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Dok-ID: 110-00017_V2.2_en
CO#003-001658

1. Description

High-quality LED's combined with the patented reflector technology creates the pre-condition of illuminating the operating field. The perfect arrangement of LED reflectors facilitates the maximum efficiency of the light emitting surface. The LED light sources mainly emit visible light without any infrared components.

The perfect arrangement of LED reflectors leads to a shadow-free illumination with simultaneous great illumination depth for deep body cavities.

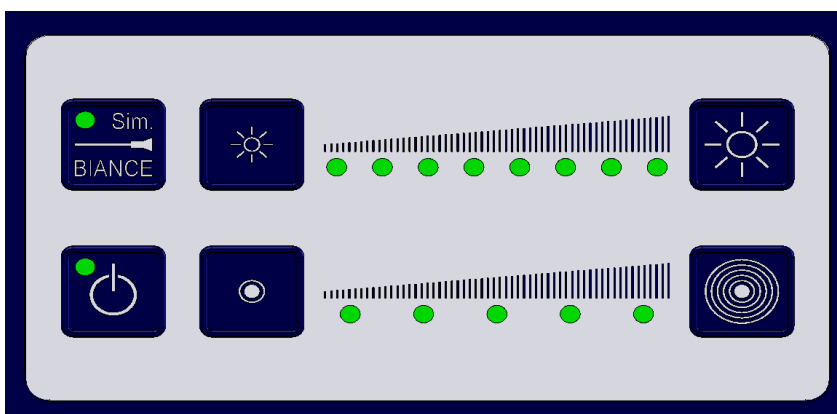
The SIMEON BusinessLine operating lights are made of high-end materials such as aluminum and safety glass. The housing made of aluminum favors a well-established heat management. This offers two important advantages. First, it avoids heat accumulation by direct heat sink function which leads to an extremely long lifetime of the LEDs. Second, the optimized heat management and the very low power consumption creates a perfect hygienic environment under laminar flow ceiling conditions.

The BusinessLine lights have a hygiene-optimized design, which is supported by the seamlessly closed construction and the use of ESG safety glass. In addition, the ESG safety glass offers the advantage of a consistently high illumination over the entire service life of the LED light.

The BusinessLine operating lights convince with the innovative antibacterial coating Anti.BAC®. Anti.BAC® reduces germs by 99.99% and is completely free of physiologically harmful nano-silver or free silver ions.

All operating functions are intuitively controllable via cardanic control panel:

- On/Off button with LED
- **Sim.BIANCE** button (background illumination for endoscopic procedures)
- Illumination intensity plus/minus (8 steps)
- Illuminated field size plus/minus (5 steps)



Further the **my.GRIP** function offers a sterile control of two operating functions in parallel and directly on the sterile handle with up to 12 freely selectable combinations.

2. Technical data

Photometrical data:		Sim.LED 700 SC	Sim.LED 500 SC	Sim.LED 450 SC
Central illumination E_c (1m)	[lx]	160,000	160,000	140,000
Electrical dimming capability from/to	[lx]	48,000-160,000	48,000-160,000	42,000-140,000
Light field diameter d_{10} at a distance of 1m	[mm]	170-300	170-290	140-250
Light field diameter d_{50} at a distance of 1m	[mm]	101	98	80
Color temperature	[K]	4,500	4,500	4,500
Color rendering index		96	96	96
Red rendering index		96	96	96
Total irradiance	[W/m ²]	629	534	468
Luminosity factor of radiation	[lm/W]	264	270	274
Depth of illumination without additional focusing (L1+L2) at 20%	[mm]	875	930	975
Depth of illumination without additional focusing (L1+L2) at 60%	[mm]	420	460	470
Working area from/to	[mm]	670-1,545	670-1,600	520-1,495
Laminar flow index (measurement for intensity of turbulence)	[%]	16	14	13
Laminar flow index (measurement of particles)	[class]	3	3.6	> 3.6
Light emitting surface	[cm ²]	3,320	2,360	1,650
Temperature increase at surgeon's head	[°C]	< 1	< 1	< 1
Temperature increase at operation area	[°C]	< 10	< 10	< 10
LED – light source	[pieces]	24 x 3 = 72	18 x 3 = 54	12 x 3 = 36

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Technical Data Sheet

OR light Sim.LED 700/500/450 SC

Radiant energy	[mW/m ² lx]	3.8	3.7	3.6
Sim.BIANCE ambient light for MIS	[lx]	3,000-5,000	3,000-5,000	3,000-5,000
Residual illumination with 1 shadow-caster	[%]	67	69	32
Residual illumination with 2 shadow-caster	[%]	47	42	42
Residual illumination with 1 tube	[%]	97	100	100
Residual illumination with 1 tube and 1 shadow-caster	[%]	64	68	33
Residual Illumination With 1 tube and 2 shadow-caster	[%]	45	42	42
Efficiency of max. light intensity to max. power consumption	[lx/W]	2,580	2,641	2,666
Electrical data:		Sim.LED 700 SC	Sim.LED 500 SC	Sim.LED 450 SC
Power supply incl. mounting plate (LxWxH)	[mm]	322x145x90	322x145x90	322x145x90
Power supply – primary voltage AC	[V]	100-240	100-240	100-240
Input voltage at light head DC	[V]	20-33	20-33	20-33
Typical input voltage DC	[V]	24	24	24
Power consumption with 24 V	[W]	62	53	45
Life time of light source	[h]	> 60,000	> 60,000	> 60,000
Classification according MDD		I	I	I
Protection class according IEC 60601		I	I	I
Suspension protection class		IP 30	IP 30	IP 30
Light housing protection class		IP 52	IP 52	IP 52
Certificate		CE	CE	CE

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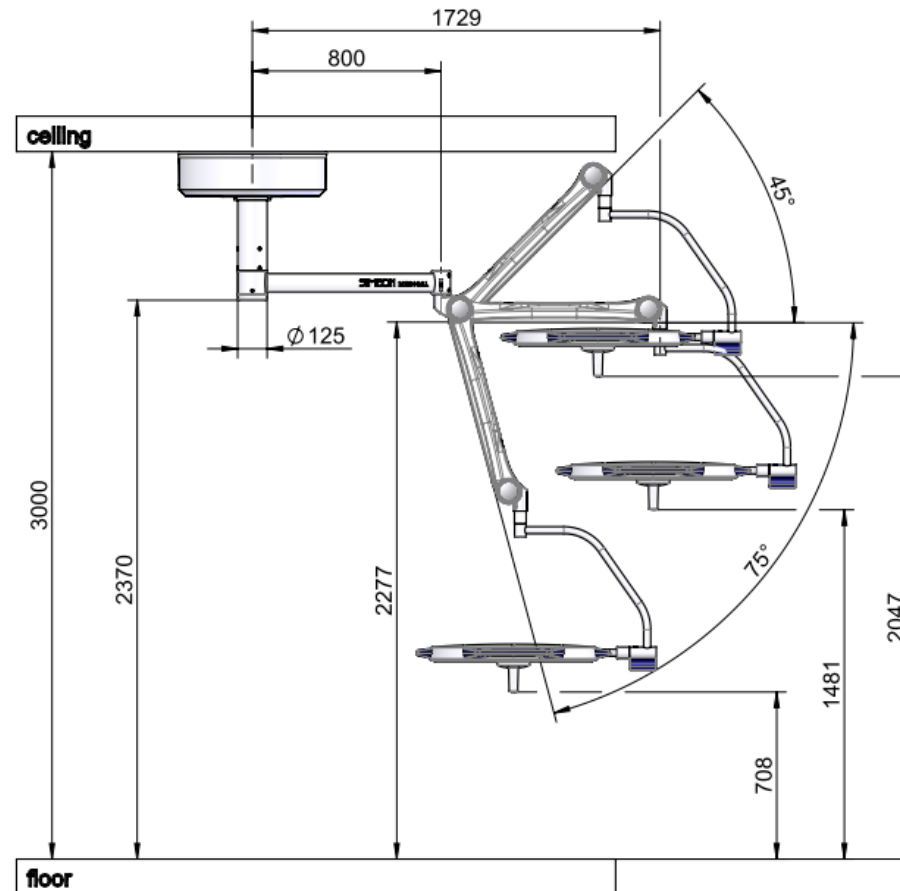
Technical Data Sheet

OR light Sim.LED 700/500/450 SC

Mechanical data:		Sim.LED 700 SC	Sim.LED 500 SC	Sim.LED 450 SC
Operating range	[mm]	1,757	1,757	1,757
Adjustment of the spring arm	[mm]	1,339	1,339	1,339
Approx. weight of a standard ceiling tube	[kg]	10.5	10.5	10.5
Approx. weight of the suspension	[kg]	9.5	9.5	9.5
Approx. weight of the spring arm SA 2075	[kg]	9.0	9.0	9.0
Approx. weight of the power supply	[kg]	2.2	2.2	2.2
Approx. weight of the light head	[kg]	18	15	13
Total weight	[kg]	49.1	46.1	44.1
Ceiling cover dimensions	[mm]	Ø620x180 (90)	Ø620x180 (90)	Ø620x180 (90)
Height of the light head without sterile handle	[mm]	71	71	71
Light head diameter	[mm]	710	610	520
Mobile stand with battery:		Sim.LED 700 SC	Sim.LED 500 SC	Sim.LED 450 SC
Single Battery runtime at maximum intensity	[h]	3.5	4	5
Double Battery runtime at maximum intensity	[h]	7	8	10
Battery charging time	[h]	2.5	2.5	2.5
Estimated amount of charging cycles		1000	1000	1000
Optional power supply:				
Primary Voltage AC	[V]	100-240	100-240	100-240
Power frequency	[Hz]	47-63	47-63	47-63
Current Consumption	[A]	2.5-1.2	2.5-1.2	2.5-1.2

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3. Technical drawing



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