

For more than seeing...

General Catalogue

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## **Company Profile**

Turkey's First LED Based Surgical Lights Manufacturer



Etkin Tıbbi Cihazlar was established in 1996 as a medical device sales and service company. Since its establishment, Etkin Tıbbi Cihazlar has adopted high quality and trustworthy customer service as the company's main philosophy.

Etkin Tıbbi Cihazlar started manufacturing and sales of the LED surgical lighting systems in 2012 and has become one of the renowned brands in the world.

In the Turkish market the company is a medical device importer and seller as well, and it performs in the areas of intensive care room equipment, operating room equipment supplies, radiology devices, anesthesia, surgery, gynecology, pediatrics and sterilization. Etkin Tibbi Cihazlar is a proud provider of high quality and trustworthy customer service and technical support for the health care institutions, with an expertise in serving the operating rooms and ICU rooms. Currently LED surgical light products constitute the sole international business product line for exports.

## Our History

#### Turkey's First Surgical Lights Manufacturer



## **Common Main Features**



#### **Shadowless Lighting**

Ergonomic light head design feature minimizes the probable shadow of the head or shoulders of the surgical personnel interfering in the operation area.

#### **Vibration-Free Lighting**

Ability to adjust flicker-free lighting without any changes in color.

#### **Low Power Consumption**

Thanks to the fresnel structure, decrement of lighting is minimized and all power is focused on the lighting area.

#### **Stable And Unchanging Lighting**

In case of failure in any LED/Module, the other LEDs continue illumination maintaining the light intensity.

#### **High CRI Value**

Thanks to its high CRI value, the operation area can be seen in its true color tone, tissues and organs can be quantified down to the finest details, and with its high CRI R9 and CRI R13 values, it provides contrast-rich and natural illumination for the surgery without compromising the true tones of the tissues.















## **Common Main Features**



#### Internal & External Endoscopic Mode

External and internal endoscopy mode are used for comfortable lighting during closed operations such as endoscopy and laparoscopy.

# 

#### High Level Design: Environmentally Friendly-User Friendly-Ergonomic

High quality components are integrated with innovative design and successful engineering in all products for superior lighting and longlasting high performance thanks to environmentally-friendly, user friendly, and ergonomic.

#### **IP54 Protection**



Light heads are resistant to dust and liquid at IP54 level.

#### The Latest Technology Led Chip

LED chip technology that provides a minimum life of 60,000 hours, regardless of color and light intensity used.

# 3500 K 4400 K 5000 K

60.000 HOURS

#### Color Temperature Adjustment (Kelvin)

Ideal illumination is provided while color temperature can be adjusted according to tissue and operation type; eye fatigue, glare and similar negativities effects that may be experienced with conventional lights are inhibited.

### Surgical Lights Common Features

#### \*Elite, Pergamon+, Smyrna+ common features

#### **Remote Control System**

**Integration Systems** 

all solutions you needs.

Lighting systems can be controlled from outside the operation area with a Wall Control Panel, Remote Control, and a mobile tablet. All heads can be controlled synchronously from a single control panel; Meanwhile, they can be adjusted separately.

Etkin Tibbi Cihazlar offers innovative and fully compatible surgical lights to be integrated with

#### **Laminar Flow**

Light head design provides ideal laminar airflow to manage air turbulence to minimize bacterial contamination.

#### DUCOP<sup>®</sup>-Double Sided Control Panel

This feature enables bilateral use of the control panel without the necessity of making any changes on the location of the operation team members.















## Surgical Lights Common Features



#### UHD/FULL HD Camera Integration

Uninterrupted high resolution image of 3840x2160 or 1920x1080 transfer to all imaging devices is provided for the purpose of consulting and training.



#### Camera: Perfect Image And Wireless Transmission

Wireless camera feature combines existing Full HD and Ultra HD camera technology with the advantage of encrypted and wireless communication.

The high-resolution images can then be transmitted to a main receiver or multiple installers without the need for any additional cables. Camera features also be controlled from wall control panel or a tablet.

#### **Touch Control Panel**

With the control panel option, where camera can also be controlled, there is no need for an additional camera control unit. Durability is ensured without sacrificing ease of use with the uniquely designed control panel consisting of touch-sensitive buttons.

#### Wireless Camera And Camera Infrastructure

With its wireless camera infrastructure and camera technology, the systems is ready to use without the need for any equipment necessary for assembly in the installation and removal of the camera. Lights with camera can be equipped with sterilizable handles.





## Accessories



## **Optional Features**





## SURGICAL LIGHTS

## ETC Elite

SERIES

Elite Series operating lights provide solutions with various head mounting styles. Elite series can provide 160,000 lux illumination with minimum power consumption through high energy efficiency.

#### Sterilizable Handle Can be sterilized at 134°C in autoclave

IP 54 ◀ Light heads are resistant to dust and liquid at IP54 level.

#### **Excellent Lighting and High Performance**

Elite Series surgical light, which is the first product that Etkin Tibbi Cihazlar started to produce in Turkey and export to the international market, attracts attention with its unique control panel, low power consumption, flicker-free illumination, high CRI value (>97) and color temperature adjustment.

ETC ELITE

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#### Ease of Use and Superior Control

#### Elite Series

#### **Remote Control System**

Light systems can be controlled from outside the operation area with the Wall Control Panel, Remote Control and a mobile or tablet.





#### UHD/FULL HD Camera

Uninterrupted high resolution image transfer of 840x2160 or 1920x1080 to all imaging devices is provided for the purpose of consultancy and training.

#### Wireless Camera and Camera Infrastructure

With its wireless camera infrastructure and camera technology, the systems is ready to use without the need for any equipment necessary for assembly in the installation and removal of the camera. Lights with camera can be equipped with sterilizable handles.





Full HD Medical Camera / Ultra HD Camera inside customized protective case



A sterilizable case is used to protect the camera during surgeries.



#### The ideal solution for narrow surgical area

Elite Series LED surgical lights provide significant support to the surgeon in narrow fields compared to other surgical lights with their manually adjustable 11-18 cm spot setting, offering shadow-free illumination in areas where surgeon intervene in neurosurgery and general surgery operations.



All values conform to IEC 60601-2-41. Subject to technical and design changes without notice. Light values are subject to a measurement tolerance of ra10 %. \* In accordance with IEC 606001-2-41 the max. Illuminance must not exceed 160,000 k. The measurement tolerance is therefore only - 10 %. All values conform to IEC 60601-2-41. Subject to a technical and design changes without notice. Light values are subject to a measurement tolerance of ±10 %. \* In accordance with IEC 60601-2-41 the max. Illuminance must not exceed 160,000 k. The measurement tolerance of ±10 %. \* In accordance with IEC 60601-2-41 the max. Illuminance must not exceed 160,000 k. The measurement tolerance of ±10 %. \* In accordance with IEC 60601-2-41 the max. Illuminance must not exceed 160,000 k. The measurement tolerance is therefore only - 10 %.

## **Elite** Series Technical Specification

| Model  | Elite   |
|--|---|
| Туре   | LED   |
| Light Intensity                                  | 130.000 lux - 160.000 lux                                 |
| Light Intensity Adjustment Level                 | %20-%100 10 steps*-From Control Panel                     |
| Color Temperature (K)                            | 3.800K-4.800K*- From Control Panel                        |
| Color Temperature Adjustment Level               | 3 Steps* Manual / 5 Steps* Motorized                      |
| Head Diameter                                    | 65 cm   |
| Lighthead Material                               | Aluminum, Antibacterial (Smooth Surfaces, Curved Corners) |
| Spot Adjustment                                  | Manual / Motorized  |
| Spot Diameter                                    | 11-18 cm  |
| Number of LEDs                                   | 58 LEDs   |
| Led Lifetime                                     | >60.000 hour  |
| CRI Ra   | > 96  |
| CRI R9   | > 97  |
| Illumination Depth(L1+L2)-20%                    | > 110 cm  |
| Illumination Depth(L1+L2)-60%                    | > 50 cm   |
| Temperature increase at the sugeon's head        | <1 °C   |
| Increased temperature in the operating room area | <1 °C   |
| Power Consumption                                | 40 W  |
| Laminar Flow Compatibility                       | Yes   |
| Resistance to Dust and Water                     | Yes, IP54   |
| Radiant Energy                                   | < 3,5 mW/m² Lux   |
| Endoscopy Mode                                   | Yes   |
|  |   |



III values conform to IEC 60601-2-41. Subject to technical and design changes without notice. Light values are subject to a pressurement tolerance of ±10 % \* In accordance with IEC 60601-2-41. Ithe max luminance must not exceed 180.000 ik. The measurement tolerance is therefore only -10 %. All values conform to IEC 60601-2-41. Subject to technical and design changes without notice. Light values are ubject to a measurement tolerance of ±10 %. \* In accordance with IEC 60601-2-41 max must not exceed 180,000 ik. The measurement tolerance is therefore only -10 % and ubject to a measurement tolerance of ±10 %. \* In accordance with IEC 60601-2-41 max illuminance must not exceed 180,000 ik. The measurement tolerance is therefore only -10 %



## SURGICAL LIGHTS

## ETC Pergamon +

#### SERIES

We have integrated innovative solutions that improve working conditions in the operating room into Pergamon+ series.



#### High User Comfort with Automatic Spot and High Lighting Depth

Light heads are resistant to dust and liquid at IP54 level.

Pergamon+ series offers the option of automatically correcting any distortion of circular homogeneity in the spot that may be caused by the distance to the surgical field. With its wide spot scale and high illumination depth, it provides the most suitable focal diameter and illumination comfort for all surgical types.

All Pergamon+ models have the feature of three spot adjustment as Wide, Mid, and Narrow using control panel. This adjustment can be done in Pergamon+ E series as electronically, while in Pergamon+ X this adjustments are both electronically and motorized. In Pergamon+ XO, as an advance model, besides these two type of adjustment, Automatic Light Filed Management Sensor (ALM) is integrated.



#### Pergamon+ Series

#### **Remote Control System**

Light systems can be controlled from outside the operation area with the Wall Control Panel, Remote Control and a mobile or tablet.



#### UHD/FHD Camera

Uninterrupted high resolution image transfer of 840x2160 or 1920x1080 to all imaging devices is provided for the purpose of consultancy and training.





Full HD Medical Camera / Ultra HD Camera inside customized protective case

A sterilizable case is used to protect the camera during surgeries.

#### Wireless Camera and Camera Infrastructure

With its wireless camera infrastructure and camera technology, the systems is ready to use without the need for any equipment necessary for assembly in the installation and removal of the camera. Lights with camera can be equipped with sterilizable handles.



#### Automatic Light Field Management (ALM)

It allows automatic fixation of the desired spot width above and below 1 meter (0.6m-1.5m).

#### HIGH Illumination DEPTH (L1+L2)

Pergamon series, with illumination depth value (L1+L2)-20% > 140 cm, ensures that light beams reach the deepest cavities of the body in a beneficial and homogeneous anner with the synchronized movement of the modules. This feature can be reached also manually with handles of Pergamon X series for users who are accustomed to conventional systems. In Pergamon+ XO series which have a higher level of technological hardware and software than conventional system, the automatic spot adjustment feature via distance sensor provided perfect operation in narrow and deep operation areas without the need for repositioning of the light.



#### CONSISTENT ILLUMINATED FIELD

#### AUTOMATIC Light Field Management (ALM)

The desired spot width above and below 1 meter (0.6m-1.6m) is automatically fixed. If the normal working distance is changed above or below 1 meter, automatic adjustment of the spot width is provided with the sensor technology (ALM) in the Pergamon XO series. Without the need to reposition the operating head or manually adjust the spot during surgery, the surgeon is enabled to concentrate on the operating field and work in consistent, homogeneous lighting conditions at all times.



Wide Working Distance Range



All values conform to IEC 60601-2-41. Subject to technical and design changes without notice. Light values are subject to a measurement tolerance of ±10 %. \* In accordance with IEC 60601-2-41 the meax Illuminance must not exceed F60,000. The measurement tolerance is therefore only -10 %. All values conform to IEC 60601-2-41. Subject to technical and design changes without notice. Light values are subject to a measurement tolerance of ±10 %. \* In accordance with IEC 60601-2-41 the max. Illuminance must not exceed F60,000 k. The measurement tolerance is therefore only -10 %.

## **Pergamon+** Series Technical Specifications

| Model  | Pergamon+ E                           | Pergamon+ X                           |
|--|---------------------------------------|---------------------------------------|
| Туре   | LED                                   | LED                                   |
| Light Intensity                                  | 130.000 lux - 160.000 lux             | 130.000 lux - 160.000 lux             |
| Light Intensity Adjustment Level                 | %25-%100 10 Steps*-From Control Panel | %25-%100 10 Steps*-From Control Panel |
| Color Temperature (K)                            | 3.500K-5.000K*- From Control Panel    | 3.500K-5.000K*- From Control Panel    |
| Color Temperature Adjustment Level               | 5 Steps                               | 5 Steps                               |
| Head Diameter                                    | 65 cm                                 | 65 cm                                 |
| Lighthead Material                               | Aluminum, Antibacterial               | Aluminum, Antibacterial               |
| Spot Adjustment                                  | Electronic                            | Electro-motorized                     |
| Spot Diameter                                    | 16-29 cm                              | 15-30 cm                              |
| Number of LEDs                                   | 69 LEDs                               | 69 LEDs                               |
| Led Lifetime                                     | >60.000 hour                          | >60.000 hour                          |
| CRI Ra   | > 96                                  | > 96                                  |
| CRI R9   | > 97                                  | > 97                                  |
| Illumination Depth(L1+L2)-20%                    | > 91 cm                               | > 140 cm                              |
| Illumination Depth(L1+L2)-60%                    | > 61 cm                               | > 80 cm                               |
| Temperature increase at the sugeon's head        | <1 °C                                 | <1 °C                                 |
| Increased temperature in the operating room area | <1 °C                                 | <1 °C                                 |
| Power Consumption                                | 80 W                                  | 80 W                                  |
| Laminar Flow Compatibility                       | Yes                                   | Yes                                   |
| Resistance to Dust and Water                     | Yes, IP54                             | Yes, IP54                             |
| Radiant Energy                                   | < 3,5 mW/m² Lux                       | < 3,5 mW/m² Lux                       |
| Endoscopy Mode                                   | Yes                                   | Yes                                   |
|  |                                       |                                       |





## SURGICAL LIGHT

## ETC Smyrna+

SERIES

## Ultimate Lighting and Surgical Efficiency with the Most Innovative Features

Smyrna+ series has been developed based on the belief that more successful surgeries can be performed providing excellence lighting. With the most powerful LED technology, shadow-free illumination, and the integration of the most innovative features that maximize working conditions, this series allows surgeons to perform comfortable and successful surgeries.

Sterilizable Handle The handles can be sterilized in an autoclave at 134°C.

IP 54 Lighting heads are resistant to dust and liquid at IP54 level

#### Perfect Operation Experience with Innovative Surgical Light Infrastructure

Smyrna+ Series surgical lights, which were designed using smart sensor technologies in line with all professional experience and user feedback in the field of surgical light, offer superior performance in operation continuity with its Automatic Light Field Management (ALM), Automatic Shadow Management (ASM) and 3 independent microcontrollers in its technology.

In addition to all the features been offered in other surgical lighting series within our company, in Smyrna+ Series these features can be maximized; With its Illumination Depth value (L1+L2-20%) measured above 183 cm, it has significantly surpassed all its competitors in the international market.

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#### Smyrna+ Series

#### **Remote Control System**

Light systems can be controlled from outside the operation area with the Wall Control Panel, Remote Control and a mobile or tablet.



#### UHD/FHD Camera

Uninterrupted high resolution image transfer of 840x2160 or 1920x1080 to all imaging devices is provided for the purpose of consultancy and training.





Full HD Medical Camera / Ultra HD Camera inside customized protective case

A sterilizable case is used to protect the camera during surgeries.

#### Wireless Camera and Camera Infrastructure

With its wireless camera infrastructure and camera technology, the systems is ready to use without the need for any equipment necessary for assembly in the installation and removal of the camera. Lights with camera can be equipped with sterilizable handles.



#### Automatic Shadow Management (ASM)

Any obstacles that will affect theillumination efficiency between the operating light head and the operation area are detected by the sensors and shadow formation and loss of light intensity are prevented..

#### **Automatic Light Field** Management(ALM)

It allows automatic fixation of the desired spot width above and below 1 meter (0.6m-2.3m).

#### **Automatic Light Field Management** (Alm) and High Illumination Depth

Within Smyrna+ series and Pergamon+ series, the ALM feature has been taken as an advance level. In this way, the light head can provide the automatic Light Field feature even if it is closer and/or farther away from the operation area, and the operating range is extended. Improving the working range has offered a high-level illumination depth of 185 cm, thus ensuring that even the deepest cavities within the illumination area are illuminated homogeneously, offering the user the highest level of viewing angle.

#### Automatic Shadow Management (ASM)

Thanks to the 6 sensors used in Automatic Shadow Management (ASM) and the hexagonal structure of the Smyrna+ series, possible shadowing that may occur due to the user blocking any LED Module during operation is prevented. Homogeneous light and focus structure are maintained by sending light beams of higher light intensity to the lighting area of other modules.





nance must not exceed 160,000 k. The measurement tolerance is therefore only -10 % All values conformed to the Co06012-241 Subject to technical and design changes without notice use and a subject to technical and design changes without notice use and a subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses are subject to technical and design changes without notice uses

## **Smyrna+** Series Technical Specifications

| Model  | Smyrna+   |
|--|---|
| Туре   | LED   |
| Light Intensity                                  | 130.000 lux - 160.000 lux (1m)                            |
| Light Intensity Adjustment Level                 | %20-%100 10 steps*-From Touch Control Panel               |
| Color Temperature (K)                            | 3.500K – 5.000 K – 5 step*-From Touch Control Panel       |
| Color Temperature Adjustment Level               | 5 steps*  |
| Head Diameter                                    | 70 cm   |
| Lighthead Material                               | Aluminum, Antibacterial (Smooth surfaces, Curved Corners) |
| Spot Adjustment                                  | By the handle, Electronic                                 |
| Spot Diameter                                    | 15-32 cm  |
| Number of LEDs                                   | 108 LEDs  |
| Led Lifetime                                     | >60.000 hour  |
| CRI Ra   | > 96  |
| CRI R9   | > 97  |
| Illumination Depth(L1+L2)-20%                    | > 183 cm  |
| Illumination Depth(L1+L2)-60%                    | > 103 cm  |
| Temperature increase at the sugeon's head        | <1°C  |
| Increased temperature in the operating room area | <1 °C   |
| Power Consumption                                | 80 W  |
| Laminar Flow Compatibility                       | Yes   |
| Resistance to Dust and Water                     | Yes, IP54   |
| Radiant Energy                                   | < 3,6 mW/m² Lux   |
| Endoscopy Mode                                   | Yes   |
|  |   |



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Our Surgical Lights offer solutions for all lighting needs with various mounting styles. Ceiling mounted lighting systems can be configured with single head, double head, triple head, quad head and an additional monitor arm.





## MINOR OPERATION LIGHT

## ETC Anka+

#### SERIES

Anka+ Series which are categorized as minor operation lights, have become indispensable for surgeons in small operations thanks to their mounting variety, user-friendly design and high energy efficiency. Anka+ minor operation lights can be used in wide ranges namely s hospitals, veterinary, dermatology, plastic surgery and gynecology clinics.



Sterilizable Handle The handles can be sterilized in an autoclave at 134°C.

Light heads are resistant to dust and liquid at IP54 level.

#### **Superior Performance in Minor and Critical Surgeries**

Anka+ minor operation lights series are compact surgical lights that provide illumination levels of 100,000 lux, 110,000 lux and 120,000 lux, 160,000 lux which are deal for small and critical operations. Anka+ series , with IP54 protection, have features that can meet all needs of a minor surgery. Thanks to the optional battery unit, continuity of operation at maximum lighting intensity for up to 6 hours can be provided.

ETC ANKA+

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#### Ease of Use and Superior Control

#### Anka+ Series

#### **Different Control Panel Options**

According to user's demands, it can be provided with an option of 3 different unique control panels .





#### FULL HD Camera

Uninterrupted high resolution image transfer of 840x2160 or 1920x1080 to all imaging devices is provided for the purpose of consultancy and training.



## 6 or 10 hours battery back up unit

In case of a power outage during the operation, the system can automatically switch from mains to battery without causing any lighting interruption. Additionally, battery status and power supply information are shown on the Large Information Screen.

#### **Multifunctional Control Panel**



- On and Off

   Image: Spot Size Adjustment
- Light Intensity Adjustment

Light Intensity Adjustment Endo Mode Activation

#### Anka+ Series Configurations









Double Hea



## Anka+ Series Technical Specifications

| Model  | Anka+   |
|--|---|
| Туре   | LED   |
| Light Intensity                                  | 120.000 lux - 160.000 lux (1m)                            |
| Light Intensity Adjustment Level                 | %20-%100 10 Steps*-Via Touch Control Panel                |
| Color Temperature (K)                            | 3.800K – 4.800 K – 3 Steps*–Via Touch Control Panel       |
| Color Temperature Adjustment Level               | 3 Steps* Mobile-Wall/ 5 Steps* Ceiling                    |
| Head Diameter                                    | 37 cm   |
| Lighthead Material                               | Aluminum, Antibacterial (Smooth surfaces, Curved Corners) |
| Spot Adjustment                                  | Touch Control Panel – Electronic                          |
| Spot Diameter                                    | 19-31 cm  |
| Number of LEDs                                   | 55 LEDs * Mobile/Wall / 54 LED* Ceiling                   |
| Led Lifetime                                     | >60.000 hour  |
| CRI Ra   | > 96  |
| CRI R9   | > 97  |
| Illumination Depth(L1+L2)-20%                    | > 203 cm  |
| Illumination Depth(L1+L2)-60%                    | > 140 cm  |
| Temperature increase at the sugeon's head        | <1 °C   |
| Increased temperature in the operating room area | <1 °C   |
| Power Consumption                                | 58 W  |
| Laminar Flow Compatibility                       | Yes   |
| Resistance to Dust and Water                     | Yes, IP54   |
| Radiant Energy                                   | < 3,5 mW/m² Lux   |
| Endoscopy Mode                                   | Yes   |
|  |   |

#### Accessories



#### Optional Features



All values conform to IEC 60601-2-41. Subject to technical and design changes without notice. Light values are subject to a measurement tolerance of ±10 %. In accordance with Illuminance must not exceed 160,000 k. The measurement tolerance is therefore only -10 %. All values conform to IEC 60601-2-41. Subject to technical and design changes withou subject to a measurement tolerance of ±10 %. I a accordance with IEC 60601-2-41 the max. Illuminance must not exceed 160,000 k. The measurement tolerance is therefore only -



## EXAMINATION LIGHT

## ETC Kayra+



Kayra+ Series lights are high-end examination lighting systems that provide 80,000 lux illumination at a distance of 1 meter. Their high CRI value and color temperature adjustment features enable them to be used for minor surgeries when necessary.

#### Powerful Lighting Solution in Small and Crowded Treatment and Examination Areas

It offers wall-mounted, ceiling-mounted and mobile style. This series provides the perfect solution in areas such as hair transplantation centers, dental clinics, aesthetics and beauty centers. Mobile Kayra+ systems with optional 3-hour battery are the perfect portable lighting system for clinics looking for more than a standard examination lamp.



#### ETC KAYRA+

#### Ease of Use and Superior Control

Kayra+ Series



#### Kayra+ Series Configurations









## **Kayra+** Series Technical Specifications

| Model  | Кауга+   |
|--|--|
| Туре   | LED  |
| Light Intensity                                  | 50.000 - 80.000 lux - 100.000 lux (1m)                         |
| Light Intensity Adjustment Level                 | %20-%100 10 Steps*-Via Touch Control Panel                     |
| Color Temperature (K)                            | 3.500K – 5.000 K – 3 Steps*–Via Touch Control Panel            |
| Color Temperature Adjustment Level               | 3 Steps*– Via Touch Control Panel                              |
| Head Diameter                                    | 29 cm  |
| Lighthead Material                               | Aluminum, Antibacterial (Smooth surfaces, Curved Corners) Spot |
| Spot Adjustment                                  | Via Touch Control Panel – Electronic                           |
| Spot Diameter                                    | 15–25 cm   |
| Number of LEDs                                   | 31 LEDs  |
| Led Lifetime                                     | >60.000 hour   |
| CRI Ra   | > 96   |
| CRI R9   | > 97   |
| Illumination Depth(L1+L2)-20%                    | > 185 cm   |
| Illumination Depth(L1+L2)-60%                    | > 125 cm   |
| Temperature increase at the sugeon's head        | <1 °C  |
| Increased temperature in the operating room area | <1 °C  |
| Power Consumption                                | 26 W   |
| Laminar Flow Compatibility                       | Yes  |
| Resistance to Dust and Water                     | Yes, IP54  |
| Radiant Energy                                   | < 3,5 mW/m² Lux  |
| Endoscopy Mode                                   | Yes  |
|  |  |

#### Accessories



#### Optional Features



All values conform to IEC 60601-2-41. Subject to technical and design changes without notice. Light values are subject to a measurement tolerance of ±10 %. In accordance with IEC 60601-2-41 the max liummance must not exceed 160,000 Ix. The measurement tolerance is therefore only -10 %. All values conform to IEC 60601-2-41, Subject to technical and design changes without notice. Light values are subject to a measurement tolerance of ±10 %. In accordance with IEC 60601-2-41 the max illuminance must not exceed 160,000 Ix. The measurement tolerance is therefore only -10 %





## EXAMINATION LIGHT





## EXAMINATION LIGHTS



## Hera+/Hera S+ Series Technical Specifications

| MODEL   | HERA+                         | HERA S+ 40                    | HERA S+ 60                    |
|---|-------------------------------|-------------------------------|-------------------------------|
| Light Intensity (Lux) (0.5m)                    | 60.000 lux                    | 40.000 lux                    | 60.000 lux                    |
| Color Rendering Index CRI Ra                    | >96                           | >96                           | >92                           |
| Color Temperature (Kelvin)                      | 4.250 +- 10%                  | 4.500 K +-10%                 | 6.500 K +-10%                 |
| Light Intensity Level Adjustment                | Fixed or %50-%100 adj. option | Fixed or %50-%100 adj. option | Fixed or %50-%100 adj. option |
| Number of LED                                   | 10 LEDs                       | 7 LEDs                        | 7 LEDs                        |
| Spot Diameter (0,5m)                            | 15 cm                         | 18 cm                         | 18 cm                         |
| Power Consumption (W)                           | 12W                           | 10 W                          | 14 W                          |
| LED Lifetime (h)                                | >60.000                       | 60.000                        | 60.000                        |
| Working Distance (cm)                           | 40-100                        | 30-100                        | 30-100                        |
| Integrated on/off switch                        | Yes                           | Yes                           | Yes                           |
| Minimum 2 hours battery                         | Yes[Optional]                 | Yes(Optional)                 | Yes(Optional)                 |
| Automatic switch to battery during power outage | Yes(Optional)                 | Yes(Optional)                 | Yes(Optional)                 |
| Light Head Size (cm)                            | 24 cm                         | 9.9 cm                        | 9.9 cm                        |

#### Hera+ Configuration









#### Hera S+ Configuration







All values conform to IEC 60601-2-41. Subject to technical and design changes without notice. Light values are subject to a measurement tolerance of ±10 %. \* In accordance with IEC 60601-2-41 the max. Illuminance must not exceed I60,000 ix. The measurement tolerance is therefore only -10 %. All values conform to IEC 60601-2-41. Subject to technical and design changes without notice. Light values are subject to a measurement tolerance of ±10 %. \* In accordance with IEC 60601-2: 10 %. The measurement tolerance of ±10 %. \* In accordance with IEC 60601-2: 10 %.

## ETCLED

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