

Specifications for Dual Dome Operation Theater Light

- 1 The light should comprise of 2 units,
 - i. one major which should have output between 120 k lux and 160 k lux
 - ii. One minor which should have output between 80 k lux and 100 k lux.
- 2 .Each unit should have a central light bulb.
3. Should have a facility of continuous brightness adjustment.
4. Should be shadow free.
5. It should be multiple or single reflector Prismatic or Parabolic based system.
6. All cables should be through the central supporting pillar/column of light.
- 7 .Should have dichroic mirrors and KG type glass filter for better thermal filtration so that the light on the incident area is free from thermal properties and cold.
8. Bulbs should be of standard Quartz Halogen 12/24 V ;50,75,100,150 Watts 2 pin base. Nonstandard bulb with special product which is using proprietary items such as bulbs with special Pins or wings with clips or base should not be considered because of non-availability of such items in the market.
- 9 .Changing of bulbs should be easy with no tools or with very simple tools like screw drivers only and bulb base mounting should be independent of the sterilizable handles.
- 10 .Changing of bulbs should not take more than 3-5 minutes.
- 11 .The increase in the ambient temp of the room with the lights on should not be more than 3-5 degrees centigrade.
12. The light should be easily maneuverable and should have a swivel radius of at least 150 cms and height adjustment of at least 100 cms
13. The optimum colour temperature of the light should be between 3400-4200 Kelvin, with colour rendering index of at least 90%
14. Each unit should provide a pre-focused beam of light with at least 50 cms depth of field.
15. It should be a cool light and should not interfere with the laminar air flow system. The absorption of infrared radiation should be more than 95% and infrared radiation to feet at 100000 lux should be less than 35 w /sq meter
16. Each unit should have quartz halogen lamp of average life of 1000 hours.
- 17 . 15 numbers of spare bulbs should be included.
- 18 .The light should have 360 degree turning radius with unbreakable head Glass.
- 19 .Light should have battery back up automatic switch over facility.
20. The handle should be Autoclavable & detachable.

Minor Parameters.

- 1] Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. Or should comply with 89/366/EEC; EMC-directive.
- 2] The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%
- 3] The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%
- 4] It should be fitted with appropriate Indian plugs and sockets.
- 5] It should have Suitable Servo controlled Stabilizer
- 6] It should conform to standards for electrical safety IEC-60601-1 General Requirements.
- 7] It should supply with User/Technical/Maintenance manuals in English.
- 8] It should be supplied with Certificate of calibration and inspection.
- 9] List of important spare parts and accessories with their part number and costing should be attached.
- 10] Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist should be attached. The job description of the hospital technician and company service engineer should be mentioned.
- 11] List of Equipments available for providing calibration and routine Preventive Maintenance Support should be attached, as per manufacturer documentation in service/technical manual.
- 12] Written declaration for Comprehensive Maintenance Contract after 2 years warranty to be attached.