

iLED:  
Milestones  
of  
light



The world's leading LED surgical lights delivering unrivalled performance.

Machine tools/Power tools  
Laser technology/Electronics  
Medical technology



High performance  
knows  
no boundaries.

## iLED: Meeting next-generation demands.

Pioneering research has made the iLED the leader in its class. With its outstanding lighting specifications, extreme adaptability and energy-efficient technology, iLED is firmly established in the premium lighting segment. Our goal? Uncompromising performance. The latest iLED generation is even better and comes with the newest high-performance technology for even greater user convenience and efficiency in the hospital.





A truly diverse solution.

**Brilliant**

Everything in view: optimum illumination of the wound area with unique multi-lens matrix with a light intensity up to 160,000 lux

**User comfort**

Perfect support: automatic focusing (ALC plus) and intuitive control of light intensity with the Sterile Light Control (SLC)

**Adaptable**

Always to the point: four color settings provide optimal contrast and resolution for any surgical procedure

**Precise**

Light in the shadows: uniform, homogeneous lighting for surface and deep cavity procedures with innovative shadow management control

**Security**

Sustainability that pays for itself: virtually unlimited LED life expectancy delivers reliability and protects your investment

**Efficient**

Environmentally proactive: low power consumption and durable LEDs minimize the impact on the environment

**Connected**

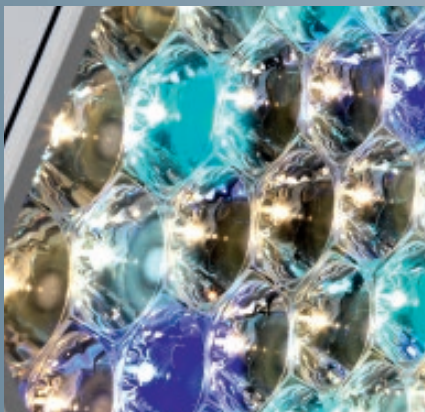
More than just a light: integrated camera and video systems for digital transmission in high-resolution HD format



# Perfection in every aspect.

## iLED – leading-edge lighting technology.

With their outstanding performance and energy efficiency, light-emitting diodes (LEDs) are becoming more common for illumination in demanding environments. Compared to conventional lamps, LEDs have a wide range of technological, economic and environmental advantages, such as flexibility with a range of settings and functions, low heat generation, minimal power consumption and virtually unlimited life. iLED supplies these advantages in one package. The result: unparalleled performance.



### **The multi-lens matrix: powerful and homogeneous light at the surface and in depth.**

During an operation, the entire surgical site must be clearly visible under homogeneous illumination. TRUMPF's recipe for success: a unique multi-lens matrix that uniformly distributes the emitted light.

Inspired by nature: like the convex, faceted eyes of an insect, the matrix consists of three or five strategically placed segments, each consisting of a number of individual convergent lenses. In this arrangement, every lens produces its own light pattern.

The result: an exceptionally homogeneous, shadow-free light on the surface and in deep cavities, with a light intensity of up to 160,000 lux.

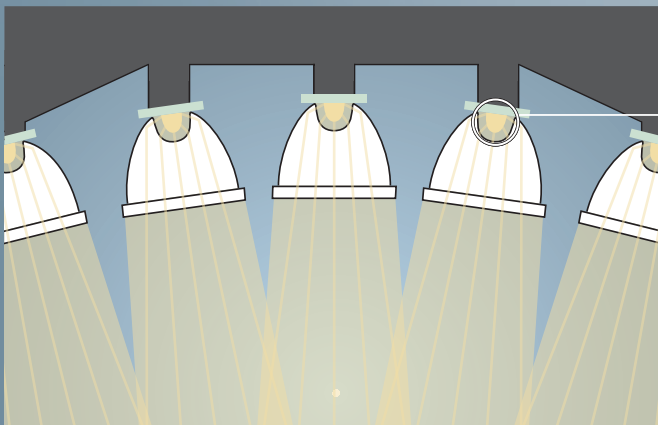


### **Green technology.**

LED lights are an extremely environmentally friendly alternative to conventional light sources. They contain no heavy metals, consume very little energy, and have a virtually unlimited life. The reduced heat generation means a lower heat load and more efficient ventilated ceilings.

### **Long-lasting light sources.**

With a service life of 40,000 hours, each LED lasts many times longer than conventional lighting sources. The expense of storing and replacing lamps is dramatically reduced. Nevertheless, each LED can be individually replaced on-site, meaning that iLED combines ergonomics, cost efficiency, and optimal performance.



### **Best implementation.**

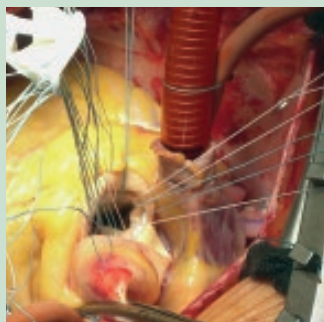
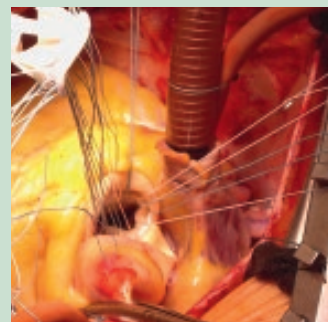
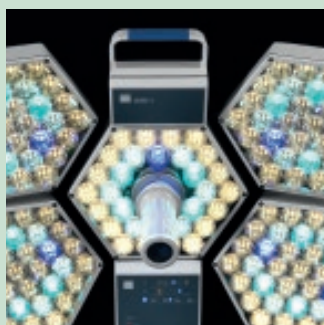
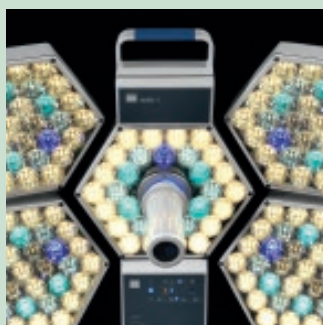
The intelligent multi-lens matrix is based on embedding individual LEDs into TRUMPF-designed convergent lenses. The complete immersion of every single LED in the light body means that the light of every LED is fully used for optimum effect.



The new standard for perfect sight.

**Unique functionality with adjustable color temperature.**

iLED offers variable settings to meet different preferences and the diverse requirements of different procedures. This unique TRUMPF feature is revolutionizing the surgeon's work, particularly in extreme situations.



Contrast enhancement with adjustment of the color temperature from 3500 to 5000 K.

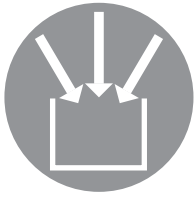


**Superior results: improved contrast, less fatigue, and greater ease of use.**

Whether operating in areas which have a good or poor supply of blood, surgeons can optimize their field of view by changing the color temperature with a Color Rendering Index (CRI) of up to Ra 98. A higher color temperature can reduce eye fatigue and improve concentration during night operations.



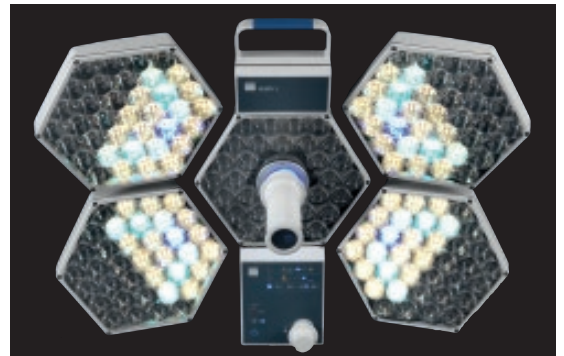
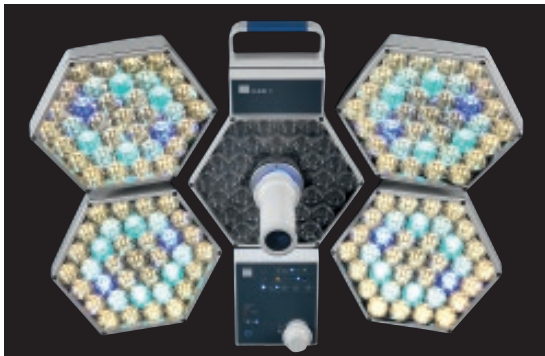
Meeting every challenge.



**Shadow-free light for safe working in extreme situations.**

TRUMPF has perfected the far-reaching potential of the multi-lens matrix with unique technology. The iLED 5 regulates the light intensity of specific zones to provide optimum backlighting of obstacles.

The result is up to 25% more light at depth. In extreme situations the surgeon has an advantage with high lighting intensity in the wound region.



Shadow-free illumination of the wound region with backlighting of obstacles.



25% more light in extreme situations; for example, in narrow, deep wounds.

# Ease of use.

## Ergonomics has a new standard: iLED.

With people at the center of attention, the demands on the product extend far beyond the specifications. This is why iLED is more than simply auxiliary assistance in the surgical field. With its unique ergonomic properties, the surgical light supports operating room staff through all phases of the procedure, making it an essential part of the team. The secret of success: the unique sterile operating design and the intelligent ALC plus technology for automatic focus.

### Innovation: Adaptive Light Control plus.



#### **Intelligent technology for more efficient processes.**

Adaptive Light Control plus (ALC plus) is the term for targeted electronic focusing of the light segments to ensure optimum illumination of the wound site at variable distances.

If the light fixture is moved during the operation, the integrated motion detector automatically measures the distance to the surgical site and adjusts the position of the light segments accordingly. The beam angle of the lens groups remains optimized for different distances and provides optimum lighting at all times. Your advantage: the surgeon can concentrate fully on the surgery.







Uniquely simple.



**Dimming with Sterile Light Control.**

The new Sterile Light Control (SLC) function for controlling the light intensity is an additional innovation with iLED. Capacitive sensors in the sterile handle of the light head make adjustment during an operation quick and easy. This ensures more efficient work processes in surgery without requiring additional unsterile assistants.



**Synchronization for greater ease of use.**

With iLED, an innovative operating concept translates into maximum ease of use of primary function. The following functions can be synchronized and controlled by either lighthead:

- On/off
- Color Temperature
- Endo Mode (5% illumination)



(1) iLED 5 sterile control panel for greater convenience during operations  
(2) iLED 3 control panel

Sterile in use.

STERILE

#### The intuitive control of iLED.

Another ergonomic advantage of iLED 5: the sterile control design gives the surgical team intuitive, quick and convenient control of all important functions – at the light head or at the wall.

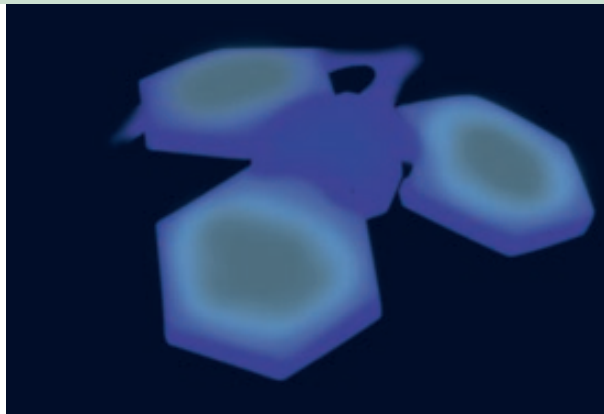
- On/off switch
- Dimming with integrated endo mode
- Synchronization of multiple light heads
- Adjustment of color temperature
- Shadow management
- Camera functions

# Always in shape.

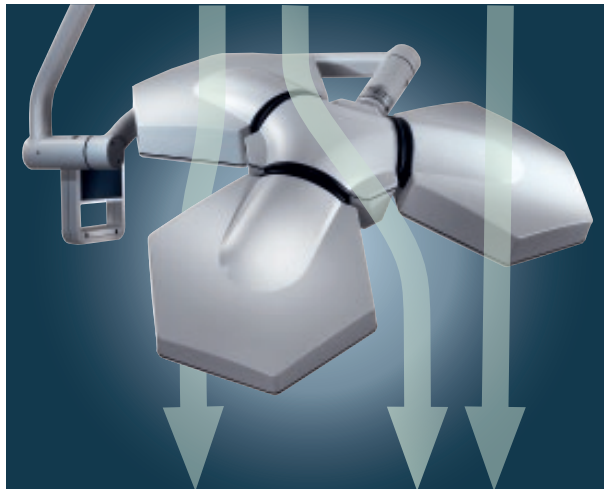
## Cool head with intelligent thermal management.

Creating the perfect conditions for operating – iLED with its sophisticated thermal management. Efficient, even heat dissipation prevents localized overheating. At the same time, thermal reduction increases the life and efficiency of the LEDs, and the economy of the surgical light.

Heat development on the surface of the light head



Open design for high degree of compatibility with clean air ceilings



## Flow-optimized head for improved hygiene.

Hygiene: one of the most important factors in the operating room. The open design of the LED guarantees maximum possible freedom from pathogens. The cool light head minimizes air flow and turbulence and is ideal for clean air ceilings (laminar air flow).



# One step ahead.

Sophisticated communication needs a platform.

For TRUMPF, "Premium" means setting new standards. For this reason, the iLED range of surgical lights allows integration of high-quality, innovative camera solutions – with digital imaging quality in SD to high-end HD-resolution and communication over LAN networks in HD quality.



Cameras can be installed in the light head or on a separate support and removed and replaced as required. This forms an ideal platform for research, teaching, and documentation.

See our product brochures for more information on the innovative TruVidia camera system.

# Versatile design.

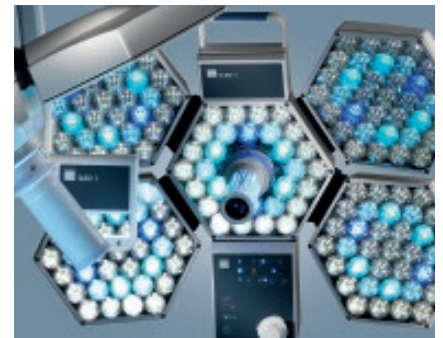
Ideal assistant: surgical lights by TRUMPF.

Specialized requirements demand flexible interplay of individual solutions. TRUMPF offers a wide range of LED lights to add to the functions of your iLED, and to open up new applications for you.

**Master of its class:**

**iLED 5/3**

Premium surgical light with unique performance parameters for the most extreme requirements



**Master of ergonomics:**

**TruLight 5000/3000**

Extremely light and maneuverable surgical light for immediate use with maximum economy



**Flexible lighting system:**

**AmbientLine**

Innovative lighting solution with day-night simulation and individual lighting options for staff



# Secure investment.

Always ready for you: TruServices.

**Secure decision.**

We offer consultation services before purchase to ensure that your investment is successful. The TruTops Visual planning software provides you with 3D interactive design capability for your OR and ICU environments.

**Professional support.**

The comprehensive TRUMPF service portfolio ensures that your purchase is available and in operating condition throughout the life of the product. We service your products, install new options as required, and train your staff in workshops and training courses. We also have a 24-hour spare-parts service.

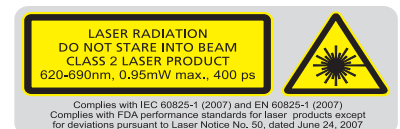
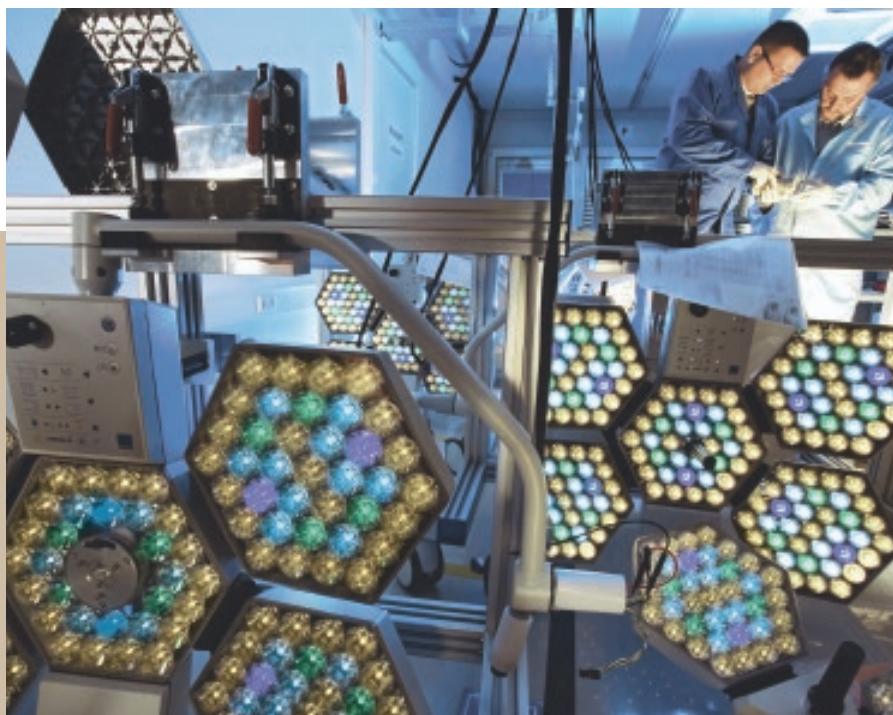


## Did you know?

TRUMPF Leasing offers innovative financing concepts customized for your specific requirements, enabling you to procure first-class TRUMPF products and solutions at attractive lease rates. Just ask us!



Technical data	iLED 5	iLED 3
Illumination Ec at 1 m working distance	160,000 Lux	160,000 Lux
Color temperature	3,500 – 5,000 K	3,500 – 5,000 K
Color rendering index Ra	Max 98	Max 98
Focusable light field size d10 at 1 m distance	200 – 300 mm (7.9" – 11.8")	200 – 300 mm (7.9" – 11.8")
Dimming range	100 – 30% (5% Endo)	100 – 30% (5% Endo)
Remaining illumination: with 1 mask without tube	98%	73%
Remaining illumination: with 1 mask with tube	83%	60%
Remaining illumination: with 2 masks without tube	64%	53%
Temperature increase in the surgeon's head area	< 1 °C	< 1 °C
Lighting controls	Sterile and non-sterile (wall)	Non-sterile
LED life	> 40,000 h	> 40,000 h
Power consumption of the light head	145 W	90 W



Greatest demands right from the start.

From development through production, TRUMPF fulfills the latest quality standards according to DIN EN ISO 9001. To meet the rigorous requirements of lighting quality, all surgical LED lights are assembled in a clean room environment. TRUMPF also tests all lights during its finished product inspection to ensure specifications are met and that you receive highly efficient LED surgical lights to meet your most demanding challenges.

## TRUMPF Medical Systems worldwide.

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### **The TRUMPF Group.**

Innovation, quality and customer relations have been the basic philosophy of the entire TRUMPF Group since the original TRUMPF company was founded in Germany in 1923. TRUMPF sees innovation not as an end in itself but as a mission aimed at the needs of users. With great success: TRUMPF today is one of the leaders in technology for machine tools and in laser and medical technology.

Milestones to date in medical technology have been the first installations of ceiling stands in 1978; the development of the patented coupling point system for operating tables in 1997; in 2005, the first surgical lights in the world with LED technology, and, in 2010, the introduction of the first modular ceiling supply unit.

### **Subsidiaries and branch offices:**

#### **Austria**

TRUMPF Medizin Systeme Österreich GmbH

#### **France**

TRUMPF AMSA SAS

#### **Great Britain**

TRUMPF Medical Systems Ltd.

#### **Italy**

TRUMPF MED Italia s.r.l.

#### **USA**

TRUMPF Medical Systems, Inc.

#### **Australia**

TRUMPF MED Australia

#### **Singapore**

TRUMPF (Pte.) Ltd. (Medical Division)

#### **China**

TRUMPF Medical Systems Ltd.

#### **United Arab Emirates**

TRUMPF Medical Systems Dubai

#### **Russia**

TRUMPF Med OOO



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