm² at a therapy distance of about 20 cm with **Q.Light® PRO UNIT** and 10 cm with **Q.Light® WOUND CARE**. The light beam is directed at a right angle to the treatment area. Only after wounds have been properly cleansed, the patient's regenerative capacity is activated in the wound area.

The subsequent healing process of the wound 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. Phototherapy with polarized radiation has become the preferred method of therapy for the treatment of deep dermal burns in special clinics.

optimized treatment results

Systemic mechanisms of anti-inflammatory, immunomodulating, wound-healing effects of phototherapy with visible and near infrared spectrum

Recent research on pain, even in connection with the treatment of wounds, have shown that the visible radiation on the microvasculature of the skin affects the total volume of blood in the body.

Already after a short treatment with a dose of 12 J/cm^2 , at a wavelength of 400-1700 nm and a degree of polarization of 98 %, there is a complete photomodulation within 90 minutes.

Continuation of changes are observed at a slower rate, for up to 24 hours after irradiation

The treatment result can be summarized as the following:

- Immediate effect on blood changes are due to transcutaneous photo-modification with a fast (30-90 minutes) translation of light-induced changes to the whole circulating volume of blood.
- Immediate changes in blood cells and plasma of the entire circulating blood.
- Increased functional activity of monocytes, granulocytes, lymphocytes, platelets.
- Rapidly improves oxygen flow- and transport properties of erythrocytes.
- Increased lipid peroxidation in plasma and the membrane of the erythrocytes.
- Slight positive change in blood clotting.
- Significant reduction in the plasma content and proinflammatory cytokines and increased levels of IFN-g respectively IL-10
- Increased rate of wound healing and improved growth promoting plasma properties in relation to the keratinocytes, endotheliocytes, fibroblasts and radiation-damaged autologous cells.

The changes demonstrate the regulative effect of phototherapy and their therapeutic effect for the treatment of wounds. Phototherapy has been successfully used in chronic wounds, as well as slow-healing wounds.

Effective treatment of wounds by phototherapy



Deep second degree burn



After 2 weeks of light therapy



Result after 9 month



Venous ulcer by submission



After 2 weeks of light therapy



Result after 2 month

regulated photomodulation

Scientific research on wound healing

The effect of polarized-light on wound healing

S. Monstrey, H. Hoeksema, H. Saelens, K. Depuydt, M. Hamdi, K. Van Landuyt and P. Blondeel

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

S. Monstrey, H. Hoeksema, H. Saelens, K. Depuydt, M. Hamdi, K. Van Landuyt and P. Blondeel

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:
Published: 8th Congress of European Society for Photobiology. Book of Abstracts, P108, p.145, Granada (1999).

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

Published: Journal of Clinical
Laser Medicine and Surgery. 2001;19:305-314

Practical experience and references with

Q.Light® WOUND CARE

2. Degree Burn Wounds on face and neck - 5 patients

Gera, Germany - Dr. Stotz,

Profound pain reduction and optimal wound healing was achieved without practically no scar formation

Diabetes mellitus Type 2

Nursing Home Rorschach, Switzerland

Mr A. is born 19.10.1920 and came back to our nursing home after hospitalization with wounds on the heels.

Very good treatment results with **Q.Light®**.

Treatment time range May – August '04



May '04: Start of treatment



June '04




July '04



Result after treatment
August '04

Quality certificate



Q.Light® Phototherapy Systems are certified active medical products based on DIN EN ISO 9001:2008 & EN ISO 13485:2012 + AC:2012 and carry the CE Mark **CE 0197**

 EC Certificate Directive 93/42/EEC Annex V Production Quality Assurance Medical Devices	
Registration No.:	DD 60107707 0001
Report No.:	21238979 001
Manufacturer:	Q. Products AG Säntisstr. 11 9401 Rorschach Schweiz
Products:	Medical Devices for Light Therapy/Phototherapy (see attachment for products included) Replaces Certificate, Registration No.: DD 60098314 0001
Expiry Date:	2021-01-28
<p>The Notified Body hereby declares that the requirements of Annex V of the directive 93/42/EEC have been met for the listed products. The above named manufacturer has established and applies a quality assurance system, which is subject to periodic surveillance, defined by Annex V, section 4 of the aforementioned directive. For placing on the market of class IIb and class III devices covered by this certificate an EC type-examination certificate according to Annex III is required.</p>	
Effective Date:	2016-01-29
Date:	2016-01-29
 Dipl.-Ing. I. Munkler	
TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg	
TÜV Rheinland LGA Products GmbH is a Notified Body according to Directive 93/42/EEC concerning medical devices with the identification number 0197.	

Free Sales Certificate

This certification approves **Q.Products AG** to manufacture and sell **Q.Light®** therapy devices internationally.


swissmedic

FREE SALES CERTIFICATE	
Nr.: FSC-16-20243	valid until: 21 February 2019
<p>The SWISS AGENCY FOR THERAPEUTIC PRODUCTS certifies herewith, that medical devices are regulated in Switzerland under the Federal Law on Medicinal Products and Medical Devices (Law on Therapeutic Products) of 15 December 2000 in force since 1 January 2002 and the Medical Devices Ordinance of 17 October 2001 in force since 1 January 2002.</p> <p>The following medical device(s) meets (meet) the legal requirements set out in the Swiss Medical Devices Ordinance and which incorporates the Medical Devices Directives of the European Union:</p> <p>Q. Light® Photo Therapy Devices.</p> <p>Therefore, the firm Q.Products AG, Säntisstrasse 11, 9401 Rorschach, Switzerland,</p> <p>in conformity with the medical devices law of Switzerland is authorized to manufacture and sell on the Swiss market and to export into any country the CE marked medical device(s) above-mentioned.</p> <p>This certificate is valid until 21 February 2019</p> <p>Bern, 22 February 2016</p> <p>Swiss Agency for Therapeutic Products Medical Devices Division</p> <p> Claude-Philippe Pelletier, Master of Law</p> <p>Fee: CHF 300.00</p>	
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Schweizerisches Heilmittelinstitut Institut suisse des produits thérapeutiques Istituto svizzero per gli agenti terapeutici Swiss Agency for Therapeutic Products	
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certified medical products

Q.Products AG – biotechnology & photomedicine

Q.Products AG develops and manufactures specialized phototherapy devices for professional application and for self medication at home. Additionally to our **Q.Light® WOUND CARE** we also manufacture the following specialized systems:

➤ **Q.Light® PAIN CARE**

➤ **Q.Light® ACNE CARE**

➤ **Q.Light® SAD CARE**

➤ **Q.Light® PRO UNIT**

This professional device is a flexible system that works with different filter modules for all specialized treatments, the spectrum is adapted to the specific needs.

In addition, appropriate filters for color therapy are available.

Due to the comfort to set treatment time and treatment diameter, it is the ideal product for clinics, medical practices and esthetic salons.

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Version 2016/02/16

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specialized systems