



An Efficient View to Life for More Than Seeing

## ADVANCED SURGICAL ILLUMINATION SOLUTIONS

## ETC LED OPERATING LIGHTS



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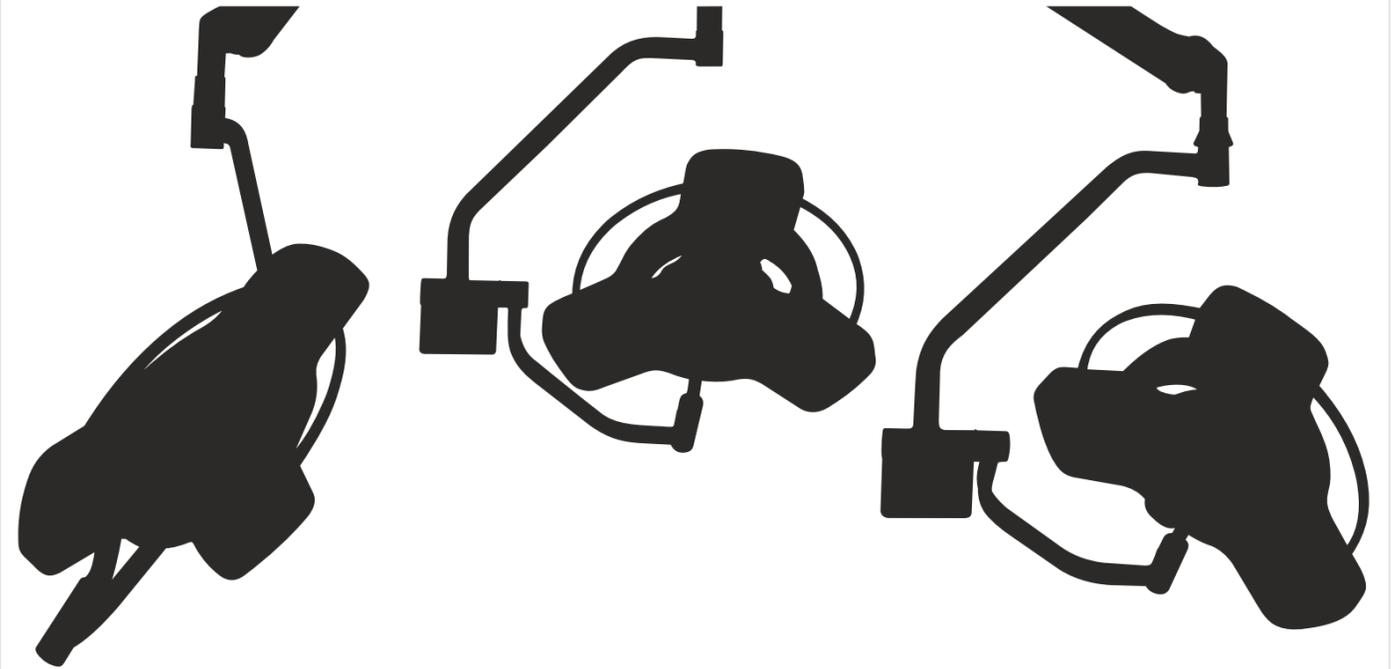




MEDICAL DEVICES

An Efficient View to Life for More Than Seeing

## ETC LED OPERATING LIGHTS



MEDICAL DEVICES



An innovative manufacturer of LED operating light systems, **ETKIN** provides high quality surgical illumination solutions for the medical professionals around the world. Surgical light products that range from full size operating theater lights to compact operating lights and examination lights are offered for the illumination needs of today's advanced OT Rooms.

**LED Life > 60.000 hr**



**CRIa >96  
CRI9 >97**

### TRUST YOUR OT ROOM LIGHTS!

Outstanding design of the lightheads and powerful LED modules deliver high performance illumination with use of comfort for the surgery professionals even for the long hour surgeries.

**High CRI values** of the light field area allow to see true colors that are very close to natural colors under the sun. State of the art components are embedded with successful engineering in the lightheads for providing powerful illumination for toughest surgeries. Today's OT Rooms demand reliability, durability and long life in their choice of equipment. ETKIN surgical light systems meet these demands with a performance above expectations.

### Complete Solutions on Four Platforms



Master Lightheads



Elite Lightheads



Anka Lightheads



Kayra Lightheads

## Surgical Illumination Solutions

### OPERATING LIGHTS - Master and Elite Series

Full size operating lights are offered in ceiling, wall mount, and mobile model options. Illumination levels of 130.000 lux and 160.000 are available.



Ceiling



Mobile



Wall mount

### COMPACT OPERATING LIGHTS - Anka Series

A true operating light system with full features with a smaller lighthead, top quality illumination. Anka Series Operating Lights produce illumination levels of 100.000 lux, 110.000 lux and 120.000 lux.



Ceiling



Mobile



Wall mount

### EXAMINATION LIGHTS - Kayra Series

50.000 lux, 60.000 lux and 80.000 lux powerful illumination at 1 meter, these advanced examination lights can deliver outstanding performance for minor surgeries and detailed examinations.



Ceiling



Mobile

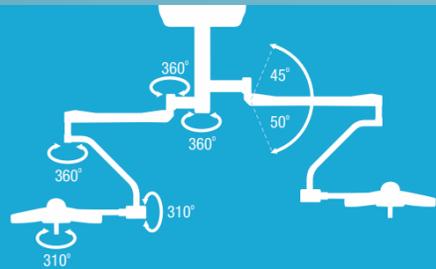


Wall mount

# MASTER Series Lights



130.000 Lux / 160.000 Lux



**ETC LED C 16ET / 16ET**  
Master Series model ceiling light.  
160.000 lux illumination power  
on both heads.

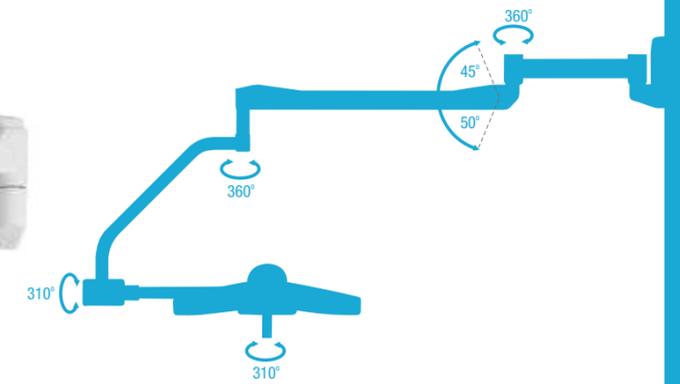
## Ceiling Operating Lights

Master Series lightheads are available in 130.000 lux and 160.000 lux illumination levels. Carefully designed for providing maximum lighting power at all light field diameters, the Master Series models provide exceptional luminance regardless of focus adjustment.



- Focus adjustment: 16 cm - 30 cm
- L1 + L2: 156 cm
- CRIa >96, CRI9 >97
- Focusing function: Electronic focusing control by LED on/off

## Wall Mount Operating Lights



**ETC LED W 16ET Master Series**  
Wall Operating Light System

Wall mount Master Series operating lights allow to save space in compact operating rooms or in busy traffic emergency room areas, and yet provide exceptional illumination for the surgery staff.

## Mobile Operating Lights

Master Series lightheads are available as mobile operating light units with illumination power options of 130.000 lux and 160.000 lux.



### 6 Hour Battery

Full size and fully functional operating lightheads to be used as portable units. Powered with 6 hour lasting batteries these mobile systems are the reliable portable operating lights for providing top quality illumination for surgeries during power shortages or in challenging surgery room conditions.



The base unit has an information screen on the front for indicating the power source type and battery status.

### Automatic Switch to Battery Use

In case of a power outage, the system can switch automatically from mains to battery instantly without causing any interruption of illumination during an operation.



### Extreme Mobility

The mobility of the system is provided by four wheels. Each wheel is made of swivel casters that can rotate 360 degrees. Braking mechanism is used for locking the wheels for still positioning during operations.



**M 16ET Master Series model**  
mobile operating light.

# ELITE Series Lights



130.000 Lux / 160.000 Lux

## Ceiling Operating Lights

160.000 Lux with Low Power Consumption

Elite Series Lightheads provide 130.000 lux and 160.000 lux luminance based on user's choice. Elite lightheads are energy efficient and can provide 160.000 lux illumination with minimum power consumption. Like Master Series, Elite Series lightheads too have high CRIa and CRI9 values for providing excellent illumination.

ETC LED C 16ETK / 16ET / 16ET  
Elite Series model ceiling light  
with Full HD Camera. 160.000 lux  
illumination power on all heads.



- Focus adjustment: 11 cm - 18 cm
- L1 + L2: 110 cm
- CRIa >96, CRI9 >97
- Focusing function: Motorized electrical focusing or manually

## Mobile Operating Lights

M 16ET Elite Series  
Mobile Operating Light

130.000 lux and 160.000 lux Elite Series model mobile operating lights are energy efficient and they can deliver high performance illumination with little power consumption. These energy efficient portable operating lights can stand up to long operations running on battery up to **10 hours**.

The base unit has an information screen on the front for indicating power source type and battery status.

### Automatic Switch to Battery Use

In case of a power outage, the system can switch automatically from mains to battery instantly without causing any interruption of illumination during an operation.

### Extreme Mobility

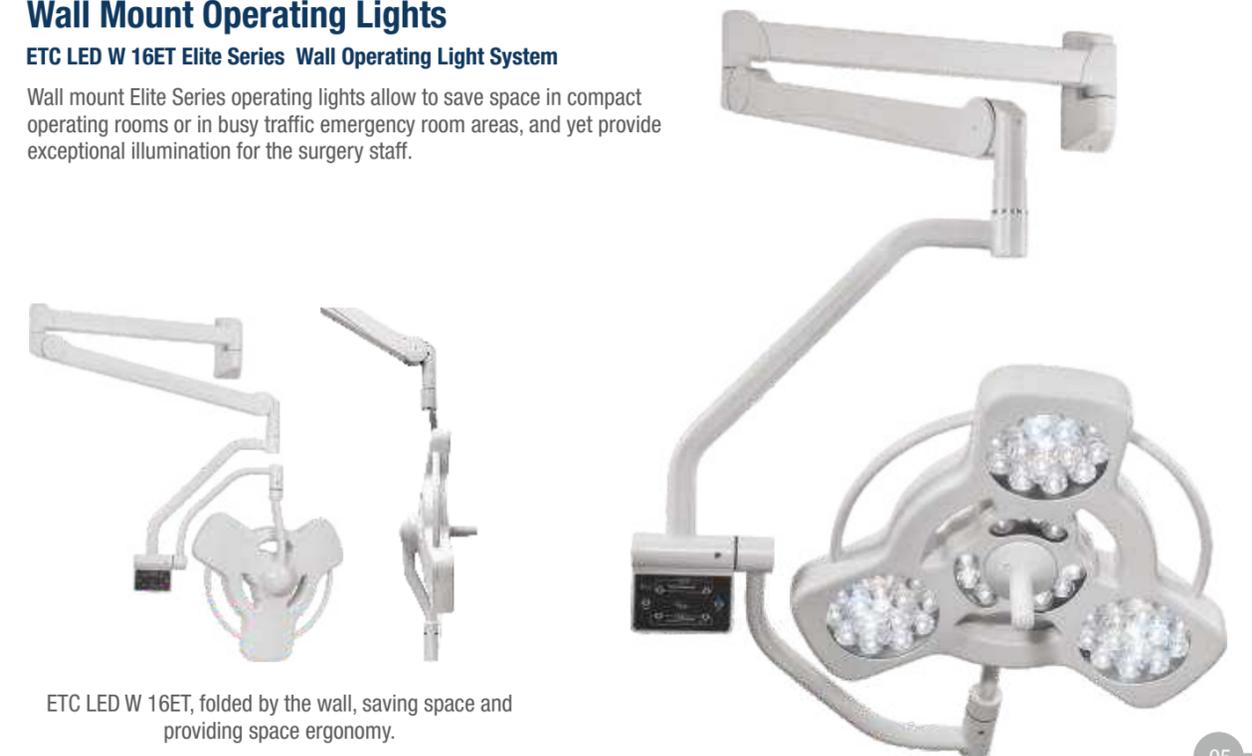
The mobility of the system is provided by four wheels. Each wheel is made of swivel casters that can rotate 360 degrees. Braking mechanism is used for locking the wheels for still positioning during operations.



## Wall Mount Operating Lights

ETC LED W 16ET Elite Series Wall Operating Light System

Wall mount Elite Series operating lights allow to save space in compact operating rooms or in busy traffic emergency room areas, and yet provide exceptional illumination for the surgery staff.



ETC LED W 16ET, folded by the wall, saving space and providing space ergonomics.

**Hygienic:**

Any dust, stain or bacteria cannot live on the isolated and antibacterial body. It can be cleaned with disinfectant agents.

**Adjustable Color Temperature:**

Color temperature can be adjusted fractionally between 3.500K - 5.000K

**Uninterrupted Light:**

In case of a failure on any module, other modules keep continue working for uninterrupted illumination.

**ETC LED**

**Environmental Friendly:**

LEDs do not contain any mercury, toxic gas, filament and fragile parts.

**Light Without UV:**

Does not have an effect on the tissue and skin.

**Ergonomic:**

Enhanced mechanical properties of the arms provide great effective maneuver ability for focusing on the operation field.

**IP54**

Antibacterial coating is applied on the lighthouse.

Full HD Camera Integration

**Monitor for Camera Images:**

Video monitors can be installed on the operating room wall or can be mounted on the light system with use of an additional spring arm.

**Integration with HIS:**

ETKIN operating lights are easily connected with Hospital Information Systems (HIS). Light functionality controls, camera images and video archiving are easily integrated into existing HIS of the medical institutions.



## Advanced Technology & High Quality Components

In all of the products highest quality components are integrated with successful engineering design for superior illumination and long lasting high performance.

### Laminar Flow



Lighthead design enables ideal laminar air flow for managing air turbulence for minimizing contamination of bacteria.

### Endoscopy Mode



Endoscopy mode for comfortable ambient lighting during endoscopy operations.

### Shadowless Light



Shadowless light provides uninterrupted illumination in case of blocking of the LED modules by the head or shoulders of the surgical staff.

## Control Panel of a Camera Integrated Light System

- Operating Light Functions
- Camera Functions

Light Focus Adjustment  
Image Rotation of Camera

Minimum and Maximum Spot Size  
Auto Focus for Camera

Illumination Intensity Adjustment  
Zoom In / Zoom Out for Camera

Color Temperature Adjustment  
Iris Adjustment for Camera

On / Off

Camera Control Activation On / Off

Endoscopy Mode On / Off  
Auto Iris Adjustment for Camera



## Color Temperature Adjustment

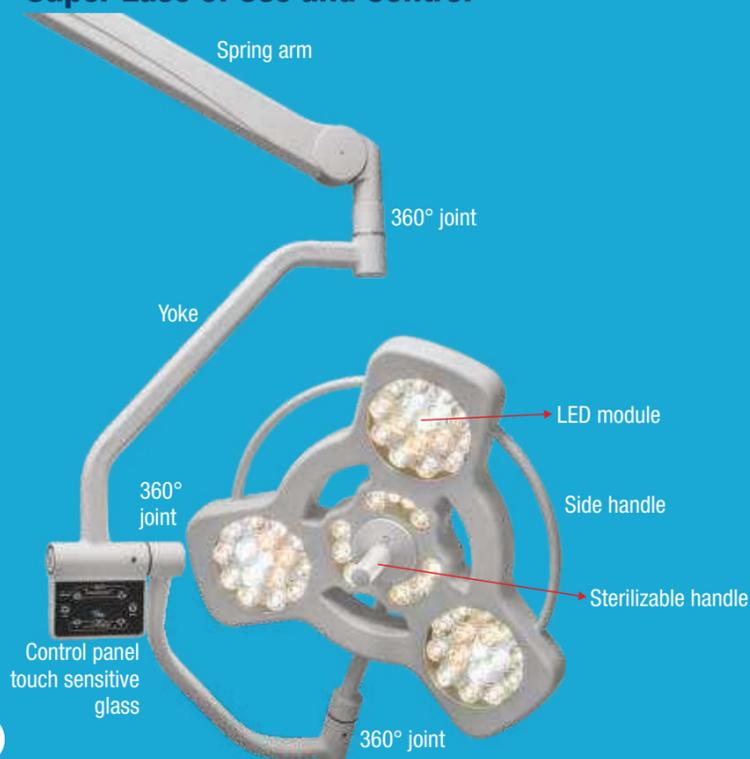
Color temperature adjustment feature provides the ideal light for the planned surgery. User can choose color temperature settings from 3500K warm values to 5000K cold white values. Color temperature adjustment is set in 5 steps between 3500 K to 5000 K values.





## Operating Lights Features

### Super Ease of Use and Control



- Aluminum cast body
- Anti bacterial paint
- Dust and water proof - IP 54
- < 1° Temperature at surgeon's head
- Shadowless illumination
- Sterilizable handle
- Touch sensitive glass control panel
- 60,000 hour LED life
- Dual face control panel
- 360° rotation for all articulations including camera models

### Modular Systems

Ceiling light systems can be configured as single head, dual head, triple head, and quadruple head, or triple head with monitor arm systems.



### Great Maneuver Ability

360 degree rotation capability at all joints provide great comfort of easy maneuverability.



### Dual Face Light Control Panel



User control panel on light arm can be configured with dual face control panel option.

This option has two control panels facing opposite directions, which enables very easy access to the control panel. Surgery staff working around the operating table can reach for control panel from both sides of the table and continue surgery in comfort without changing their position.

### Synchronization of Multiple Lighthoods

Ceiling lights that have multiple lighthoods can be synchronized for any specific function as requested by the user.

### Remote Control / Wall Control Panel



For operating rooms that require control panel of the light system as a separate unit, the wall control panel provides an ideal solution.

All functions of the light system can be controlled on the wall control panel including the full functions of the camera system.

### Android Connection

Compatible with android systems for WiFi control of the light system.



## Operating Lights Features

### Full HD Camera

A full HD Camera can be integrated into any type operating light, regardless of ceiling, mobile or wall mount model. Full HD camera features the main specifications of 1920 x 1080 resolution, 12x digital zoom, 10x optical zoom.

### Camera Ready Lighthoods

For users who want to have the camera option later in future, the camera substructure with ready cabling allows flexibility of adding a camera to the light system at a later time.



Camera casing without the sterilizable handle



Camera ready lighthouse with camera substructure and with the sterilizable handle.



### Camera Integration

Full HD Camera integration on the lighthouse enables surgeons to view the fine details of the surgery area in zoomed in larger views on the operating room monitor screen, which reduces the risks during difficult operations.

Video images from the camera can be seen on the monitor screens inside the operating room. With full integration to the hospital network and information systems the camera images can be viewed from other locations in the hospital, such as doctor offices, meeting rooms and the education centers.



Full HD Camera inside the customized protective casing



Sterilizable cover is used to cover the camera during surgeries.

> 360°

### Spinner Acrobat

With use of a specially designed articulation, Spinner Acrobat system, the camera integrated lighthouse can be rotated easily to > 360° and to even more sweeping angles.



### Specifications of Operating Lights

FEATURE	ELITE SERIES	MASTER SERIES
Illumination	130.000 lux / 160.000 lux	130.000 lux / 160.000 lux
Spot Diameter	11 cm - 18 cm	16 cm - 30 cm
L1 +L2	110 cm	156 cm
Focusing Type	Motorized electrical focusing	Electronic LED on/off focusing
Power Consumption	50 W	70 W
Color Temperature	3500K - 5000K	3500K - 5000K
Endoscopy Mode	Yes	Yes
CRIa	> 96	> 96
CRI9	> 97	> 97
LED Life	60.000 hr	60.000 hr
Maximum Illumination	At 11 cm	For All Spot Diameters
Wireless Control Wall Panel	Optional	Optional
Double Face Control Panel	Optional	Optional

\* Etkin Medical Devices may make changes to specifications and product descriptions at any time without notice. Technical values provided here are measured at laboratory conditions and may show slight variations under different measurement practices.

# ANKA Series Operating Lights



100.000 Lux / 110.000 Lux / 120.000 Lux

## Compact Operating Lights

ANKA Series Lighthouse are compact operating lights that provide illuminations between 100.000 lux, 110.000 lux and 120.000 lux. It makes them ideal for minor surgeries and critical surgeries in smaller clinics.

ANKA Series lights are true operating lights in their reduced dimensions. They have outstanding illumination quality with all functions of a full sized operating light.



## Ceiling Anka Lights

Compact lighthouse Anka Series can be mounted as a ceiling operating light and provide illumination up to 120.000 lux with full functions.

## Mobile Anka Lights

Offered with optional 3 hours battery, the mobile Anka light systems are the perfect portable light system for smaller clinics that require quick response in emergencies.



## Specifications

FEATURE	ANKA SERIES
Illumination	100.000 lux / 110.000 lux / 120.000 lux
Spot Diameter	23 cm - 31 cm
L1 +L2	> 203 cm
Focusing Type	Electronic LED on/off focusing
Color Temperature	3600K - 5000K
Endoscopy Mode	Yes
CRIa	> 96
CRI9	> 97
LED Life	60.000 hr
Lighthouse diameter	37 cm
Battery	Optional

\* Technical values provided here are measured at laboratory conditions and may show slight variations under different measurement practices.



Exceptional illumination with all functions of a full size operating light.

## Wall Mount Anka Lights

Wall mount Anka Series compact operating lights allow to save space in compact operating rooms or in busy traffic emergency room areas, and yet provide exceptional illumination for the surgery staff.



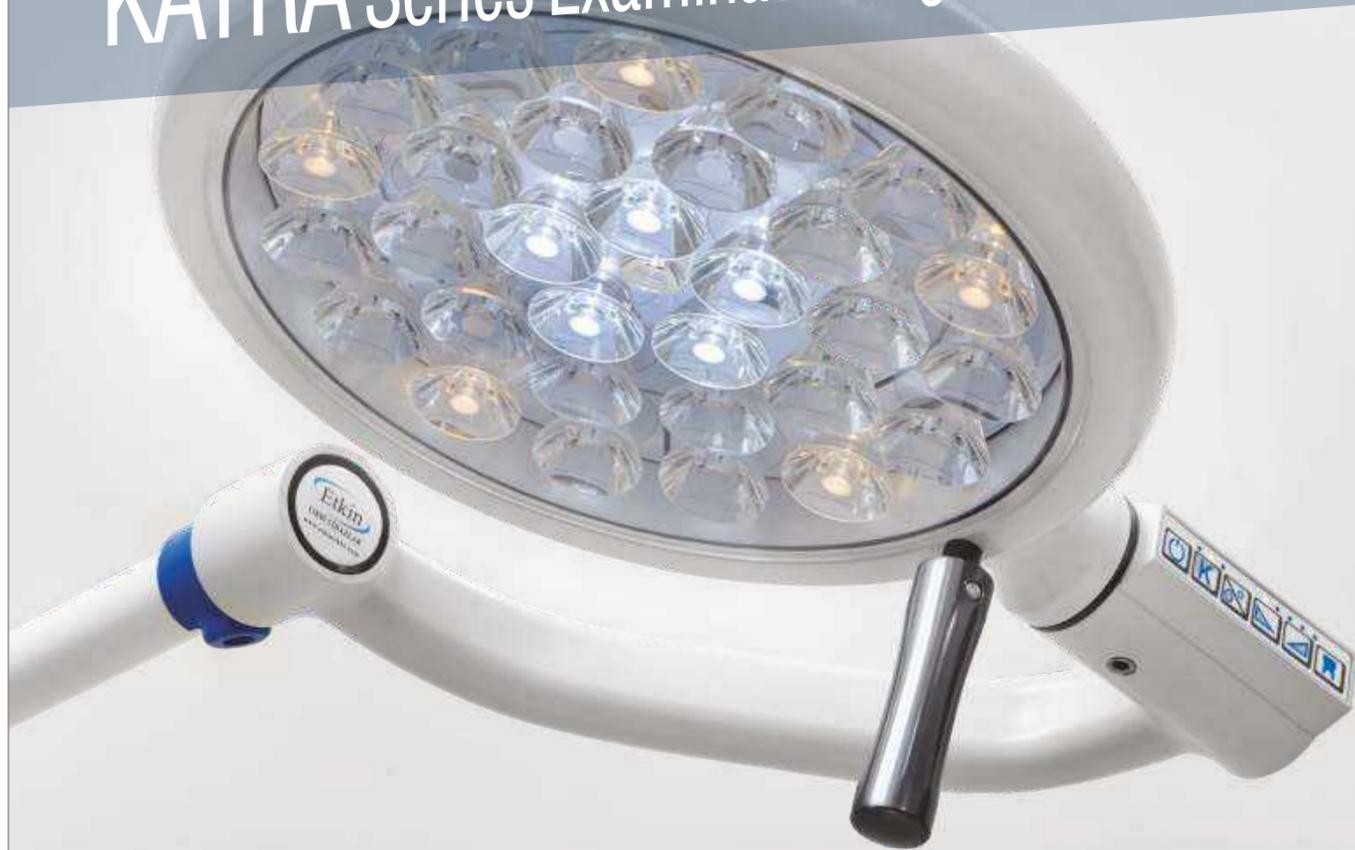
Ideal for limited space and small surgery rooms

## Anka Control Panel



-  On / Off
-  3500 - 5000 K
-  23 - 31 cm
-  30 % - 100 % illumination
-  Endoscopy

# KAYRA Series Examination Lights



50.000 Lux / 60.000 Lux / 80.000 Lux

## Examination Lights

Kayra Series Lightheads are the examination lights offered with advanced features such as focus adjustment, color temperature adjustment and dental mode. 50.000 lux, 60.000 lux and 80.000 lux illumination levels are available for users' choice.

### 80.000 lux at 1 meter!

Kayra Series lights are high end examination light systems that deliver up to 80.000 lux illumination at 1 meter distance. High CRI values of 95 and color temperature adjustment features make them possible to use for minor surgeries when needed.



## Mobile Kayra Lights

With optional 3 hours battery, the mobile Kayra light systems are the perfect portable light system for clinics that look for more than a standard examination light.

## Specifications

FEATURE	KAYRA SERIES
Illumination	50.000 lux / 60.000 lux / 80.000 lux
Spot Diameter	15 cm - 24 cm
L1 +L2	> 185 cm
Focusing Type	Electronic LED on/off focusing
Color Temperature	3600K - 5000K
Dental Mode	15 cm straight beam
CRIa	> 96
CRI9	> 97
LED Life	60.000 hr
Lighthead diameter	29 cm
Battery	Optional

\* Technical values provided here are measured at laboratory conditions and may show slight variations under different measurement practices.



-  On / Off
-  3500 - 5000 K
-  23 - 31 cm
-  30 % - 100 % illumination
-  Dental mode

## Ceiling Kayra Lights

Kayra Series lightheads can be mounted as a ceiling examination light and provide illumination up to 80.000 lux with full functions.



## Wall Mount Kayra Lights

Wall mount Kayra Series examination lights help small and crowded clinics to save space and maintain powerful illumination for treatments and examinations.

