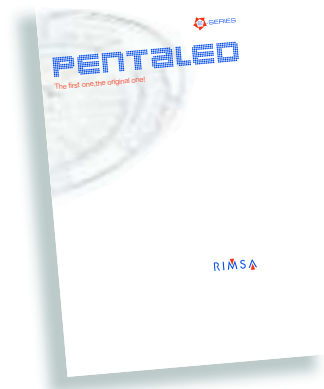


## Electronic diameter adjustment

Light has a crucial affect on man's ability to work. Proper lighting makes for comfortable working conditions, reduces stress levels, minimises the feeling of tiredness and increases productivity.



**PENTALED81** is a hi-tech product designed to guarantee excellent performance levels.

81 elliptical reflectors split into 9 modules, each containing 9 LEDs. The lamp lens is designed to guarantee perfectly focused lighting, i.e. without the need to focus the light every time the dome is moved.

The light is pre-focused at different distances (from 80 cm to 200 cm).

The E-View system lets the surgeon adjust the extent of the lit field to get the right type of light for each surgical procedure. The light structure of the lamp makes it easy to handle and yet still very stable.

**The indirect light** provided by all PentaLED lamps guarantees cold light, depth and no stress or dazzling for the surgeon. This is due to especially calculated parabolic dishes that reflect the entire spectrum of light emitted by each LED lamp in a punctiform manner, without dispersion. This means:

- No dazzling effect
- Mixing of luminous rays before reaching the operating field
- 3D illumination of the operating field
- No shadows
- Well defined illuminated area without uncontrolled light rays

Thanks to the physical principle of indirect light, the surgeon and his/her assistants are never disturbed by the light and can operate without stress to the eyes and, most importantly, without becoming dazzled.



**-DEEP** The centre of the lamp is fitted with an extra 9-LED module with special parabolic dishes specifically designed to reflect deep light. E-deep means the surgeon can operate with perfect 3D lighting, especially in cavities.

**-VIEW** Ideal for the following surgical procedures: thoracic surgery, abdominal surgery, caesarean births. In all the above procedures, the surgeon must be able to operate in an extensive field lit with high intensity light. An additional lens called E-View (Extended-View) makes it possible to expand the lit field to up to 30 cm with 6000 Lux at the edges without affecting the light intensity at the centre (Ec).

Recommended use	81	105	30E
Abdominal/general surgery	■	■	–
Heart/vascular/thoracic surgery	■	■	■
Traumatology/Emergency OR	■	■	■
Orthopaedics	■	■	■
Neurosurgery	■	■	■
Gynaecology	■	■	■
Urology/TURP	■	■	■
ENT/Ophthalmology	–	–	■
Endoscopy/Angiography	■	–	■
OMF/Aesthetic	■	–	■
ER	■	■	■



**PENTALED30E** is especially recommended for operating theatres where the surgeon needs a small lamp to avoid interference with other overhead equipment.

Excellent for oral and maxillofacial surgery and aesthetic plastic surgery. It has 30 elliptical reflectors split into 6 modules, each containing 5 LEDs, providing 140,000 Lux. An aluminium ring runs around the dome for easier positioning.

The E-View system lets the surgeon adjust the extent of the lit field to get the right type of light for each surgical procedure.

**PENTALED105** is the top of the range product. It has a central module like the PENTALED81 lamp and 4 side petals, each fitted with 6 LEDs radiating outwards.

This configuration offers two great advantages:

- Increased scalytic effect
- Increased depth of field thanks to the double focalisation E-focus.

The central and side modules are designed to provide lighting at two different focal distances and thus guarantee greater depth of light and constant light intensity at 100-120 cm, without losing focus.

The E-deep module is fitted at the centre of the lamp: this has 9 LEDs with special parabolic dishes designed to reflect the light at depths. E-deep means the surgeon can enjoy excellent 3D lighting, especially in cavities.



#### Performances

	<b>81</b>	<b>105</b>	<b>30E</b>
Light intensity at 1 m distance (Ec)	160 Klx	160 Klx	140 Klx*
Out reflector diameter	63 cm	79 cm	40 cm
Color temperature: double selection	4500/5000 °K	4500/5000 °K	4500/5000 °K
Color rendering index (CRI)	96 Ra	96 Ra	96 Ra
Light field diameter adjustable from-to	19-32 cm	20-32 cm	16-30 cm
Diameter adjustment	Electronic	Electronic	Electronic
Depth of illumination (L1+L2) at 20%	103 cm	100 cm	95 cm
Depth of illumination (L1+L2) at 60%	43 cm	47 cm	49 cm
Total radiated energy Ee where the illuminance reaches max level	392 W/m <sup>2</sup>	410 W/m <sup>2</sup>	299 W/m <sup>2</sup>
Ratio between radiated energy Ee and illuminance	2,45 Ec mW/m <sup>2</sup> .lx	2,56 Ec mW/m <sup>2</sup> .lx	2,30 Ec mW/m <sup>2</sup> .lx
Average led life	> 50,000 hours	> 50,000 hours	> 50,000 hours
Absorbed power (VA)	145	150	70
Control of the illuminance	25-100%	25-100%	25-100%

\*available special version 160,000 Lux