OPELA III™ Cx

Wearable OR Lighting System
Born From Surgeon's Experience

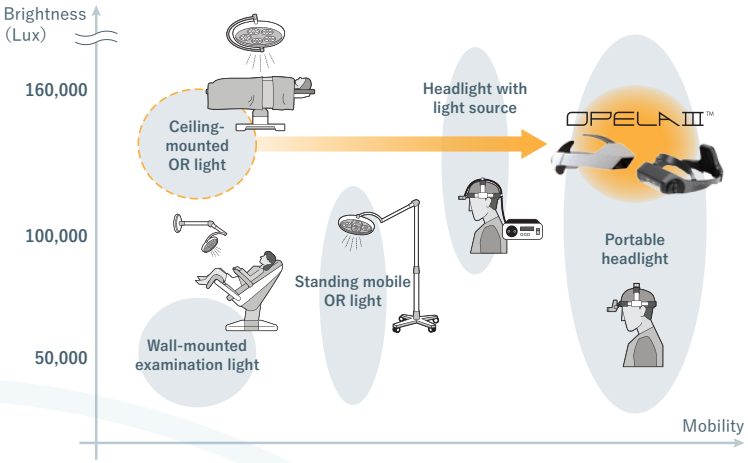
TAIYO Corporation

MADE IN JAPAN

Concept

To Make OR Lights Wearable

Many surgical lightings are characterized by “brightness” or “mobility”. OPELAIII Cx stands on its own as a unique Mobile Surgical Lighting System that maintains the brightness and shadow reducing function of a surgical light, while focusing on the quality of light itself, combining years of surgeon’s experience into its design.



* Headlight illuminance is calculated based on illumination distance of 400mm

Lighting Technology

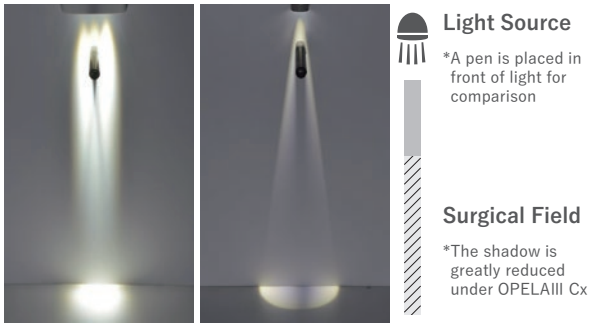
**Focusing on the user experience,
its light quality is developed for surgeons.**

Bright 160,000Lux* (color temperature 5,000K*)

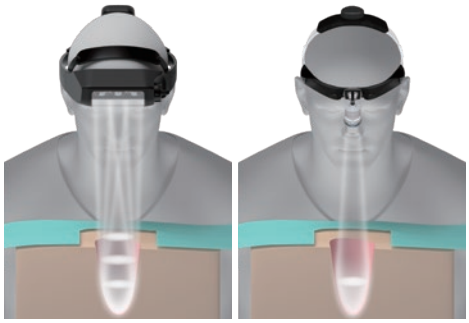
It provides the highest luminance within the standard, BASIC SAFETY and ESSENTIAL PERFORMANCE of SURGICAL LUMINAIRES. The long-life LED has a color that makes it easy to distinguish tissue.

Reduces shadows, illuminates deep areas and cavities

Unique optical distribution design minimizes shadows, penetrates deep into surgical field and illuminates inner cavities and walls.



OPELAIII General headlight



OPELAIII General headlight

Flicker-free, Fatigue-free light

The optical engineering on OPELAIII Cx allows for faded boundary, making the light less tiring on the eyes. Using “DC lighting system” it keeps a constant current flowing through the LED. This eliminates “flickering”, which puts a strain on the eyes.

Spot size diameter 6-23cm* for flexible illumination

It can illuminate the surgical field with pinpoint accuracy, while also illuminating wider area of the operating field.

* Headlight illuminance is calculated based on an illumination distance of 400 mm.

Maximizing Efficiency

By completely redesigning from scratch, OPELAIII Cx provides high quality illumination with a revolutionary heat dissipation system.

Light Weight

The centrally balanced weight-design makes it feel very light

- 20% reduction from the previous model

More Compact

Eliminating anything that isn't 100% necessary, even by 1g or 1mm

- Light source module reduced by 52% in volume

More Comfortable

Airy enough to forget you're wearing it

- Fitting system jointly developed with the leading Japanese motorcycle helmet manufacturer, OGK KABUTO

OPELAIII & OPELAIII Cx comparison

The special adjuster allows fine adjustment and uniform tightening to fit any head shape

The dual floating structure of the COOLMAX® inner pad reduces the contact area for a comfortable hold during long operation

Evolved User Experience

Simple Operation

- The power switch & brightness controls are all assembled on the back of the unit for ease of access
- An easy-to-operate adjustment allows for wide range of light angle adjustment

Rear controls with battery gauge

Dual dial for lighting angle and spot size adjustment

Battery unit

- Simultaneous dual charger
- Fast charging (approx. 3 hours)
- 4-level charge indicator
- Compact pocket size
- Maximum 4 hours of continuous use at 160,000 Lux

Power Source

- Can be used directly with AC adaptor, ready for any situation

Case Studies and Usages

In addition to being used as an auxiliary light for surgical OR lamps, it can also be used as a MOBILE SURGICAL LIGHT in a variety of environments, such as the bedside, examination room, disaster sites and in vehicles.

Specifications:

		
Model	OPELAIIICx	OPELAIII
Maximum illuminance *Irradiation distance 400mm *When irradiation range is at minimum diameter	160,000Lux ±10%	145,000Lux ±10%
Color temperature	Approx. 5,000K	Approx. 4,500K
Brightness level	5 levels	8 levels
Irradiation size * Irradiation distance 400mm	(ϕ60～230mm)	(ϕ75～125mm)
Type of LED	3 high brightness LEDs (average lifespan of 50,000 hours)	3 high brightness LEDs (average lifespan of 50,000 hours)
Continuous lighting time (reference value) *Per battery unit when fully charged *Illumination distance 400mm	Level 5: 160,000Lux / 4 hours Level 4: 135,000Lux / 5.5 hours Level 3: 100,000Lux / 7.5 hours Level 2: 80,000Lux / 12 hours Level 1: 40,000Lux / 20 hours	Approximately 2.5 to 6 hours (@ 50~100%)
Battery	Nickel-metal hydride battery	Nickel-metal hydride battery
Operating environment (when in use)	0~35°C, 20~85%RH (non-condensing)	15~32°C, 20~85%RH (non-condensing)
Power consumption	Approx. 8W	Approx. 7.2W
Power supply (rated)	100-240V AC, 47-63Hz (when using AC adapter) DC6V (when using battery unit)	100-240V AC, 47-63Hz (when using AC adapter) DC9V (when using battery unit)
Weight	Main unit: approx. 310g Battery unit: approx. 430g Charging stand: approx. 250g	Main unit: approx. 390g Battery unit: approx. 480g
Head circumference size	51～65cm	53～66cm
Generic name	Headlight (Class 1)	Headlight (Class 1)
Manufacturing license number / Approval number	13B3X10231000002	13B3X10231000001
Applied Standard	IEC60601-1, IEC60601-1-2	IEC60601-1, IEC60601-1-2
CE Marking	Applied	–
Patents	–	[Patent registration] Heat dissipation system <Japan> Patent No. 6283150 / <US> 10,401,004 [Design registration] <Japan> Registration No. 1598372 / <US> US D850,681 S <Europe> 004387694-0001

• Specifications are subject to change without notice and may vary depending on usage conditions.

[Manufacturer]

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