BiliLux
LED phototherapy light

The BiliLux is a compact and lightweight LED phototherapy light system for the treatment of neonatal unconjugated hyperbilirubinemia. It provides superior phototherapy performance, individualised therapy with electronic documentation capabilities and the flexibility for seamless integration into practically every workplace.
Benefits

**Superior phototherapy with even and broad irradiance distribution**

Phototherapy is effectively used for treating neonatal unconjugated hyperbilirubinemia: The BiliLux phototherapy light has its irradiance peaks in the most effective wavelength range to reduce the bilirubin which is 460 – 490nm. By achieving extremely high irradiance levels, the BiliLux fulfills the requirements of the American Academy of Pediatrics (AAP). In addition, the irradiance can be dimmed in 5 steps to provide proper therapy for the individual patient. The phototherapy light features a large surface area to cover full term and premature babies. The irradiance is evenly distributed over the entire mattress to help ensure effective phototherapy.

**Seamless workplace integration for more flexibility**

The BiliLux phototherapy light was designed for flexible use and seamless integration into the neonatal workplace. The phototherapy light can be placed on an incubator hood, mounted with the spring arm to warming therapy devices or ceiling supplies or used with a trolley. The BiliLux offers the perfect combination for practically every workplace. To simplify the process, the phototherapy light can be easily locked and unlocked by using the intuitive quick-connect mechanism.

The BiliLux also features a white observation light to observe the baby between phototherapy sessions or to switch white light on during phototherapy to soften blue light.

**Designed for a healthy and family-friendly environment**

The family-friendly and compact design saves space around the neonatal workplace while simultaneously providing high irradiances to treat neonatal jaundice. The BiliLux is lightweight for easy handling and storage. And most important: it is soundless to ensure a calm and nurturing atmosphere for the baby, parents and caregivers.

**Infection prevention – priority in our development**

Hygiene and infection prevention is an important topic in the neonatal segment: the BiliLux was designed for easy and fast cleaning supported by smooth surfaces. Unlike some other phototherapy devices, the BiliLux does not have any ventilation slots or fans in order to improve infection prevention.

**Individualised care and quality management**

The optional BiliLux Radiometer is specifically designed for the phototherapy light and instantly measures the irradiance. Use of the radiometer helps ensure the correct positioning of the baby under the phototherapy light and the adequate irradiance that the baby receives. In addition, each measurement (incl. date and time) and the phototherapy duration can be stored and downloaded in a phototherapy report e.g. for patient documentation or quality control purposes.
Benefits

**Electronic data transfer – for efficient workflow**

The phototherapy LED supports the hospital and clinical processes by providing the ability for electronic documentation. Electronic data transfer is faster and less prone to errors than manual data transfer. This helps work in the NICU to become more efficient.

Irradiance distribution and radiometer calibration

The radiometer is calibrated for measurement of light with the relative spectrum shown in the graph. The BiILux light irradiance is distributed evenly over the entire mattress.
System Components

**BiliLux phototherapy light**

The BiliLux phototherapy light can be placed directly on an incubator hood. It has slip-resistant feet on the bottom that help to hold it in place. The phototherapy light houses the 20 blue lights that provide therapy as well as two white lights used for observation or soften the blue light. The front panel has a display screen and keys to control functions and change settings. The BiliLux phototherapy light also has the capability to produce a phototherapy report via export to a USB flash drive that is supplied with the device.

**BiliLux with optional spring arm**

The BiliLux with spring arm consists of the phototherapy light, an adjustable spring arm, and mounting provision that allow the BiliLux to be used with various Dräger warming therapy devices and ceiling supply units. When mounted on the arm, the phototherapy light can be rotated and positioned for optimum effectiveness. It can be easily attached and released from the spring arm by using the quick-connect mechanism.

**BiliLux with optional trolley**

The BiliLux with trolley consists of the phototherapy light, an adjustable spring arm, and a rolling trolley that allows use above an incubator, radiant warmer, crib, or bassinet. The trolley has four locking castors and a height-adjustable pole. These features, together with the adjustable spring arm, allow the BiliLux to be moved, rotated, and positioned for optimum effectiveness. The phototherapy light can be easily attached and released from the spring arm by using the quick-connect mechanism.

**BiliLux Radiometer**

The BiliLux Radiometer is specifically designed for the BiliLux phototherapy light and provides instant irradiance measurements.
**Light shield curtain – Protection for caregivers, other patients and parents during phototherapy treatments**

The light shield curtain helps to block the light of the phototherapy during phototherapy treatments to protect caregivers, other patients and parents from the blue light. The design offers easy assembly of the curtain. Flaps at the front and back allow for easy access to the patient.

**Phototherapy mask Eyemax 2**

The latex-free Eyemax 2 provides optimum comfort and protection for patients during phototherapy treatments. The one-piece, wraparound design has two attachment points that can be adjusted independently; this both prevents unwanted movement and allows for a perfect fit. The special ultraviolet light eye-protection pad was ergonomically designed to prevent light leakage.

**Cable Holder**

Cable holder for trolley pole. Set of 4 for Ø 38 mm pole

**Rail Claw for lamp**

Rail claw for phototherapy light (to connect to 38 mm pole and DIN, Fairfield, and GCX rails)
Accessories

**Rail clamp**
Rail clamp, for attachment to poles of different diameters. Rotable by 90° to left and right. Length of standard rail (profile 10 × 25 mm): 20 cm.

**Duct pivot rail, Kit**
For mounting the BiliLux on the standard rail of a warming therapy device.

Related Products

**Dräger Jaundice Meter JM-105**
The Dräger Jaundice Meter JM-105 gives you consistent quality screening, cost-effectively delivered over the lifetime of the device. As a result you optimize the efficiency of your jaundice management program, which can help save time and money while delivering an exceptional standard of care.
Related Products

Dräger Babyleo® TN500

The Babyleo® TN500 is Dräger’s first IncuWarmer that provides optimal thermoregulation for neonates in open care, closed care and transition. With the combination of three heat sources, this device protects your little patients so they can grow while making your workflow easier with quick and comfortable access to the baby.

Isolette® 8000 plus

Dräger sets the standard for thermoregulation with a host of performance features designed to provide a stable, cocoon-like environment for the baby. To ensure that the Thermo-Neutral Zone is maintained, the Isolette® 8000 plus enables you to continuously monitor both the central and peripheral body temperature.

Babytherm® 8004/8010

Babytherm® is an intensive care Infant Warming System intended as a therapeutic device providing warmth for premature and full term neonates. Not only does it provide babies with a unique thermal environment, but it also allows you to enjoy outstanding ease of access so you can give them the best possible care.
# Technical Data

**Device classification**

<table>
<thead>
<tr>
<th>Type of protection against electric shock</th>
<th>Class I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of protection against ingress of liquids and particulate matter (IEC 60601-1)</td>
<td>IPX0</td>
</tr>
<tr>
<td>Mode of operation</td>
<td>Continuous</td>
</tr>
<tr>
<td>Classification in accordance with EU Directive 93/42/EEC</td>
<td>IIa</td>
</tr>
<tr>
<td>UMDNS code/GMDN code</td>
<td>13-037/35239</td>
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</table>

**Physical attributes**

<table>
<thead>
<tr>
<th>BillLux phototherapy light</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Length</td>
<td>≤39 cm (15.4 in)</td>
</tr>
<tr>
<td>Width</td>
<td>≤19 cm (7.5 in) with quick-connect plug</td>
</tr>
<tr>
<td>Height</td>
<td>≤8 cm (3.1 in)</td>
</tr>
<tr>
<td>Weight (without options/accessories)</td>
<td>≥1.2 kg (2.7 lb)</td>
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<table>
<thead>
<tr>
<th>BillLux spring arm</th>
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</thead>
<tbody>
<tr>
<td>Length, spring arm fully folded</td>
<td>≤61 cm (24 in)</td>
</tr>
<tr>
<td>Length, spring arm fully extended</td>
<td>≤106 cm (41.7 in)</td>
</tr>
<tr>
<td>Weight (without options/accessories)</td>
<td>≤1.5 kg (3.3 lb)</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>BillLux trolley (with spring arm)</th>
<th></th>
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<tbody>
<tr>
<td>Height (trolley at lowest position and spring arm fully folded)</td>
<td>≤132 cm (52 in)</td>
</tr>
<tr>
<td>Height (trolley at highest position, lower arm fully extended, and upper arm at 45° angle)</td>
<td>≤213 cm (83.9 in)</td>
</tr>
<tr>
<td>Weight (without options/accessories)</td>
<td>≤14.9 kg (32.8 lb)</td>
</tr>
<tr>
<td>Total mass including safe working load</td>
<td>18.1 kg (39.9 lb)</td>
</tr>
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</table>

**Environmental requirements**

<table>
<thead>
<tr>
<th>Operating conditions</th>
<th></th>
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<tbody>
<tr>
<td>Temperature</td>
<td>18 °C (64.4 °F) to 40 °C (104 °F)</td>
</tr>
<tr>
<td>Ambient pressure</td>
<td>1,100 hPa to 700 hPa</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>10 % to 95 % relative humidity, noncondensing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Storage/transportation conditions</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>-20 °C (-4 °F) to 60 °C (140 °F)</td>
</tr>
<tr>
<td>Ambient pressure</td>
<td>1,100 hPa to 500 hPa</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>10 % to 95 % relative humidity, noncondensing</td>
</tr>
</tbody>
</table>

**Electrical requirements**

| Power requirements | 100–240 V AC, 50/60 Hz, 0.42–0.22 A |
| Earth leakage current | <500 μA |

<table>
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<tr>
<th>Noise requirements</th>
<th></th>
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<tbody>
<tr>
<td>Noise level during normal operation</td>
<td>≤20 dB(A)</td>
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<thead>
<tr>
<th>RS-232 communication port</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Expected minimum period of use of phototherapy LED lights, L70/B50</td>
<td>50,000 hours</td>
</tr>
<tr>
<td>Expected service life of device</td>
<td>8 years</td>
</tr>
</tbody>
</table>

| Only connect devices that fulfill the requirements of the standard IEC 60950-1 on unearthed SELV circuits or the requirements of the standard IEC60601-1 on accessible secondary circuits with max. 60 V DC nominal voltage. |

**Type**

| 9-pin Sub-D (female) |
Technical Data

Configuration

MEDIBUS.X, version 6.0

by the RS-232 port only

Baud rate

9,600

Parity

ev

Data bits

8

Stop bits

1

For a detailed description of the interface protocol, please see these manuals:

MEDIBUS.X, Rules and Standards for Implementation (9052607) and MEDIBUS.X, Profile Definition for Data Communication V1.n (9052608)

Pin assignment

Pin 2

RXD

Pin 3

txD

Pin 5

GND

Irradiance

\( E_{\text{\muW/cm}^2/\text{nm}} \) (460-490nm at 100% irradiance setting)

30 cm distance

>85,5

40 cm distance

>50,1

50 cm distance

>33,4

Spectral irradiance distribution – Peak

between 460–490nm

Effective surface area at 40 cm

30 cm x 50 cm

Radiometer option requirements

Accuracy

+3% / -15%

Measurement output

Average spectral irradiance, 460 nm to 490 nm

Ordering Information

Device

BiliLux Phototherapy System

MU20100

Optional Components

BiliLux radiometer

MU26079

BiliLux spring arm

MU26077

BiliLux trolley

MU26076

USB flash drive

8416347

Cable holder for trolley pole

G13171

Mounting adapters

Rail clamp for phototherapy light

MP00615

Compact rail

2M85337

Rail clamp

2M85274

Kit, duct pivot rail

4118453

Accessories

Phototherapy mask Eyemax 2, disposable, micro, 20

MP03770

Phototherapy mask Eyemax 2, disposable, preemie, 20

MP03771

Phototherapy mask Eyemax 2, disposable, regular, 20

MP03772
Notes