

Specifications for Mains operated Portable Cool Light Kits

ENG

1. SCOPE:

The specification aims at the procurement of Mains operated Portable Cool Light with compact fluorescent lamps for ENG outdoor application (Location shooting) in Doordarshan network.


2. ESSENTIAL FEATURES :

1. The unit should meet the professional standards that are normally followed in TV Production Studios.
2. They are to be cool light with very little radiant heat in the light beam.
3. The light source should be highly energy efficient and should use high performance lamps of known reputed brands with near constant spectrums over the maximum dimming range to give unchanged color temperature.
4. Professional Compact Fluorescent lamps, 55 W of 3200°K color temperature should be offered with continuous spectrums over the dimming range to avoid color mismatch between lamps.
5. It should be possible to achieve perfect mixing with Tungsten Lights.
6. The luminaries should use high frequency excitation ballast of 50 kHz or more to obtain highly efficient and flicker free light output essential for TV production. The power factor of the ballast should be equal to more than 0.95 (cos ϕ).
7. The light should have even spectral response however, lights with a spiky spectral energy distribution should have the major spikes coinciding with the colour camera analysis characteristics/ RGB spikes in the visible spectrum are also accepted.
8. The light fitting should be provided with yoke mounting assembly that facilitates the fixture to be mounted on floor stands and allows the user to pan and tilt the fitting to the required angle and orientation.
9. The spread of light from the source should be controllable for different angles of throw with the help of louvers or adjustable honeycomb grids. Facility to insert Gel/filter frames and scrims should be available.
10. Adequate ventilation should be provided with proper care taken for avoiding light spill into adjacent areas.

11. The fitting should be supplied with a minimum of three meters of 3-core power supply cable of suitable capacity fitted with plug with Earth pin of 5 Amp rating suitable for Indian environment.
12. The unit should have provision for easy internal access for lamp & ballast replacement and maintenance.
13. Each fixture should incorporate an in-built electronic linear dimmer control for about 100% to 20% or less dimming capability. The colour temperature of the lamp should remain constant even during the dimming operation. The dimmer control should be through 0-10 Volt DC supply and also through DMX 512 control.
14. The luminaries offered should comply with the industry standard electrical and Electro magnetic interference specifications. There should be no emissions of RF or infrared to avoid any interference to microphones, earphones, Floor manager's infrared intercom system and other wireless equipment being used within the studio or on the locations. The firm must enclose the certificate or necessary documentation to this effect.
15. As the luminaries are to be used in coverage's of important events involving VVIPs/VIPs where safety is the prime concern, the luminaries offered should comply with safety standards. Necessary certificate as applies to OEM for the quoted model of the product, from their National certification body should be enclosed. The firm should ensure that the certificate should clearly refer to IEC/UL safety standard clauses pertaining to the luminaries for stage light, TV and film studio (outdoor and indoor).

3. TECHNICAL SPECIFICATION:

1. Operating Voltage : AC Single phase 230 V, 50 Hz.
2. Bulb Socket/ Lamp base : 2G11
3. Colour Rendition Index : 90 or better.
4. Colour Temperature of the light source : 3200 deg Kelvin (Tungsten balance).
5. Lamp : Compact Fluorescent Lamp of 55 W
6. Life of bulb : Better than 6, 000 hours
7. Dimmer : 0 – 10 V DC supply.
8. Power cable : Minimum 3-meter length of 3-core cable of suitable capacity to avoid heating of the cables with 3-pin, 5 Amp power plug.
9. Reflecting Mirror : High reflective Optical reflectors should be fitted with appropriate number of matching mirror flaps and reflecting corners.


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10. Housing/finishing : Robust and rugged Aluminum/Steel extrusion and epoxy coated aluminum alloy sheets coated with heat resistant paint.
11. Yoke : Suitable fixtures for mounting the fitting over stand
12. Electronic Ballast : High frequency excitation ballast of 50 kHz or more to obtain high efficient and flicker free silent light. The power factor of the ballast should be 0.95 or above.
13. Mini Stand : Made of Strong, corrosion resistant material with height adjustable between 2.75 mtr max. and 1 mtr min. weighing 2.5 Kg or less along with suitable clamps for mounting the light fitting.

4. Light Fittings required

The 220 Watt light fitting with lamps and accessories are to be quoted item-wise. The suggestive complement of equipment required is as enclosed in Annexure 1.

220 Watt Fluorescent fixtures

Total Wattage of the Lamp : (4 X 55 W) - About 220 Watt with in built Dimmer
Light Throw at a distance of : Better than 100 Lux 2 mtr (in Vertical zone)

5. General:

Following general conditions are applicable to all tenderers. These conditions have to be complied for consideration of their offer(s).

- 5.1) Other essential item(s), if any, which have not been mentioned in this specification, but are necessary to complete the system for its full exploitation, should also be quoted as optional item. The firm should provide the sufficient details of such item(s) to decide about its utility.
- 5.2) The tenderer/manufacturer should ensure the completeness of the system in their offer(s).
- 5.3) All the essential accessories such as Power cables etc. should be included in the offer

6. Compliance:

A point by point compliance statement from the principal manufacturer in respect of all the points laid down in this specification is to be enclosed along with the offer in the format given below. **The figures so mentioned should be supported by record of these in the technical literature enclosed with the tender and reference to the page number of enclosed literature for all features and technical specifications should be mentioned in the relevant column.** Offers without the compliance statement or incomplete compliance statement will be rejected with the sole responsibility of the tenderer. **Any deviation from the specification detailed in the compliance statement is to be highlighted separately.**

Sr.No of DD specs.	DD specs.	Compliance (Yes/No)	Performance Fig. of eqpt. Offered.	Reference to the Page Number of enclosed literature	Deviations, in case of non-compliance	Optional items if any reqd. to make the sys. Compliant to DD specs.	Features in the sys. Offered Which exceed DD specs.

7. Price

The tenderer must quote separately item wise price of all the items that constitutes the system including the cost of control cables (if any), connectors, etc., Prices of all the optional items should also be quoted separately. Power connection cables are considered as part of the equipment.

8. Spares

The tenderer should quote for all the essential spares that are required for the smooth functioning of the system for at least five years after the guarantee period is over. Lamp holder 2G11, 55 Watt Cool Lamp meeting the specification 3 (Point 1 to 6) and Electronic ballast meeting the specification 3 (Point 12) should also be quoted as spares with their prices in Commercial bid only.

9. Documentation

One set of the technical literature for equipment should be enclosed along with the tender for technical evaluation. **Offers without the necessary literature for evaluation will be rejected with sole responsibility of tenderer. The successful tenderer has to supply one set of technical manual for operation & maintenance, along with the equipment.**

10. Demonstration:

The firm may be asked to demonstrate the offered product as part of the technical evaluation. In such case the firm will have to make suitable arrangement for the demonstration of the offered product.

11. Guarantee

The equipment should be guaranteed for two years of trouble free operation from the date of supply to Doordarshan. In case of any failure within two years, the equipment should be replaced/repared free of cost.

12. Inspection

The equipment shall be subjected to inspection by DD officials at New Delhi.

13. Enclosures:

The firm must submit the following enclosures along with the tender to facilitate technical evaluation.


1. Point to point compliance statement duly signed by the OEM. The OEM should essentially fill the performance figure of the offered product in the compliance statement. The reference to the page number of enclosed literature for all features and technical specifications should be essentially mentioned in the relevant column of the Compliance statement.
2. Technical manuals/Detailed technical literature/catalogues for all the offered products for substantiating the technical specification.
3. Broadcast User list of the offered product/system.
4. Any other document mentioned elsewhere in the tender document.

The tender is liable to be rejected in the absence of the above enclosures with the sole responsibility of the tenderer.

Annexure I

Total No. of kits required :17
Complement of equipments per kit

Sl. No.	Details of Item	Quantity per Kit
1.	220 W Compact Light fitting with lamp (With Horizontal Yoke)	2 No.
2.	4 Leaf Barn door (suitable for 220 W Compact Light fitting)	2 No.
3.	Gel/ filter frame (suitable for 220 W Compact Light fitting)	2 No.
4.	Adjustable Stand	2 No.
5.	Honey comb / Egg crate Grid (suitable for 220 W Compact Light fitting)	2 No.
6.	Carrying Case for each Light fitting.	2 No.


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