

JSN: M7470

LIGHT, SURGICAL, CEILING, SINGLE, SMALL

MAQUET INC.

## PowerLED: POINT & SHOOT MAQUET — THE GOLD STANDARD



**A pledge to life:** MAQUET is among the world's leading vendors of forward-looking medical technology for operating rooms and intensive care units. Whether Surgical Workplaces, Cardio-vascular or Critical Care – MAQUET always puts the needs of staff and patients in the foreground during product development work. And thus MAQUET satisfies the ever more exacting demands made on the modern hospital – demands for safety, efficiency and economy (operation costs).

**Bringing expertise in surgical lighting,** ceiling service units and multimedia solutions, MAQUET defines the highest standards, quality and innovation throughout the industry for the benefit of patients and the medical staff. MAQUET surgical

lights are known as the world's leader in design and innovation. Combined with the extensive line of ceiling pendants systems, MAQUET provides the most comprehensive solutions for various areas in the hospital.

Recently, advances in Light Emitting Diode (LED) technology have led MAQUET to adopt this innovation as the springboard to a new era of surgical lighting. With its modern appearance, the PowerLED system sets a new standard of illumination quality, safety, comfort and operational efficiency, while taking care to sustainable development.

MAQUET – The Gold Standard.

## 2ND GENERATION OF LED PowerLED



### True Comfort

- 2<sup>nd</sup> generation of white LED
- "Always-in-focus" illumination with an exceptional depth of field and volume of light
- Efficient and consistent light patch
- Clear tissue visualization: optimized white LEDs cover the entire visible color spectrum required for demanding surgeries
- Unparalleled heat management



### Flux Stability Program

- A patented LED luminous flux management
- Dynamic electronic control of illumination





## AIM, AUTOMATIC ILLUMINATION MANAGEMENT PowerLED

### AIM, for improved working conditions:

- First OR light with adaptive illuminance to surgeon's presence
- Safe and consistent lighting of the surgical field
- Sensor driven management: masked areas around surgeon's head are reduced whereas remaining zones are boosted
- 100% freedom of movement
- Less heat on surgeon's head

### Shadow-free illumination:

- Large illuminating surface: shadows created by obstructed areas are immediately diluted by diverging beams from illuminated areas
- The symmetric shape of the light head provides an ideal shadow control whatever the surgeon position, thanks to the overlapping beams technology





## FULLY LAMINAR FLOW COMPLIANT PowerLED

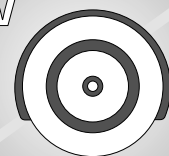
### 5 stars laminar flow compliant:

- Coolflow design
- Smooth surface
- Excellent heat dissipation
- No visible uprise of air observed towards the ceiling
- 24.5% turbulence degree. Far below the planned limit of 37.5% defined in the DIN standard 1946 part 4

### Fully hygienic:

- Striking sleek lines without cutting edges
- Rounded curves and smooth surfaces for quick and easy cleaning
- Shock resistant coating

LAMINAR  
FLOW



# TECHNICAL DATA

## PowerLED



Optical and photometric characteristics	PowerLED 700	PowerLED 500	PowerLED 300
Technology	LED	LED	LED
Diameter of lighthouse (cm / inches)	74 / 29.1	58 / 22.8	45 / 17.7
Illumination (lx)	110,000	110,000	110,000
Boost (lx)	140,000	140,000	140,000
Field diameter 1 m / 39.4 inches (cm / inches)	26 / 10.2	24 / 9.4	17 / 6.7
Depth of Illumination at 20% (cm / inches)	120 / 47.2	120 / 47.2	100 / 39.4
Depth of Illumination at 60% (cm / inches)	50 / 19.7	70 / 27.6	60 / 23.6
Color Rendering Index (CRI) (Ra)	95	95	95
Color temperature (K)	3,800	3,800	3,800
Radiant energy (average) (mW/m <sup>2</sup> .lx)	3.6	3.6	3.6
Flux Stability Program (FSP)	Yes	Yes	Yes
Automatic Illumination Management (AIM)	Optional	N/A	N/A

Ambient light characteristics	PowerLED 700	PowerLED 500	PowerLED 300
Illumination (lx)	500	500	500

Electrical and mechanical characteristics	PowerLED 700	PowerLED 500	PowerLED 300
Power supply input voltage (V)	100–120 / 220–230	100–120 / 220–230	100–120 / 220–230
Lighthouse power consumption (W)	160	110	70
Frequency (Hz)	50 / 60	50 / 60	50 / 60
SD Video prewired	Only on PowerLED Video	Only on PowerLED Video	N/A
HD Video prewired	Only on PowerLED HD with AIM	Only on PowerLED HD	N/A
Illumination adjustment (%)	30–100	30–100	30–100

Video camera range	ORCHIS	ORCHIDE HD
CCD sensor	1/4 inch CCD	1/3 inch Cmos
Signal system	NTSC or PAL	1080i
Effective number of pixels	380,000 (NTSC) or 440,000 (PAL)	2,000,000
Horizontal resolution (at center) (LVT) -Standard NTSC or PAL	460 or 470	N/A
Aspect Ratio	4:3	16:9
S/N ratio (dB)	50	50
Lens (zoom range)	36x motorized zoom	120x motorized zoom
Focal length (mm / inch)	f=3.4 to 122.4 / 0.1 to 4.8	f=5.1 to 51.0 / 0.2 to 2
Minimum working distance (mm / inches)	320 (wide end) to 1,500 (tele end) / 12.6 (wide end) to 59 (tele end)	10 (wide end) to 800 (tele end) / 0.4 (wide end) to 31.5 (tele end)
Aperture	F1.6 to F4.5	F1.8 to F2.1
Antiflicker	Built-in	Built-in
Autofocus	Built-in	Built-in
Freeze	Built-in	Built-in
Contrast Enhancement	Built-in	Built-in
Sensitivity (lx)	1.4 (F1.6, 50 IRE)	12 (F1.8, 50 IRE)
Location of camera	Center of the lighthouse / Separate arm	Center of the lighthouse / Separate arm
Control box power supply	100–230 V; 50/60 Hz; 50 VA	100–230 V; 50/60 Hz; 50 VA
White balance	Auto / manual	Auto / manual
Foot control	Optional	Optional
Control box	Mobile	Mobile
Video signal outputs	SD: -Composite (2x) -SDI (2x)	HD: -Component YPbPr (2x) -DVI-D (1x) -HD-SDI (2x) SD: -Y/C (1x) -Composite (1x)
Serial link interface	RS-232 / RS-485	RS-232 / RS-485