

Klas-S

Multiple Treatments LLLT Unit



User's Guide



The Smartest LLLT Unit



Innovative optic design w/
anti-reflection coating glass

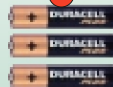


Vandal resistant stainless
steel pushbutton switch

All stainless steel robust construction
w/ compact assembly



Konftec's IC functions with
full protections & APC
(Automatic Power Control)



Powered by 3x AAA batteries

English

| | |
|-----------------------------|---|
| Getting started/ Using Klas | 2 |
| Specifications | 3 |
| Therapy protocol | 4 |
| Tips and troubleshooting | 8 |
| Safety and cleaning | 9 |

Getting started

Install your Klas with the included batteries and begins to get started low level laser therapy (LLLT).

Using Klas

Klas can be used for treatment of diseases and conditions, follow the recommended dosage and treatment time to get the best efficacy. You can also find new information about using Klas on the web www.konftec.com.

Using the battery

- ✓ Use the battery that came with your Klas or any qualified standard battery or rechargeable battery.
- ✓ If you do not use your Klas for a period of time, be sure to take battery out from your Klas.

Specifications

Klas-S Multiple Treatments LLLT Unit

| Treatment Time Calculation Table | | | | | | | | | | |
|----------------------------------|----------------------------|--------------------------|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Dose (J/cm ³) | Depth of Tissue (cm) | Energy Loss Factor | Treatment Time (minutes) | | | | | | | |
| | | | Model | <i>Klas-S20</i> | <i>Klas-S50</i> | <i>Klas-S61</i> | <i>Klas-S79</i> | <i>Klas-S81</i> | <i>Klas-S82</i> | <i>Klas-S84</i> |
| | | | LD Power (mW) | 25 | 50 | 100 | 90 | 110 | 260 | 460 |
| | | | End Power (mW) | 15 | 30 | 60 | 54 | 44 | 104 | 184 |
| 3 J/cm ² | Surface | 1.0000 | | 10 | 5 | 3 | 3 | 3 | 1 | 1 |
| 3 | 0.5 | 0.6772 | | 7 | 4 | 2 | 2 | 3 | 1 | 1 |
| | 1 | 0.4586 | | 22 | 11 | 5 | 6 | 7 | 3 | 2 |
| | 1.5 | 0.3105 | | | 24 | 12 | 13 | 16 | 7 | 4 |
| | 2 | 0.2103 | | | | 24 | 26 | 32 | 14 | 8 |
| | 2.5 | 0.1424 | | | | | | | 25 | 14 |
| | 3 | 0.0964 | | | | | | | | 25 |

Remarks: 1) Laser beam spot size = 3.00 cm²
 2) Energy loss is postulated to be linear at 7.5% per mm of tissue.
 3) Treatment time is calculated by Monte Carlo Simulation method.

Therapy Protocol

| Disease / Condition | Therapy Time (Minutes) | | | | Frequency (Time/Week) | Dosage (J/cm ²) |
|--|------------------------|-----------------|-----------------|-----------------|--------------------------|--------------------------------|
| | <i>Klas-S50</i> | <i>Klas-S79</i> | <i>Klas-S81</i> | <i>Klas-S87</i> | | |
| | (50 mW) | (90 mW) | (110 mW) | (170 mW) | | |
| Acne Vulgaris | | | | | | |
| Facial Acne | 10 | NA | | | 2~3 | 8 |
| Neckline Acne | 13 | | | | 2~3 | 10 |
| Back Acne | 15 | | | | 2~3 | 12 |
| Aesthetic | | | | | | |
| Age Spot | 15 | NA | | | 2~3 | 12 |
| Cholasma | 15 | | | | 2~3 | 12 |
| Facial Anti-aging: General Skin Conditioning | 10 | | | | 1~2 | 8 |
| Scar: Fresh | 15 | | | | 2~3 | 12 |
| Stretch Mark (Melasma): Fresh | 15 | | | | 2~3 | 12 |
| Wrinkle and Fine Lines | 10 | | | | 2~3 | 8 |
| *Therapeutic windows range from typically $\pm 50\%$ of given values. | | | | | | |
| **The given values are calculated by point or effective treatment area (3 cm ²). | | | | | | |

Therapy Protocol

| Disease / Condition | Therapy Time (Minutes) | | | | Frequency (Time/Week) | Dosage (J/cm ²) |
|------------------------------------|------------------------|-----------------|-----------------|-----------------|--------------------------|--------------------------------|
| | <i>Klas-S50</i> | <i>Klas-S79</i> | <i>Klas-S81</i> | <i>Klas-S87</i> | | |
| | (50 mW) | (90 mW) | (110 mW) | (170 mW) | | |
| Pain Relief | | | | | | |
| Achilles Bursitis | 10 | 6 | 5 | 3 | 3~7 | 8 |
| Acute & Chronic Joint Pain; Ankle | NA | 30 | 25 | 16 | 3~7 | 15 |
| Acute & Chronic Joint Pain; Finger | 8 | 5 | 4 | 3 | 3~7 | 6 |
| Acute & Chronic Joint Pain; Toe | 8 | 5 | 4 | 3 | 3~7 | 6 |
| Acute & Chronic Joint Pain; Wrist | 13 | 8 | 7 | 4 | 3~7 | 10 |
| Acute & Chronic Joint Pain; Elbow | 13 | 8 | 7 | 4 | 3~7 | 10 |
| Acute & Chronic Joint Pain; Knee | NA | 43 | 35 | 23 | 3~7 | 20 |
| Arthritis | NA | 8~43 | 7~35 | 4~23 | 3~7 | 10~20 |
| Calcaneal Spur | 13 | 8 | 7 | 4 | 3~7 | 10 |
| Carpal Tunnel Syndrome | 15 | 9 | 7 | 5 | 3~7 | 12 |
| Frozen Shoulder | NA | 43 | 35 | 23 | 3~7 | 20 |
| Herpes Zoster | NA | 43 | 35 | 23 | 1~2/Day | 20 |
| Herpes Simplex (HSV1) | 4 | NA | NA | NA | 2/Day | 3 |
| Low Back Pain | NA | 43 | 35 | 23 | 3~7 | 20 |
| Pain Associated with Facial Palsy | 10 | 6 | 5 | 3 | 3~7 | 8 |
| Plantar Fasciitis- Heel Pain | 15 | 9 | 7 | 5 | 3~7 | 12 |
| Post Operative Tissue Pain | 10 | 6 | 5 | 3 | 1~2/Day | 8 |
| Sprains and Strains | NA | 8~43 | 7~35 | 4~23 | 3~7 | 10~20 |
| Tennis Elbow (Epicondylitis) | NA | 8 | 7 | 4 | 3~7 | 10 |

*Therapeutic windows range from typically $\pm 50\%$ of given values.

**The given values are calculated by point or effective treatment area (3 cm²).

Therapy Protocol

| Disease / Condition | Therapy Time (Minutes) | | | | Frequency (Time/Week) | Dosage (J/cm ²) |
|---|------------------------|-----------------|-----------------|-----------------|--------------------------|--------------------------------|
| | <i>Klas-S50</i> | <i>Klas-S79</i> | <i>Klas-S81</i> | <i>Klas-S87</i> | | |
| | (50 mW) | (90 mW) | (110 mW) | (170 mW) | | |
| Skin Diseases | | | | | | |
| Allergic Rashes | 4 | NA | | | 2~3 | 3 |
| Apthous Ulcers & Sore Gums | 4 | | | | 2~3 | 3 |
| Burn & Related Wounds | 6 | | | | 1~3/day | 5 |
| Cellulitis | 10 | | | | 3~7 | 8 |
| Couperose (mild) | 4 | | | | 2~3 | 3 |
| Dermatitis: Allergic, Atopic, Contact | 4 | | | | 2~3 | 3 |
| Eczema | 4 | | | | 2~3 | 3 |
| Hypertrophic Cicatrix | 10 | | | | 3 | 8 |
| Insect Bites | 4 | | | | 1~2/day | 3 |
| Pressure Sore | 4 | | | | 3~7 | 3 |
| Psoriasis | 10 | | | | 2~3 | 8 |
| Rosacea | 6 | | | | 3~7 | 5 |
| Skin Eruption | 4 | | | | 2~3 | 3 |
| Sunburn | 4 | | | | 2~3 | 3 |
| Tinea Pedis | 10 | | | | 2~3 | 8 |
| Vitiligo (Leukoderma) | 10 | | | | 2~3 | 8 |
| Warts, Verruca | 10 | | | | 3 | 8 |
| Wound, Operation Wound | 10 | | | | 1~3/day | 8 |
| Wound & Ulcers | 6 | 1~3/day | 5 | | | |
| <p>*Therapeutic windows range from typically $\pm 50\%$ of given values.</p> <p>**The given values are calculated by point or effective treatment area (3 cm²).</p> | | | | | | |

Therapy Protocol

| Disease / Condition | Therapy Time (Minutes) | | | | Frequency (Time/Week) | Dosage (J/cm ²) |
|--|------------------------|-----------------|-----------------|-----------------|--------------------------|--------------------------------|
| | <i>Klas-S50</i> | <i>Klas-S79</i> | <i>Klas-S81</i> | <i>Klas-S87</i> | | |
| | (50 mW) | (90 mW) | (110 mW) | (170 mW) | | |
| Respiratory Tract and Ear, Nose, Throat | | | | | | |
| Rhinitis | 10 | NA | | | 3~7 | 8 |
| Sinusitis | 8 | 4 | 3 | 2 | 3~7 | 6 |
| Tinnitus | 31 | 17 | 14 | 9 | 3~7 | 25 |
| Other Symptoms and Prophylaxis | | | | | | |
| Hemorrhoid | 15 | 8 | 7 | 4 | 1/Day | 12 |
| Gingival and Periodontal Disease | 4 | 2 | 2 | 1 | 1/Day | 3 |
| Oral Ulcer | 8 | 4 | 3 | 2 | 1/Day | 6 |
| Edema | 15 | 8 | 7 | 4 | 1/Day | 12 |
| *Therapeutic windows range from typically $\pm 50\%$ of given values. | | | | | | |
| **The given values are calculated by point or effective treatment area (3 cm ²). | | | | | | |

About operating and storage temperatures

- ✓ Operate your Klas in a place where the temperature is always between 0 and 60° C (32 to 140° F).
- ✓ Store your Klas in a place where the temperature is always between -20 and 85° C (-4 to 185° F).

Troubleshooting

My Klas won't turn on

- ✓ Make sure Klas's power switch is on.
- ✓ If that doesn't work, check the position of battery in Klas.
- ✓ If that doesn't work, loosen the bottom cap and fasten again.
- ✓ If that doesn't work, contact your local sales office.

Learning more, service and support

There is a wealth of information about using Klas on the Web. For the latest information on Klas service and support information go to www.konftec.com

Obtaining warranty service

If the product appears to be damaged or does not function properly, please follow the advice in this booklet, and the online resources. If the unit still does not function, go to www.konftec.com for instructions on how to obtain warranty service.

Safety

Important safety instructions



Follow all instructions and warnings dealing with your Klas.

Warning

- ✓ Avoid direct eye exposure to the laser beam.
- ✓ Operation of this device, must always be supervised by an adult.

Cleaning

Follow these general rules when cleaning the outside of your Klas and its components:

- ✓ Use a damp, soft, lint-free cloth.
- ✓ Use alcohol to clean the optic glass.
- ✓ Don't use aerosol sprays, solvents or abrasives.

Avoid direct sunlight

Protect your Klas from long time direct sunlight.

Do not make repairs yourself

No user-serviceable parts are inside.

About handling

Your Klas may be damaged by improper storage or handling. Be careful not to drop your Klas when treating or transporting the device.



www.konftec.com

© 2009 Konftec Corporation. All rights reserved.

Konf, the Konf logo and Klas
are trademarks of Konftec Corporation,
registered in Taiwan and
other countries.

UKS90801E