

LUXO

Circus LED

User manual





English

Our products are subject to the Directive 2012/19/EU (Waste Electrical and Electronic Equipment - WEEE) and should at the end of their lifespan always be collected separately and brought to the appropriate collection point in your community or region.

Norsk

Våre produkter er underlagt direktiv 2012/19/EU (Waste Electrical and Electronic Equipment - WEEE) og skal etter endt levetid leveres til mottak for slikt avfall eller til en forhandler av slikt avfall.

Svenska

Våra produkter omfattas av direktivet 2012/19/EU (Waste Electrical and Electronic Equipment - WEEE) och skall vid slutet av sin livsängd alltid samlas in och levereras till återvinningsstation i din kommun eller region.

Deutsch

Unsere Produkte unterliegen der Richtlinie 2012/19/EU (Waste Electrical and Electronic Equipment - WEEE) und sollten am Ende ihrer Lebensdauer immer getrennt gesammelt und an einem entsprechenden Sammelpunkt in Ihrer Gemeinde oder Region entsorgt werden.

Suomi

Tuote kuuluu elektronisten laitteiden jätteenkäsittelyä (WEEE) koskevan direktiivin 2012/19/EU piiriin ja elinkaaren lopussa oleva tuote tulee toimittaa asiaankuuluvaan keräyspisteeseen.

Eesti

Meie toodete kohta kohaldatakse 2012/19/EU WEEE (elektri-ja elektroonikaseadmetest tekkinud jäätmete) direktiivi ning nad peavad olema eluea lõppedes eraldi kokku kogutud ning toimetatud piirkonna jäätmete vastuvõtupunkti.

Nederlands

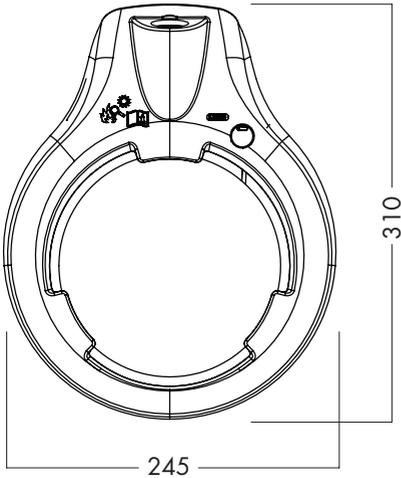
Onze producten zijn onderworpen aan de Richtlijn 2012/19/EU (Waste Electrical and Electronic Equipment - WEEE) en moeten aan het einde van hun levensduur apart ingezameld en naar het juiste inzamelpunt gebracht worden in uw gemeente of regio.

Dansk

Vores produkter er underlagt direktiv 2012/19/EU (Waste Electrical and Electronic Equipment - WEEE) og skal efter endt levetid leveres til modtagere for sådan type affald eller til en forhandler af sådan affald.

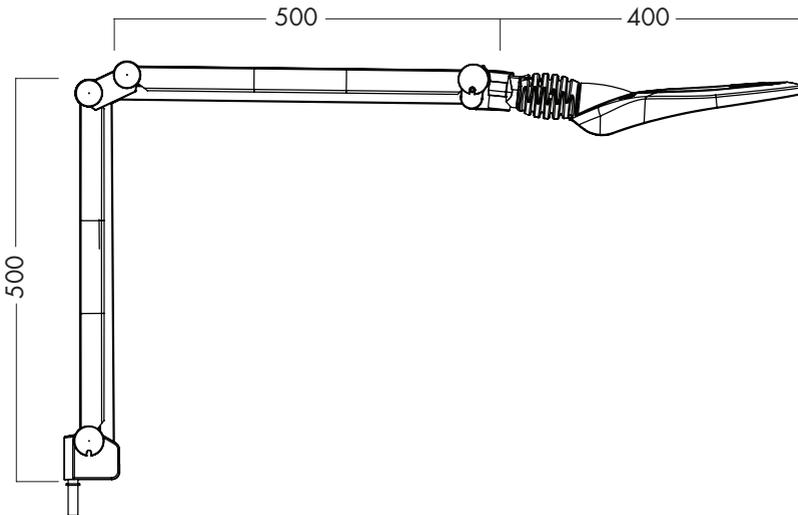
Circus LED

Instructions for use in your local language, please visit www.glamox.com



This product contains a spring loaded arm. In order to avoid damage or possible injury, first mount table bracket or floor stand. Insert product and remove protective plastic sleeve or rubber band, and carefully unfold the product.

Use only brackets supplied by Glamox or a Glamox representative. Glamox cannot guarantee the lifetime and functionality if third part accessories are used.



Circus LED

General information

This luminaire is intended for use as a general purpose examination luminaire, only for diagnosis, NOT for surgical use. If the product is used during treatment there should be NO contact with the patient. This product is not designed and approved for home use. Optimum working distance between the light source and illuminated object or surface, using a standard lamp, is 28 cm with 3.5D lens and 20 cm with 5D lens.

Installation

This product contains a spring loaded arm. In order to avoid damage or possible injury, first mount table bracket or floor stand. Insert product into table bracket or floor stand and remove protective plastic sleeve or rubber band, and carefully unfold the product. Place the supply cable so it not will be damaged. Always use enclosed table bracket, optional floor stand.

Accessories

| | |
|-----------|----------------------|
| BRK025205 | Trolley * |
| SPA025674 | Extra weight Trolley |
| BRK014904 | AH-CLA |
| SPD025980 | Sp Suction lens 4D |
| SPD025979 | Sp Suction lens 6D |
| SPD026119 | Sp Suction lens 10D |

*Trolley must always be used with extra weight
Luxo cannot guarantee the lifetime and functionality if third party accessories are used.

Cleaning

Regular cleaning of luminaires is essential for optimal lighting. Luminaires are cleaned in a de-energized state. Electrical components and connections should not be exposed to water or moisture. Be aware that LED luminaires are sensitive to electrostatic discharge (ESD). Cleaning intervals are normally consistent with those planned during the project planning. Luminaires can be cleaned with a neutral detergent (pH 7). The detergent is mixed in lukewarm water. The mixture is then applied with a microfiber cloth, sponge or similar. Afterwards, soap residues should be removed using a soft clean microfiber cloth dampened with water. Do not spray cleaning solutions directly onto the luminaires as residual detergent may collect in the cover, reflector or optical components, and be difficult to remove later. Organic solvent based and strongly alkaline detergents should be avoided, as they can damage components in the short and long term. This applies particularly to components made from various plastics. If disinfectant cleaning of light is required, disinfectant detergents should be applied with a sponge or similar.

Maintenance

Cleaning of product is the only maintenance needed. No requirements on frequency of cleaning other than when the products get degraded functions on movements or light. There are no parts requiring special inspection or maintenance on the product.

Spare parts

| | |
|-----------|----------------------------------|
| SPA026011 | Cable 3x0.75+/3,0m BS1363A White |
| SPA026708 | Cable 3x0.75+/3,0m Schuko White |
| SPA026709 | Cable 3x18 AWG/3,0m NA White |
| SPA026706 | AC/DC converter 24V class I |
| SPA026710 | Fuse T1.25AH/250V |

Discription to exchange spare parts will be supplied upon request to service personell.

Transportation

The product should be set in transportation mode when moved. Fold upper arm down in parallel with the lower arm, and secure them together with a rubber band or strips.

Circus LED

Troubleshooting for qualified electrical fitters and other similarly qualified personnel

- Replaces the fuses
 - Remove the lamp from mains supply.
 - Loosen the screw holding the bottom lamp cover
 - Exchange fuses
 - Place bottom cover, and tighten the screw
- Replaces the mains cable
 - Instruction for changing cable will be shipped with the spare part

If there should arise other problems please contact your local Glamox representative

Classification

| | |
|--|---|
| Model | Circus LED |
| Medical class | Class I |
| Protection reliability | Must not exceed 0.5 mA |
| Power supply | 100-240VAC 50/60 Hz |
| Power consumption | Max 40VA |
| Protection against risk of explosion | Not protected |
| Protection against liquid penetration | Not protected |
| Degree of mobility | Mobile mounted on trolley |
| Type of approval | MEDICAL |
| Safety test in line with | EN60601-1:2012 |
| EMC test in line with | EN60601-1-2:2014 |
| Primary fuse | IEC 127-5X20mm, 2xT1.25AH 250V, CSA/UL certified for the North American Market |
| Operating life | 50000 Hours (L70B50) |
| Central illuminance | 509 lx at 1m |
| Light field diameter | d10 =1256 mm, d50 =580mm |
| Colour rendering index Ra | 91 |
| Corresponding specific index R9 | 77 |
| Correlated colour temperature of radiation emitted CCT | 3917K |
| Chromaticity co-ordinates | X=0.3844, Y=0.3798 |
| Total irradiance | 1,4 W/m ² |

Circus LED

Symbol explanations:



Do not throw away. Electronic waste.
The product must be recycled



Self declaration symbol



Approved by Nemko



Attention, read instructions before use



Caution, consult accompanying documents



Sun protection for illuminated magnifiers

The glass in illuminated magnifiers can if exposed to strong direct sunlight provide a source of unwanted concentrated heat. The product should therefore not be placed in direct sunlight without sun protection being used.



Stand by switch, on/off and dimming of the product.



Applicable only for North American market.

Warning:

- Avoid spilling liquid on the product.
- Have minimum 400 Lux light, when reading the labels on the product
- The switch disengages the low voltage to the lamp only. To disconnect the mains supply, unplug the plug from the socket outlet.
- To avoid risk of electric shock, this equipment must only be connected to a supply main with protective earth.
- Position the product so that it's easy to disconnect the device when the product is used as isolation means.
- To terminate operation, turn the product off with the switch. For storage, unplug the device and fold the arm together.
- If the light is too bright, dim down the product to an acceptable level.
- The power cable must be supplied by Glamox and only be replaced by a qualified electrical fitter, approved by Glamox.
- Any repairs of the arm must be performed by Glamox or Glamox approved personnel. The arm contains high tensions springs.
- Do not modify this equipment without authorization of the manufacturer, any changes without authorization will do that approval does not apply.
- When abnormal use Glamox declines all responsibilities.
- This product complies to IEC/EN 60601-1-2, electromagnetic compatibility for medical devices. Electromagnetic or other interference between this equipment and other devices should not occur. In the event of interference, please move the equipment's apart from each other, minimum 30 cm.
- This ME EQUIPMENT could cause risk of reciprocal interference during specific investigations or treatments.
- The product is not intended for use in areas where there is a risk of explosion.
- Users of this form of lighting should be aware that the manufacturer of the product can only accept liability for the lighting when maintenance, repairs or changes are carried out by the manufacturer or by companies which the manufacturer has approved to carry out such work, and when components that influence the safety or EMC of the lighting are replaced with original spare parts.
- The RESPONSIBLE ORGANIZATION follows the national requirements (standards and directives) for hygiene and disinfection.

Disposal

Dispose the product at a special collection centre for recycling of electronic and waste.

Environmentally conditions

Transport and storage

| | |
|----------------------------|-------------------------|
| Ambient temperature | -20° C to 70° C |
| Moisture content | 10 % to 92 % (keep dry) |
| Atmospheric pressure | 500hPa til 1060hPa |

Operate

| | |
|----------------------------|------------------------------|
| Ambient temperature | 5° C to 40° C |
| Moisture content | 30 % to 75 % |
| Atmospheric pressure | 700hPa to 1060hPa, Max 3000m |

Guidance and manufacturer's declaration – electromagnetic emissions

Circus LED is intended for use in the electromagnetic environment specified below.

The customer or the user of Circus LED should assure that it is used in such an environment.

| Emission tests | Compliance | Electromagnetic environment – guidance |
|---|------------|---|
| RF emission CISPR 11 | Group 1 | Circus LED uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment. |
| RF emission CISPR 11 | | Circus LED must emit electromagnetic energy in order to perform its intended function. Nearby electronic equipment may be affected. |
| RF emission CISPR 11 | Class B | |
| Harmonic emissions IEC 61000-3-2 | Class C | |
| Voltage fluctuations/ flicker emissions IEC 61000-3-3 | Complies | |
| RF emissions CISPR 15 | Complies | |

Guidance and manufacturer's declaration – electromagnetic immunity

Circus LED is intended for use in the electromagnetic environment specified below.
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| Immunity tests | IEC 60601 Test level | Compliance level | Electromagnetic environment – guidance |
|-------------------------------|--|------------------|---|
| Conducted RF IEC 61000-4-6 | 3 Vrms 150 kHz to 80MHz outside the ISM bands ^a | 3 V/m | <p>Portable and mobile RF communications equipment should be used no closer to any part of Circus LED, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d = [3.5 / V1]\sqrt{P}$ |
| Radiated RF IEC 61000-4-3 | 10 V/m 80MHz to 2.7 GHz | 10 V/m | $d = [12 / E1]\sqrt{P}$ 80 MHz to 800 MHz $d = [23 / E1]\sqrt{P}$ 800 MHz to 2.5 GHz <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).^b</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,^c should be less than the compliance level in each frequency range.^d</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p>  |

NOTE 1: At 80 MHz to 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a)
The ISM (industrial, scientific and medical) bands between 150 kHz and 80 MHz are 6,765 MHz to 6,795 MHz; 13,553 MHz to 13,567 MHz; 26,957 MHz to 27,283 MHz; and 40,66 MHz to 40,70 MHz.

b)
The compliance levels in the ISM frequency bands between 150 kHz and 80 MHz and in the frequency range 80 MHz to 2,5 GHz are intended to decrease the likelihood that mobile/portable communications equipment could cause interference if it is inadvertently brought into patient areas. For this reason, an additional factor of 10/3 is used in calculating the recommended separation distance for transmitters in these frequency ranges.

c)
Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which Circus LED is used exceeds the applicable RF compliance level above, Circus LED should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating Circus LED.

d)
Over the frequency range 150 kHz to 80 MHz, field strengths should be less than $[\sqrt{1}]$ V/m.

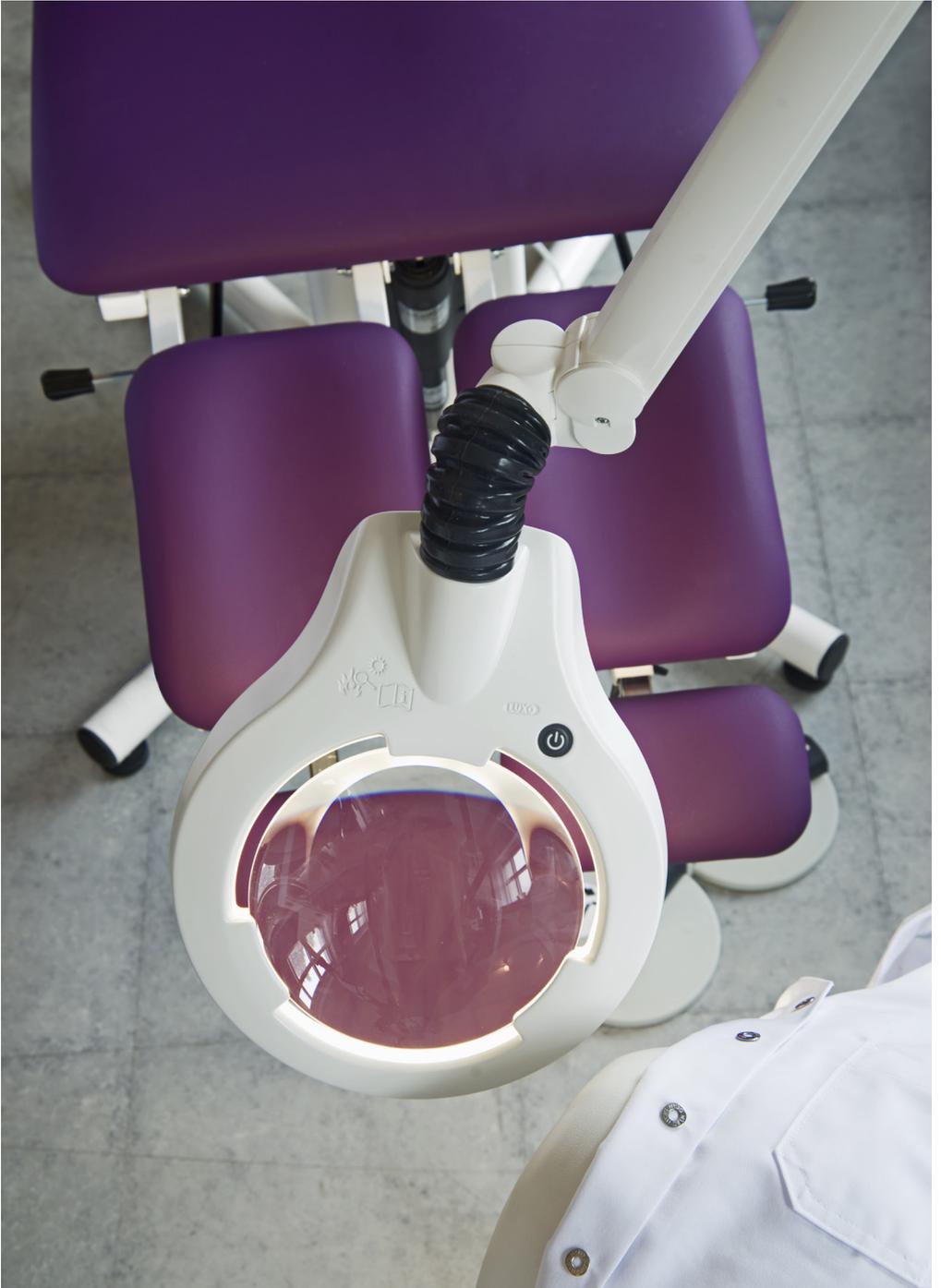
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Guidance and manufacturer's declaration – electromagnetic immunity

Circus LED is intended for use in the electromagnetic environment specified below.

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| Immunity tests | IEC 60601 Test level | Compliance level | Electromagnetic environment – guidance |
|--|---|---|--|
| Electrostatic discharge (ESD) IEC 61000-4-2 | ±8 kV contact ±15 kV air | ±8 kV contact ±15 kV air | Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %. |
| Electrical fast transient/burst | ±2 kV for power supply lines ±1 kV for input/output lines | ±2 kV for power supply lines | Mains power quality should be that of a typical commercial or hospital environment. |
| Surge IEC 61000-4-5 | ±1 kV line(s) to lines(s) ±2 kV line(s) to earth | ±1 kV line(s) to lines(s) ±2 kV line(s) to earth | Mains power quality should be that of a typical commercial or hospital environment. |
| Voltage dips, short interruptions and voltage variations on power supply input lines | <5% UT (>95% dip in UT) for 0.5 cycle <5% UT (>95% dip in UT) for 1 cycle 70% UT (30% dip in UT) for 25/30 cycles <0% UT (100% interruption in UT) for 5 sec | <5% UT (>95% dip in UT) for 0.5 cycle <5% UT (>95% dip in UT) for 1 cycle 70% UT (30% dip in UT) for 25/30 cycles <0% UT (100% interruption in UT) for 5 sec | Mains power quality should be that of a typical commercial or hospital environment. If the user of Circus LED requires continued operation during power mains interruptions, it is recommended that Circus LED be powered from an uninterruptible power supply or a battery. |
| Power frequency (50/60 Hz) magnetic field IEC 61000-4-8 | 30 A/m | 30 A/m | Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment. |
| NOTE: UT is the AC mains voltage prior to application of the test level | | | |





Manufactured by:

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Please visit our web site for contact information
www.glamox.com



Please refer to our website
for information about
our 5-year warranty.