



Precision Light with the New Dräger Polaris

A surgeon needs a natural color spectrum that should also illuminate the operating field without shadows. The new Dräger Polaris LED light delivers on these requirements to allow a look into the depths.

Its 108 light-emitting diodes (here: the Polaris 700) **1** emit light with a color temperature of 4,600 Kelvin. A phosphor layer on the semiconductor **2** ensures the production of “cold light” (without a long-wave infrared component), which is then focused through a lens **3**. Each reflector **4** contains a pair of LEDs. The sum of the individual beams forms a cylinder of light with a depth of illumination of approximately 1,100 millimeters and a variable diameter between 220 and 290 millimeters. This enables the light of each LED to be focused on the operating field so that multiple surgeons can work above it simultaneously without a significant loss of brightness in the

field. Furthermore, the smaller LEDs are significantly more energy efficient than conventional light sources. The slight amount of dissipated heat is transferred gradually to the environment through the top of the housing.

The surgical light (shown here without the supporting system and camera) comprises a Cardan suspension **5**, a smooth, seamless casing **6** with electronic, mechanical, and optical assemblies, a control **7** and lighting unit **8**, a controller **9**, and a sterilizable handle **10**. A power supply unit accepting 24 V AC/DC and from 100 to 240 V AC connects the unit to the hospital power supply. Microprocessor-controlled electronics help to ensure that the light switches back on from standby mode without delay. Precision light shines down onto the operating field—in bright, natural colors and to the full depth required.