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Tender Specifications for LED light- Double Dome

- (a) The double dome operating light must be designed for the use in high demanding surgical procedures. State-of-the-art LED bulbs should be used to ensure a low energy consumption and a long service life.
- (b) Outer handles at the light head should be provided to allow for non-sterile positioning.
- (c) Light head must be designed with smooth transitions and surfaces, without slots, gaps or exposed screwing to ensure fast and effective cleaning.
- (d) The light head with streamlined shape is favourable within laminar flow. The light head must be resistant to disinfectant.
- (e) For sterile positioning an ergonomic, exchangeable and centrally positioned sterile handle within the light head should be provided.
- (f) All main joints of surgical light must be provided with unlimited rotation (360°). Light head and suspension must be sealed dustproof.
- (g) Control of illumination intensity must be possible via wall control panel

(h) Certification/ Classification

- a. **Should have US FDA approved.**
- b. Protection class acc. to IEC 60601-1 ~
 - i. Mains connection component - Protection class 1
 - ii. Light head – SELV
- c. Protection class acc. to IEC 60529
 - i. Arm system/mains connection component - IP 30
 - ii. Light head - IP 42
- d. Classification in accordance with EU Directive 93/42/EEC Annex IX - Class I
- e. UMDNS-Code (Universal Medical Device Nomenclature System) - 12-282
- f. IEC 60601-1 - Medical electrical equipment – Section 1-1
- g. IEC 60601-2-41 - Medical electrical equipment – Section 2-41
- h. IEC 60601-1-2 - Medical electrical equipment – Section 1-2

(i) The surgical light should be complete with all components for ceiling mount and electrical feed-in, incl. finalised installation.

(j) Technical data for main dome: - 1nos.

i. Central illumination intensity Ec	160.000 lux
ii. Light field diameter at a distance of 1 m	200 mm
iii. Depth of illumination L1+L2	1300 mm
iv. Average Color rendering index Ra	95
v. Color rendering index R9 (red)	93
vi. Color temperature	5000K
vii. Central illumination at 1m distance with:	
I. Tube	100%
II. one mask:	40%
III. tube and one mask:	40%
IV. two masks:	48%
V. tube and two masks:	48%
viii. Central irradiance Ee	580 W/ m ² ± 50 W/ m ²

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ix.	Ee/Ec ratio -	3.5 W/m ² x Lux
x.	Adjusting the illumination intensity	40000 to 160000 Lux
xi.	Number of LED	66 units
xii.	Number of LED stripes	11 units
xiii.	Service life LED bulbs	approx. 30000 hours
xiv.	Replacement of LED bulbs	possible
xv.	Ambient light mode (Endolight)	300 Lux
xvi.	Diameter of light head	620 mm

(k) Technical data for satellite dome - 1nos.

i.	Central illumination intensity Ec	120.000 lux
ii.	Light field diameter	200mm
iii.	Depth of illumination L1+L2	1300 mm
iv.	Average Color rendering index Ra	95
v.	Color rendering index R9 (red)	93
vi.	Color temperature	5000K
vii.	Central illumination at 1m distance with:	
	I. Tube	100%
	II. one mask:	41%
	III. tube and one mask:	41%
	IV. two masks:	49%
	V. tube and two masks:	49%
viii.	Central irradiance Ee	430 W/m ² ± 50 W/m ²
ix.	Ee/Ec ratio	3.5 W/m ² x Lux
x.	Adjusting the illumination intensity	40000 to 120000 Lux
xi.	Number of LED	48 units
xii.	Number of LED stripes	8 units
xiii.	Replacement of LED bulbs	possible
xiv.	Service life LED bulbs	approx. 30000 hours
xv.	Ambient light mode (Endolight)	300 Lux
xvi.	Diameter of light head	620 mm

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Annexure-II

To be submitted by the firm along with offer-

Tender specification as per Annexure-I	Specification quoted by the firm	Deviation if any with clarification

Signature of firm's