

TECHNICAL SPECIFICATION OF SPORTS LED LUMINAIRE – HIGH MAST

- The LED Sports Flood light Luminaire with Minimum wattage of 1200W
- Housing Made of Single piece die-cast housing with corrosion resistant Powder coating. (Multiple modules combined for higher wattage are not acceptable)
- Luminaire thermal design should be based on Easy and natural (Without dependency on active cooling) heat dissipation (passive cooling) helps to Extend Lifetime.
- LED OEM make: CREE/NICHIA/LUMILEDS, LM80 report of LED Chip to be submitted.
- The driver is specially designed to have built-in surge voltage, open/short circuit
- Protections.
- Driver should have an internal Surge protection of 10KV/5kA and an External surge protection of 20KV/10kA to be provided for additional safety.
- Luminaire is provided with a MS mounting bracket.
- System efficacy of Luminaire should be Minimum 100 Lumen/Watt at CRI >90, TLCI >90.
- The Luminaire should have CRI >90 with CCT: 5700+/-355k deg. K.
- Ingress Protection: IP66, IP test report to be submitted from NABL accredited Laboratory
- Mechanical impact protection: IK08, IK Test report to be submitted from NABL accredited Laboratory
- Television Lighting Consistency Index (TLCI) should be >90, TLCI Report from LED Chip OEM as well as of the Luminaire should be submitted along with Bid .
- The Driver should be dimmable and should have separate external DMX module so that Normal functioning and DMX system are isolated.
- The Driver should flicker free with flicker <1% for high quality slow-motion capture.
- LM79 report of Luminaire from NABL accredited lab to be submitted along with the bid in compliance with Luminaire specifications.
- The weight of proposed LED Luminaire should be less than 20 Kg and the Total wind age area on the Mast with LED system should be lesser than the existing MH system to ensure mast stability. The Confirmation from IIT/NIT should be submitted along with the bid.
- BIS of the Luminaire and driver to be submitted along with bid.
- Type test report of luminaire as per IS 10322/ IEC 60598 or equivalent to be submitted.
- The above mentioned criteria as are indicative. The successful bidder will have to do a detailed design in order to satisfy the requirements as outlined by the ICC. The contractor will also have to obtain a third-party review certification from recommendable agency who can assure design in accordance with ICC requirements for players and broadcasting.

Lux level requirements:

The Illumination of the ground shall be of high-quality providing comfort to the players, Umpires and the spectators. The illumination shall be suitable for HDTV telecast in terms of quality and level of Illumination on the ground.

Following are the requirements of various levels of Illumination required for FOP.

Horizontal Illuminance					
Area of measurement	Grid points	Eavg	U1 (Emin/Emax)	U2 (Emin/Eavg)	Uniformity Gradient
Pitch (30MtrX30Mtr)	2.5mtrX 2.5mtr	>3000 Lux	>0.80	>0.90	<15% between points
Infield (30 yard Circle)	5mtr X 5 Mtr	>2500 Lux	>0.70	>0.80	
Outfield (138Mtr dia)	10MtrX 10Mtr	>2000 Lux	>0.40	>0.60	<20% between points
Boundary (140Mtr dia perimeter)	10Mtr	> 1200 Lux	>0.40	>0.60	

Vertical Illuminance						
Camera & Location	Area of measurement	Grid points	Eavg	U1 (Emin/Emax)	U2 (Emin/Eavg)	Uniformity Gradient
4 Orthogonal Cameras height : 12mtr along 4 perpendicular directions at 95 Mtr from centre of pitch	Pitch (30MtrX30Mtr)	2.5mtrX 2.5mtr	>2500 Lux	>0.70	>0.80	<15% between points
	Infield (30 yard Circle)	5mtr X 5 Mtr	>2000 Lux	>0.60	>0.70	
	Outfield (138Mtr dia)	10MtrX 10Mtr	>1500 Lux	>0.40	>0.60	<20% between points
	Boundary (140Mtr dia perimeter)	10Mtr	> 1000 Lux	>0.40	>0.60	

All above light levels are maintained values. Maintenance Factor = 0.9

Shadow rendering to be taken into account in the lighting design considering the location & height of the high mast; the location and height of the roof canopy; the play area as indicated in the drawing.

In case the above design parameters cannot be achieved based on the present site conditions then the lighting designer has to indicate the same and also offer suitable solution.

The lighting quality and specifications shall be approved by the ICC and is supported by an approval from the broadcasting.

Service Requirement : On field support of experienced and qualified engineers during International/IPL/MPL matches.

TERMS & CONDITIONS - SPORTS LED LUMINAIRE– HIGH MAST

1.	Eligibility of Bidder	<ul style="list-style-type: none"> • Profit making Entity Minimum 100 Cr Annual turnover for last 3 year • Minimum 1 or more cricket stadium LED Sports Flood light Luminaire– High Mast installation experience.
2.	Invitation	Quotations in sealed envelope are invited for the proposed LED Sports Flood light Luminaire– High Mast at MCA International Stadium, Pune.
3.	Procedure for participating in the tender	<p>Non-refundable Tender fee of Rs. 10,000/- can be made in cash or by bank transfer to the following bank account before submitting tender:</p> <p>Beneficiary’s name: Maharashtra Cricket Association Bank name: Bank of Maharashtra Branch: Deccan Gymkhana Savings A/C no.: 60010718910 RTGS/IFSC Code: MAHB0000003 GST no.: 27AAATM2192D1ZS</p>
4.	Earnest Money Deposit	Rs.10,00,000/- by Demand Draft (DD) in favor of “MAHARASHTRA CRICKET ASSOCIATION” payable at Pune along with submission of Quotation. The DD should be drawn on a scheduled bank and should be put into a separate sealed envelope with the name of work and name of the bidder clearly written on it. This DD should be submitted along with Quotation in separate sealed envelope.
5.	Security Deposit	<ul style="list-style-type: none"> • Successful bidder shall furnish Security deposit @ 10% of the contract price, by demand draft in favour of “MAHARASHTRA CRICKET ASSOCIATION” payable at Pune, however, Earnest Money Deposit shall be converted as Security Deposit and difference in amount shall be adjusted accordingly. • Security deposit shall be released after the total retention amount deducted from the successful bidders (hereinafter referred to as “Contractor”) bills equals the amount of security deposit.
6.	Performance Bank Guarantee	Successful bidder shall submit Performance Bank Guarantee @ 10% of contract price, validity shall be initially for one year thereafter shall be extended covering DLP & performance period of 3 years.
7.	Commencement of work	Immediately from the date of issuance of work order.
8.	Time frame	The time frame for the completion of work shall be 40 days from the date of issuance of work order.
9.	Billing and payments	<ul style="list-style-type: none"> • R.A. Bills amount should not be less than 25 lakh. • Interim bills shall be certified within 10 days from the date of their receipt in the prescribed format with supporting document/s. • The Final bill shall be certified within 30 days from the date of their receipt in the prescribed format with required

		<p>enclosures such as all bill supporting documents, challans, and materials consumption sheets, designs, calculations and sketches of measurement marking which shall be attached with respective R.A. Bill and Final Bill.</p> <ul style="list-style-type: none"> • All incoming and outgoing materials including empty containers and bags challans will have to be signed by duly authorized MCA manager/Supervisor and entered into register which shall be in the custody of MCA. • Final bill shall be paid within 30 days from its date of certification by MCA technician. • After issuing of LOI, successful bidder shall submit billing breakup for approval by MCA.
10.	Retention	<ul style="list-style-type: none"> • Retention money @ 5% of the gross value of work certified in each bill shall be deducted progressively. • Retention money shall be released at the end of the Defect Liability Period/Guarantee Period after all the defects, if any, have been rectified. Retention amount can also be released against Bank Guarantee submitted by bidder for the stipulated performance guarantee period. This will be without prejudice to all other rights and/or claims of Maharashtra Cricket Association relating to the quality of work done by the Contractor.
11.	Right of acceptance/rejection	MCA reserves the right to accept any bid or reject any or all bids or to postpone or cancel the work without assigning any reason to do so and does not bind itself to accept the lowest or any bid.
12.	Defect liability period	12 months from the date of the final bill / Handing over of complete system as certified by the Consultant for entire work.
13.	Submissions	<ul style="list-style-type: none"> • Last 3 Financial years audited Balance Sheet with copy of Income Tax Return • Past experience Purchase order/Work Order
14.	Date, Time & Place of Tender submission	On or before 21st August 2023 by 5:30 pm at MCA Office, 2 nd floor, MCA International Stadium, Gahunje, Pune