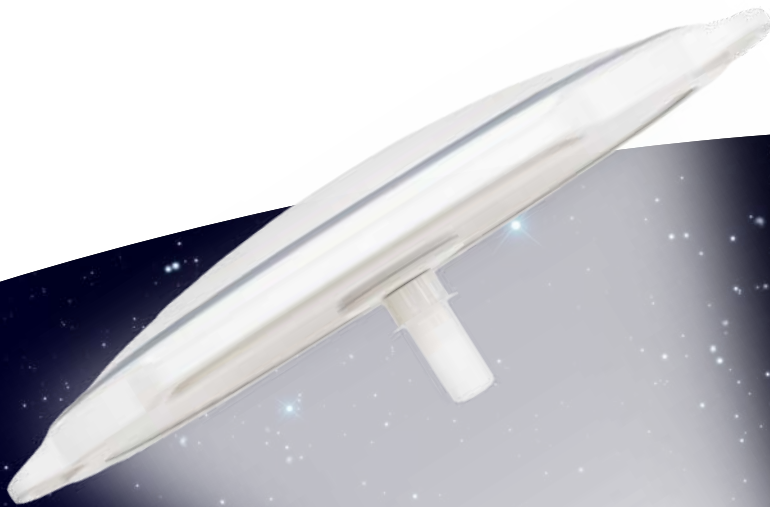




Healthcare

DATA SHEETS



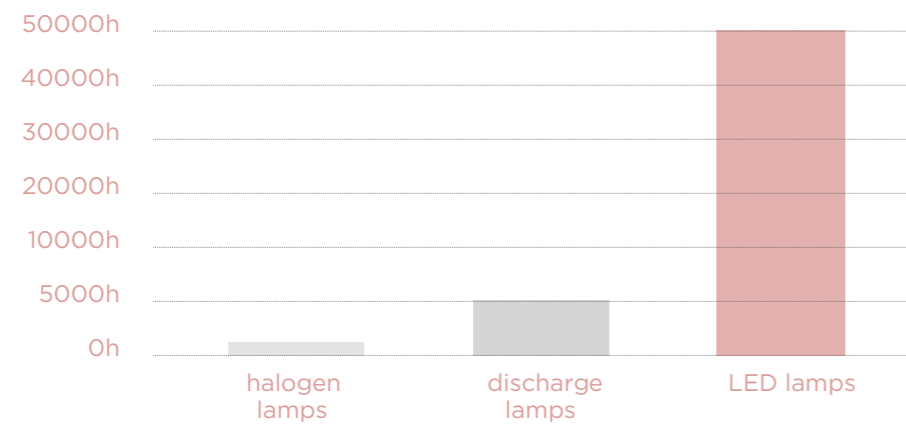
LED Surgical Light

LED Surgical Light LED Technology

Sources of light in LED technology have several times longer lifetime in comparison to traditional light sources. It directly contributes to the reduction of waste. In addition, it does not contain lead, mercury and other hazardous substances which will facilitate their future disposal.

LED technology also helps to protect our health. Light source in LED technology produces no harmful UV rays.

Lifetime of LED lamps



The LEDs used in operating room are characterized by very long lifetime, estimated at more than 50,000 h. In relation to other light sources used in halogen or discharge lamps, it is respectively more than 50 or 10 - times longer times between exchanges of light sources, which minimizes service actions. Additionally, low energy consumption of LED lamps: 2 or 3 times smaller than traditional surgical light, enables to save the environment and reduce the cost of maintaining the operating theater.

LED Surgical Light Color temperature adjustment

Wide range of color temperature adjustment enables changing the contrast of the observed tissue and reduces fatigue of operating surgeon, which affects the comfort and ergonomics of the medical staff.

Smooth surface with coolflow design
No visible uprise of air observed towards the ceiling, excellent heat dissipation

LED Light features



Osram LED bulbs

Natural sun-light lighting effect, real eye-sight of the human tissue
10-grade adjustable of illumination, color and ratio of radiation illumination

CAD modularized designed LED bulb set, adjustable depth more than 1,400mm. Glass imported from South Korea.



Special lighting intensity

5% intensity of illumination, meet the requirement for the special lighting intensity during the surgery



German Ondal spring arm

German Ondal spring arm ensure the high performance of the whole lighting system, stable and reliable during the surgery



LCD touching screen control panel

10-grade adjustable control panel, adjust by LCD touching screen
Quick and accurate adjust any time



Sterile grasp handle

Highly steriled grasp handle, one time shaping technology ensure highly hygiene degree

LED Surgical Light Examples of configuration



Standard ceiling mounted

All models compatible



Mobile basis curved arm

All models compatible



Low ceiling height mounted

All models compatible



Mobile basis straight arm

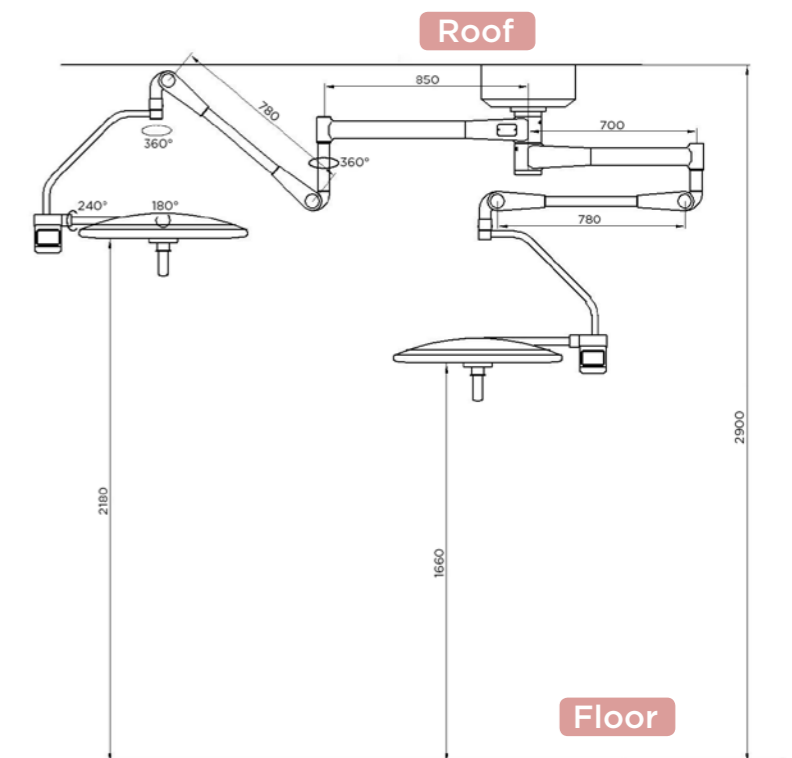
All models compatible



Wall mounted

All models compatible

Installation guide





BIOL800M
Mobile basis, curved arm



BIOL600M
Mobile basis, straight arm

Single ceiling mounted BIOL800



Technica Specifications	BIOL800
Illumination(lux)	60000-160000
Color Temperature(k)	3500-5000
Color Rendering Index(Ra)	85-98
Ratio of radiation illumination(mW/m ² -lux)	< 3.6
Max. irradiation (w/m ²)	3.6
Diameter of Light Spot(mm)	120-350
Light field, D10 (mm)	160 +/-10
Light field, D50(mm)	80 +/-10
Lighting Depth(mm)	≥ 700
Working distance(mm)	700-1400
Shadowless Rate(%)	98
Power(W)	120
LED bulbs(pcs)	120
Voltage used for LEDs (V)	30
Dome diameter(mm)	700
Weight of lamp body (kg)	65
Electric & frequency(V&Hz)	100-240 & 50/60
LED Working Life(h)	> 50000
No emission of IR and UV	

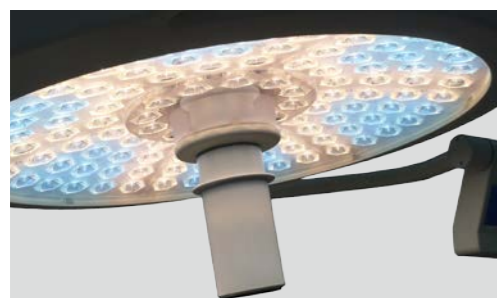
Single ceiling mounted BIOL600



Technica Specifications	BIOL600
Illumination(lux)	40000-90000
Color Temperature(k)	3500-5000
Color Rendering Index(Ra)	85-98
Ratio of radiation illumination(mW/m ² -lux)	< 3.6
Max. irradiation (w/m ²)	3.6
Diameter of Light Spot(mm)	120-350
Light field, D10 (mm)	90 +/-10
Light field, D50(mm)	45 +/-10
Lighting Depth(mm)	≥ 700
Working distance(mm)	700-1400
Shadowless Rate(%)	88
Power(W)	54
LED bulbs(pcs)	54
Voltage used for LEDs (V)	30
Dome diameter(mm)	500
Weight of lamp body (kg)	55
Electric & frequency(V&Hz)	100-240 & 50/60
LED Working Life(h)	> 50000
No emission of IR and UV	



Dual ceiling mounted BIOL800/800



Technica Specifications	BIOL800	BIOL800
Illumination(lux)	60000-160000	60000-160000
Color Temperature(k)	3500-5000	3500-5000
Color Rendering Index(Ra)	85-98	85-98
Ratio of radiation illumination(mW/m ² -lux)	< 3.6	< 3.6
Max. irradiation (w/m ²)	3.6	3.6
Diameter of Light Spot(mm)	120-350	120-350
Light field, D10 (mm)	160 +/-10	160 +/-10
Light field, D50(mm)	80+/-10	80+/-10
Lighting Depth(mm)	≥ 700	≥ 700
Working distance(mm)	700-1400	700-1400
Shadowless Rate(%)	98	98
Power(W)	120	120
LED bulbs(pcs)	120	120
Voltage used for LEDs (V)	30	30
Dome diameter(mm)	700	700
Weight of lamp body (kg)	65	65
Electric & frequency(V&Hz)	100-240 & 50/60	100-240 & 50/60
LED Working Life(h)	> 50000	> 50000
No emission of IR and UV		

Dual ceiling mounted BIOL800/600



Technica Specifications	BIOL800	BIOL600
Illumination(lux)	60000-160000	40000-90000
Color Temperature(k)	3500-5000	3500-5000
Color Rendering Index(Ra)	85-98	85-98
Ratio of radiation illumination(mW/m ² -lux)	< 3.6	< 3.6
Max. irradiation (w/m ²)	3.6	3.6
Diameter of Light Spot(mm)	120-350	120-350
Light field, D10 (mm)	160 +/-10	90+/-10
Light field, D50(mm)	80+/-10	45+/-10
Lighting Depth(mm)	≥ 700	≥ 700
Working distance(mm)	700-1400	700-1400
Shadowless Rate(%)	98	88
Power(W)	120	54
LED bulbs(pcs)	120	500
Voltage used for LEDs (V)	30	30
Dome diameter(mm)	700	220 & 50
Weight of lamp body (kg)	65	55
Electric & frequency(V&Hz)	100-240 & 50/60	100-240 & 50/60
LED Working Life(h)	> 50000	> 50000
No emission of IR and UV		



Single ceiling mounted
BIOL840



Technica Specifications	BIOL840
Illumination(lux)	60000-160000
Color Temperature(k)	3500-5000
Color Rendering Index(Ra)	85-98
Ratio of radiation illumination(mW/m ² -lux)	< 3.6
Max. irradiation (w/m2)	3.6
Diameter of Light Spot(mm)	120-350
Light field, D10 (mm)	150+/-10
Light field, D50(mm)	75+/-10
Lighting Depth(mm)	≥ 700
Working distance(mm)	700-1400
Shadowless Rate(%)	95
Power(W)	80
LED bulbs(pcs)	80
Voltage used for LEDs (V)	30
Dome diameter(mm/each)	250
Weight of lamp body (kg)	70
Electric & frequency(V&Hz)	100-240 & 50/60
LED Working Life(h)	> 50000

No emission of IR and UV



Single ceiling mounted
BIOL830



Technica Specifications	BIOL830
Illumination(lux)	60000-140000
Color Temperature(k)	3500-5000
Color Rendering Index(Ra)	85-98
Ratio of radiation illumination(mW/m ² -lux)	< 3.6
Max. irradiation (w/m2)	3.6
Diameter of Light Spot(mm)	120-350
Light field, D10 (mm)	140+/-10
Light field, D50(mm)	70+/-10
Lighting Depth(mm)	≥ 700
Working distance(mm)	700-1400
Shadowless Rate(%)	88
Power(W)	60
LED bulbs(pcs)	60
Voltage used for LEDs (V)	30
Dome diameter(mm/each)	250
Weight of lamp body (kg)	60
Electric & frequency(V&Hz)	100-240 & 50/60
LED Working Life(h)	> 50000

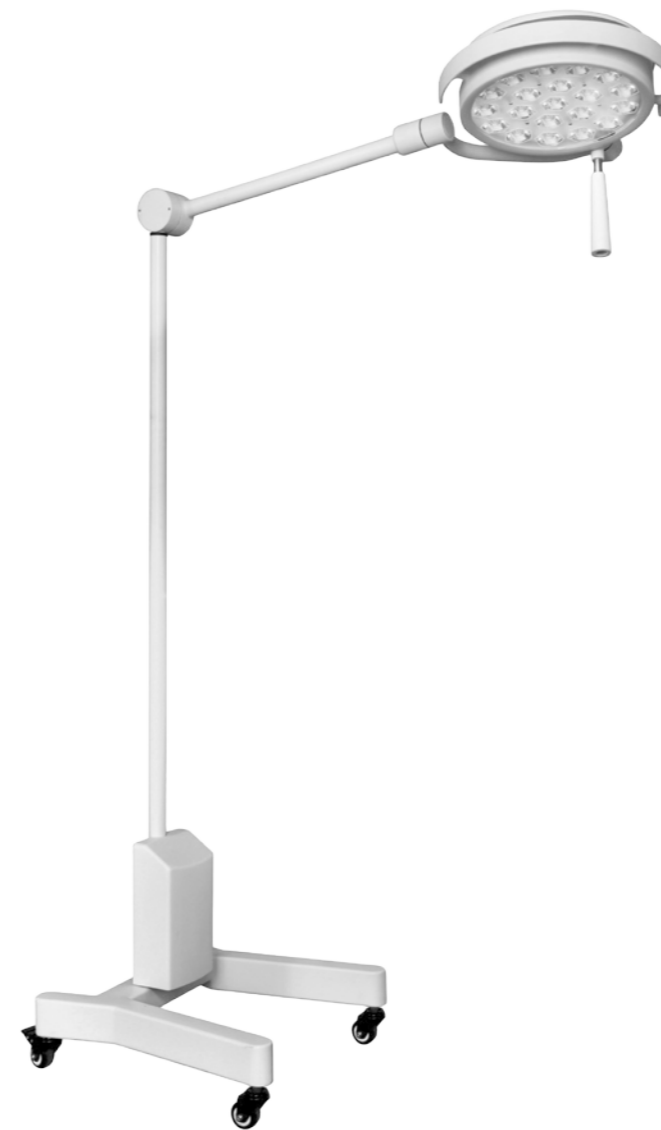
No emission of IR and UV



Dual ceiling mounted
BIOL840/830



Technica Specifications	BIOL840	BIOL830
Illumination(lux)	60000-160000	60000-140000
Color Temperature(k)	3500-5000	3500-5000
Color Rendering Index(Ra)	85-98	85-98
Ratio of radiation illumination(mW/m ² -lux)	< 3.6	< 3.6
Max. irradiation (w/m ²)	3.6	3.6
Diameter of Light Spot(mm)	120-350	120-350
Light field, D10 (mm)	150+/-10	140 +/-10
Light field, D50(mm)	75+/-10	70+/-10
Lighting Depth(mm)	≥ 700	≥ 700
Working distance(mm)	700-1400	700-1400
Shadowless Rate(%)	95	88
Power(W)	80	60
LED bulbs(pcs)	80	60
Voltage used for LEDs (V)	30	30
Dome diameter(mm/each)	250	250
Weight of lamp body (kg)	70	60
Electric & frequency(V&Hz)	100-240 & 50/60	100-240 & 50/60
LED Working Life(h)	> 50000	> 50000
No emission of IR and UV		



Single mobile basis
BIOL210



BIOL210W
Wall mounted



Technica Specifications	BIOL210
Illumination(lux)	40000-60000
Color Temperature(k)	3500-5000
Color Rendering Index(Ra)	≥ 90
Ratio of radiation illumination(mW/m ² -lux)	< 3.6
Max. irradiation (w/m ²)	3.6
Diameter of Light Spot(mm)	150
Light field, D10 (mm)	60+/-10
Light field, D50(mm)	30+/-10
Lighting Depth(mm)	≥ 500
Working distance(mm)	700-1400
Shadowless Rate(%)	—
Power(W)	20
LED bulbs(pcs)	20
Voltage used for LEDs (V)	30
Dome diameter(mm/each)	260
Weight of lamp body (kg)	45
Electric & frequency(V&Hz)	100-240 & 50/60
LED Working Life(h)	> 50000
No emission of IR and UV	

Camera & Screen Visual Operating System BIOL800/600/C/M



Camera	
Model	SR-10A
Resolution	210megapixel 1920(H)X 1080(V)
Communication mode	RS232
Communication protocols	HITACHI
Connector	LVC MOS-36pFPC(YCbCr 4:2:2) compatibility 110/LVDS 30P
Sensor type	1/2.9" CMOS
Scan mode	Progressive Scan
Day And Night System	Color/black and white/automatic
Minimum illumination	color/0.1Lux black and white:0.01Lux
Synchronization mode	inter-sync
Video output	digital signal
SNR	≥50dB(AGC OFF)

Lens	
IR CUT	IR CUT double filter automatic switching
automatic diaphragm	Support
Optical lenses	10X f=5mm ~ 50mm
Field angle	H:47°(W)-5.3°(T) V:35.6°(W)-3.96°(T)

Generic specification	
Dimensions	56(W)* 56(H)* 110(L)mm
Work Temperature/humidity	-10-50°C -10%RH-60%RH
Storage Temp/humidity	- 20°C ~ 60°C, 10% RH ~ 80% RH
Power supply	DC 12V±10%
Power consumption	5W MAX
Net weight	270g

Function	
exposure mode	A/M
white balance	Automatic/indoor/outdoor/manual
Focus Mode	A/M
gain control	A/M
Picture Effect	Automatic/color/black and white/ negative
electronic amplification	—
backlight compensation	on/off
Image Freeze	—
mirroring function	Support (horizontal mirror + vertical mirror)
image rollovers	Support
Blank Screen	—

Function	
Wide Dynamic	D-WDR
DNR	2D-DNR
electronic shutter	1/30s~1/10,000s
Digital Slow Shutter	—
contrast ratio	Adjustable
saturation	Adjustable
Anti-fog function	Support
motion detection	—
Privacy Shelter	—
Marginal	Support