

# Dräger Polaris Surgical Lights

Our Polaris surgical lights are designed for brilliant work: The series of OR lights makes your working day a lot easier – with functions which ease your workflows and improve your eye comfort! Numerous configuration options let you customise the Polaris light to perfectly meet your specific needs. The state-of-the-art light and camera quality, as well as plenty of upgrade options, provide you with a future-proof system for your OR.

<sup>1</sup> neccessity of increasing eye comfort: Renard G, Leid J, The dangers of blue light, a true story! Journal Francais D'ophtalmologie, 31 Mar 2016, 39(5):483-488, DOI: Les dangers de la lumière bleue : la vérité!



#### **Benefits**



#### **Future proof technology**

Our surgical lights have an outstanding optical performance with high contrasts that comply with all types of surgeries and make different tissue structures visible. The latest generation of LEDs deliver a homogeneous and round light field, with high illumination depth and excellent colour rendering values and contrast ratios. Its various light functions support the surgeon in conducting surgical interventions, e.g. selecting different colour temperatures, light intensities, light field diameters, or an Endo Light mode. A 4K camera integrated seamlessly next to the inner handle is immediately ready for use and provides clear and precise pictures.

Our concept is a modular system with a slim and modern design. There are 3 pre-configured variants available:

- Polaris Comfort
- Polaris Pro
- Polaris Pro+

All of them are easy to upgrade and adapt to comply to future requirements. Retrofit from former Dräger lights to new ones is nearly effortless.

To allow partner companies to interact with our light heads in their system, the Polaris lights feature an interface for OR Integration. In that way, medical and non-medical devices in an operating theatre can be linked, in order to optimise control and streamline workflows.

#### Flexibility and customisation

We offer a truly flexible system: configure your OR light according to your needs, with 3 pre-defined variants, but many options for individual configuration. Depending on the demands in your operating room, you can select and order the features which are necessary for your type of surgeries. Some options to choose from are: MedView 4K camera or MedView 4K camera Advanced, wired or wireless transmission, anti-reflection glass, light field diameters, colour temperatures, etc.

Furthermore, there are multiple control options which you can choose, depending on the type of workflows and processes in your operating room:

- Control panel on the light head (standard)
- · Control display unit on gimbal joint
- Control display unit on wall
- · Control display unit on wall tableau
- Handle on the light head with sterile touch control (STC) for the surgeon, to position the light, and to intuitively adjust the light field size or intensity
- Remote control for the Medview camera

## Benefits



#### Wholistic Workplace Design in the OR

In order to optimise efficiency, we provide you with a wholistic workplace design concept, looking at available space, types of surgeries, and workflows and processes. Together with you, we design optimal workplaces in the OR, to fulfill all of your requirements. For example, we can install the lights

- with a single axis up to a 4-fold axis,
- · with or without display holder,
- in combination with Dräger medical supply systems
- fitting into a Hybrid OR

With Dräger you'll benefit from installation advantages, having the whole package from one source.

#### Ergonomic design for intuitive handling

The light head of the Polaris and its handles are designed in an ergonomic shape, making the adjustment and the positioning (in all directions 360°) as easy and comfortable as possible. User interfaces are intuitive to control, and uniform throughout all Dräger devices. There are control options for sterile and non-sterile personnel. Colour markings above the light head and on the wall panel help to clearly assign the individual controls to the lights. To ensure smooth processes, we focus on the ergonomic arrangement of of all devices in your OR.

Our Polaris light offers a range of functions that can help to streamline your workflows:

- 3D Shadow Compensation: The 3D shadow compensation function detects objects between the light head and
  the surgical field and compensates for shadowing by actively controlling the LEDs. By providing a constant
  brightness in the surgical field, an optimal surgical procedure is facilitated.
- Light Guard: A single light head cannot exceed the threshold for irradiance. However, if the light fields of two light
  heads are directed on the same point, the permissible limit value can be exceeded\*. The Light Guard function
  comfortably supports and controls the irradiance on both the skin and surgical field, by reducing it to a value of >
  700 W/m².
- Anti Glare function: High differences in brightness can lead to eye fatigue <sup>1</sup>. The Anti-Glare function makes sure
  that there is a smooth transition of the light field between the brightly-lit surgical field and the darker surrounding.
  With the help of the adjustable brightness transition, surgeon's concentration levels can be positively supported,
  especially during long surgeries.
- Sync Mode: when activating the Sync Mode, all of the system's active light heads work with the same light settings, so that the light heads can be controlled simultaneously with one control panel. The following features can be synchronised: light intensity, colour temperature, light field diameter, endolight, anti-glare mode.
- Eye Relax: Blue light can possibly damage the eye<sup>2</sup>. The Eye Relax function sets the luminaire to an eyecare mode with low blue content. It also optimally sets colour temperature, light intensity and light field, while maintaining high colour rendering indices.
- Preset Manager: Creating individual light settings, and later selecting these settings, enables a faster start-up in the OR. The surgeon's preferred settings can be saved according to type of surgery or to individual users. The Polaris comes with exemplary pre-saved settings for a wide range of surgery procedures.

<sup>&</sup>lt;sup>1)</sup> Hemphälä, H., Johansson, G., Odenrick, P., Åkerman, K., & Larsson, P. A. (2009). Lighting Recommendations in Operating Theatres. In Proceedings of the 17th World Congress on Ergonomics 2009 IEA. Lighting Recommendations in Operating Theatres — Lund University

<sup>&</sup>lt;sup>2)</sup> Renard G, Leid J, The dangers of blue light, a true story! Journal Français D'ophtalmologie, 31 Mar 2016, 39(5):483-488, DOI: Les dangers de la lumière bleue : la vérité! - ScienceDirect

# Preliminary The product is not yet CE approved and will be available by December 2024.

### **Benefits**

#### Designed with infection prevention in mind

Our products are designed with smooth surfaces, resistant materials and rounded edges, to enable a faster cleaning process. Even the camera doesn't disturb since it's located directly in the light head under the transparent cover. The central handle therefore doesn't need to be exchanged when when operating without camera. You just need one disinfectant for all Dräger devices in your OR workplace, making the disinfection process less complex for cleaning personnel.

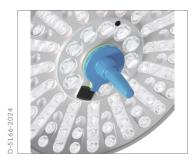
According to your individual infection prevention protocol, we can offer a sterile disposable or a sterilisable handle:

- Sterilisable handle: For multiple use, with STC function. Easy reprocessing, since the handle is designed from a single piece of durable plastic making sterilisation effortless.
- Sterile disposable handle: For single use, STC function remains without any restrictions.

Furthermore, our Polaris lights are optimised for operation in laminar flow.

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## **Details**







Polaris Pro+



Control Panel



Remote Control



Control Display unit on Cardanics



Polaris Comfort

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### **Related Products**



#### **Dräger Polaris Multimedia**

Document surgical procedures in standard or professional quality with one of several flexible, standard or high resolution video solutions.



#### Polaris 50

The Polaris 50 is ideal for everyday hospital life, which is becoming more and more challenging. Whether it is in the examination room, in intensive care or in the OR-induction room – the Polaris 50 always provides high-contrast, colour-stable light. In addition, the treatment light is flexible to handle and easy to use so that you can make the right decisions more quickly.

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## **Technical Data**

	Polaris Comfort	Polaris Pro	Polaris Pro+
Adjustable light Intensity	From 16k to 160k lux	From 16k to 160k lux	From 16k to 160k lux
Adjustable color temperature	Fixed: 4,000, 4,700 or 5,300 Kelvin	in 5 steps: 3,200, 3,800, 4,400, 5,000, 5,600 Kelvin, or steplessly with control display	5 steps: 3,200, 3,800, 4,400, 5,000, 5,600 Kelvin, or steplessly with control display
light field diameter:	3 levels 240 mm, 270 mm, 300 mm or steplessly with control display	5 levels 140 mm, 170 mm, 210 mm, 250 mm, 300 mm or steplessly with control display	5 levels 140 mm, 170 mm, 210 mm, 250 mm, 300 mm or steplessly with control display
Sync-Mode	Yes	Yes	Yes
3D Shadow Compensation	No	No	Yes
Light Guard	No	Optional	Optional
Anti Glare	No	Yes	Yes
Eye Relax	Optional	Optional	Optional
Preset Manager	Optional	Optional	Optional
Ee / Ec ratio	3,8 (mW/m²) / klx (± 0,1 (mW/m²) / klx)	3,8 (mW/m²) / klx (± 0,1 (mW/m²) / klx)	3,8 (mW/m²) / klx (± 0,1 (mW/m²) / klx)
Endo light Illuminance (of Ec)	<=3%	<=3%	<=3%
Illumination depth L1 + L2 (20%)	1,320 mm	1,300 mm	1,300 mm
Illumination depth L1 + L2 (60%)	800 mm	750 mm	750 mm
Colour Rendering Index Ra	97 (only valid for 4700K)	99 - 10%	99 - 10%
Colour Rendering Index R9	98 (only valid for 4700K)	99 - 10%	99 - 10%
Colour Rendering Index R13	99 (only valid for 4700K)	99 - 10%	99 - 10%
Sterile touch control (STC) for light intensity and light field diameter	Yes	Yes	Yes
Reusable or disposable sterile handle	Yes	Yes	Yes
MedView 4K and MedView 4K Advanced	Yes	Yes	Yes

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## **Technical Data**

Integrated MedView Camera	MedView 4K	MedView 4K advanced
Upgradable	Yes	Yes
Resolution	3840x2160p 25 Hz 1920x1080p 50 Hz	3840x2160p 29,97 Hz 1920x1080p 50 Hz 1920x1080p 59,94 Hz
Focus	Fixed focus	Autofocus
Zoom	12x digitally	240x (20x optically, 12x digitally)
Video transmission	Wired or wireless (range: 15 m, 590.5 in) transfer	Wired or wireless (range: 15 m, 590.5 in) transfer
Options	Rotate, mirror, freeze image, zoom, exposure	Rotate, mirror, freeze image, zoom, exposure, manual focus
Control Display Unit and/or IR remote control	yes	yes

#### **Notes**

Not all products, features, or services are for sale in all countries.

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