



**SBI INFRA MANAGEMENT SOLUTIONS PVT.LTD.**

Head Office-Ground Floor, Raheja Chambers,  
Free Press Journal Marg, Nariman Point, Mumbai-21

**TENDER FOR SUPPLY OF LIGHT FITTINGS AT SBI RACPC AT DOSTI PINNACLE GROUND FLOOR,  
WAGLE INDUSTRIAL ESTATE, THANE (WEST)**

**TENDER ID:- MUM201905005**

**PART – A: TECHNICAL BID**

**TENDER SUBMITTED BY:**

NAME	:	_____
ADDRESS	:	_____
		_____
		_____
GSTIN NO	:	_____
DATE	:	_____



### **NOTICE INVITING TENDERS**

SBI Infra Management Solutions Pvt. Ltd. (hereinafter SBIIMS) on behalf of SBI recall "online item rate E-tender" from the OEMs of the approved make light fittings/ authorized dealers / distributors of the approved make light fittings.

Approved makes: **Philips / GE Lighting / Havells / Osram / Crompton Greaves / Anchor-Panasonic / Wipro**

The details of tender are as under:

S.No.	Type	Description
(1)	Name of work	Tender for supply of light fittings at SBI RACPC,DOSTI PINNACLE GROUND FLOOR, WAGLE INDUSTRIAL ESTATE, THANE (WEST)
(2)	Nature of Work	Supply of light fittings
(3)	Time allowed for completion	30 days
(4)	Earnest Money Deposit	Rs. 7,500.00 (Rupees Seven Thousand five hundred Only)
(5)	Cost of Tender document cum Tender Processing Fee (Non-refundable)	<b>Rs. 1500/- (Rs. One Thousand five hundred Only)</b> to be paid through State Bank Collect <b>ONLY</b> as detailed under; 1) login <a href="https://www.onlinesbi.com">https://www.onlinesbi.com</a> 2) Select SB Collect from Top Menu, click the check box and "Proceed" 3) Select "All India" in "State of Corporate/Institution" & Select "Commercial Services" in "Type of Corporate/Institution" then "Go" 4) Select "SBI Infra Management Solutions pvt. Ltd" in Commercial Services Name and "Submit" 5) Select "Tender Application Fee" in "Payment Category" and enter the "Tender ID" exactly as given in first page top of this tender(characters in uppercase Only). 6) Fill up all fields such as email, GST No., Mobile No, Vendor/Firm Name etc and make payment. 7) Enclose payment receipt having unique reference No. along with EMD.
(6)	Mode of Payment for Item No. (4) and (5) above	By Demand Draft / Pay Order from any Nationalized/Scheduled Bank drawn in favour of "SBI Infra Management Solutions Pvt. Ltd. "payable at Mumbai.
(7)	Initial Security Deposit (ISD)	2% of awarded value of work including EMD
(8)	Date of issue of tender documents form the Bank's /	09.05.2019 to 17.05.2019 from Bank's website <a href="http://www.sbi.co.in">www.sbi.co.in</a> <Link> Procurement News.



	service provider's website.	
(9)	Last date, time and Mode of submission of sealed Technical Bid document along with EMD, Cost of tender document cum processing Fee and other documents as specified in the tender.	<p>The signed and stamped copy of Technical bid along with EMD, Tender processing fees should reach to us on or before 17.05.2019 up to 03:00 PM.</p> <p>Note: It is sole responsibility of the bidder to ensure submission of their bid by stipulated date and time at specified address.</p> <p>The SBIIMS Pvt. Ltd. shall not entertain bids received late due to any delay on account of delivery by the courier agency/speed post or any other mode for the reasons whatsoever.</p>
(10)	Address for submission and opening of Technical bid.	SBI, Local Head Office, 3rd floor, C-6, G-Block Synergy Building, Bandra- Kurla Complex, Bandra (East), Mumbai-400 051.
(11)	Last date & time for submission of online price bid.	<u>19.05.2019 by 3.00 PM</u>
(12)	Last date & time for opening of online price bid	<u>19.05.2019 by 3.30 PM</u>
(13)	Submission of Online indicative price bid and reverse Price Bid (only to those bidders who qualify in Technical Bid.)	Date and time will be intimated and Service Provider's portal <a href="https://tenderwizard.com">https://tenderwizard.com</a>
(14)	Date and time for opening of Online Price Bid of qualified bidders.	Date and time will be intimated and Service Provider's portal <a href="https://tenderwizard.com">https://tenderwizard.com</a>
(15)	Validity for Offer	3 (Three) Months from the Date of Opening of Price-Bid
(16)	Commencement of Work	10 <sup>th</sup> Day from the date of receiving of Work Order
(17)	Defects Liability Period	12 Months (Twelve months)
(18)	Period of Honoring Payment Certificate	30 Days from the date of receipt of bill.
(19)	Insurance	As per Insurance clause of the Tender Document.
(20)	Liquidated Damages for Delay	0.5 % Per week subject to total amount of 5% of Contract Value.

21. Tenders can be downloaded from the bank's website [www.sbi.co.in](http://www.sbi.co.in) (link) <Procurement News>. It shall be responsibility of the contractor to arrange and ensure that all pages of technical and financial bid are properly bound separately. Tenders in loose pages may be disqualified.

22. The contractor shall sign and stamp each page of the tender document thereby ensuring the number and sequence of all pages.



23. No conditions other than mentioned in the tender will be considered, and if given they will have to be withdrawn before opening of the price-bid.

24. The SBIIMS Pvt. Ltd. reserve their rights to accept or reject any or all the tenders, either in whole or in part without assigning any reason(s) for doing so and no claim / correspondence shall be entertained in this regard.

25. Tenders received without EMD and Cost of Tender Documents shall be summarily rejected and such tenders shall not be allowed to participate in the online price bidding process.

26. In case the date of opening of tenders is declared as a holiday, the tenders will be opened on the next working day at the same time.

27. SBIIMS Pvt. Ltd. has the right to accept / reject any / all tenders without assigning any reasons and no correspondence shall be entertained in this regard.

Yours Faithfully,

**For & On-behalf of SBI Infra Management Solutions Pvt. Ltd.**



## **SAMPLE BUISNESS RULE DOCUMENT**

### **BUISNESS RULE DOCUMENT OF ONLINE E-TENDERING FOR SUPPLY OF LIGHT FITTINGS AT DOSTI PINNACLE GROUND FLOOR, WAGLE INDUSTRIAL ESTATE, THANE (WEST).**

#### **(A) BUSINESS RULES FOR E-TENDERING / REVERSE AUCTION**

Against this Enquiry for the subject item/system with detailed scope of work as per our specification, SBIIMS ON BEHALF OF SBI may resort to "E-TENDERING" i.e. ON LINE on INTERNET.

1. All the bidders are requested to ensure that they have a valid digital signature certificate well in advance to participate in the online event.
2. For the proposed e-tendering, only OEMs or their authorized dealers / distributors of the approved makes of light fittings can apply.
3. SBIIMS will engage the services of a service provider who will provide all necessary training and assistance before commencement of on-line bidding on Internet.
4. Business rules like event date, closing and opening time etc. also will be communicated through service provider for compliance.
5. Vendors have to send the mail the compliance form in the prescribed format (provided by service provider) before start of E-tendering. Without this the vendor will not be eligible to participate in the event.
6. E-tendering will be conducted on schedule date & time.
7. At the end of E-tendering, the lowest bidder value will be known on the network.
8. **The lowest bidder has to send through email the duly signed filled-in prescribed format as provided on case-to-case basis to SBIIMS. through service provider within 24 hours of E-tendering/E-Reverse Auction without fail.**
9. In case SBIIMS decides not to go for E-tendering/E-Reverse Auction procedure for this tender enquiry, the price bids and price impacts, if any already submitted and available with SBIIMS shall be opened as per SBIIMS standard practice.
10. **The E-tendering will be treated as closed only when the bidding process gets closed in all respects for the item listed in the tender.**

#### **(B) Terms & conditions of E-tendering:**

SBIIMS shall finalize the Tender through e-tendering. SBIIMS has made arrangement with M/s. Antares Systems Limited., who shall be SBIIMS's authorized service provider for the same. Please go through the guidelines given below and submit your acceptance to the same along with your Commercial Bid:-

1. Computerized E-tendering shall be conducted by SBIIMS through M/s. Antares Systems Limited.
2. M/s. Antares Systems Limited shall arrange to train your nominated person(s), without any cost to you. They shall also explain you all the Rules related to the E-tendering. You are required to give your compliance on it.



3. **BIDDING CURRENCY AND UNIT OF MEASUREMENT:** Bidding will be conducted in Indian currency & Unit of Measurement will be displayed in Online E-tendering.
4. **BID PRICE:** The Bidder has to quote the rate online in the SBIIMS specified format only.
5. **VALIDITY OF BIDS:** The Bid price shall be firm for a period specified in the tender document and shall not be subjected to any change whatsoever.
6. If no bid is received within the specified date & time, SBIIMS, at its discretion, may decide to /scrap the e-tendering process / proceed with conventional mode of tendering.
7. **LOG IN NAME & PASSWORD:** Each Bidder is assigned a Unique User Name & Password by M/s. Antares Systems Limited. The Bidders are requested to change the Password after the receipt of initial Password from M/s. Antares Systems Limited. All bids made from the Login ID given to the bidder will be deemed to have been made by the bidder.
8. **BIDS PLACED BY BIDDER:** Bids will be taken as an offer to execute the work as specified. Bids once made, cannot be cancelled / withdrawn and the Bidder shall be bound to execute the work as per scope of work mentioned in the tender and at the quoted bid price. In case either backs out from their quote or failed to execute the work within the specified or leave the job incomplete, SBIIMS/SBI shall be free to take action against the bidder as deemed fit including forfeiting their EMD/ISD/ASD and to de-panel such contractor from the panel of SBIIMS.
9. At the end of the E-tendering, the decision of SBIIMS regarding award of Contract shall be final and binding to all the Bidders.
10. SBIIMS shall be at liberty to cancel the E-tendering process / tender at any time, before ordering, without assigning any reason.
11. SBIIMS M/s. Antares Systems Limited. Ltd shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause.
12. Other terms and conditions shall be as per techno-commercial offers and other correspondences till date.
13. Bidders are required to submit their acceptance to the terms & conditions / modality (Technical bid) given above before participating in the e-tendering.
14. **E-TENDERING WINNER:** At the end of the E-tendering then, SBIIMS will evaluate all the bids submitted and will decide upon the winner.
15. **OTHER TERMS & CONDITIONS:**
  - The Bidder shall not involve himself or any of his representatives in Price manipulation of any kind directly or indirectly by communicating with other suppliers / bidders.
  - The Bidder shall not divulge either his Bids or any other exclusive details of SBIIMS to any other party.
  - SBIIMS decision on award of Contract shall be final and binding on all the Bidders.



- SBIIMS along with M/s. Antares Systems Limited can decide to extend, reschedule or cancel any E-tendering.
- M/s. Antares Systems Limited shall not have any liability to Bidders for any interruption or delay in access to the site irrespective of the cause.
- M/s. Antares Systems Limited is not responsible for any damages, including damages that result from, but are not limited to negligence. M/s. Antares Systems Limited will not be held responsible for consequential damages, including but not limited to systems problems, inability to use the system, loss of electronic information etc.

N.B.

- All the Bidders are required to submit the Process Compliance Statement (Annexure II) duly signed to M/s. Antares Systems Limited, Bangalore.

### **PROCESS COMPLIANCE STATEMENT (ANNEXURE II)**

*(The bidders are required to print this on their company's letter head and sign, stamp before emailing)*

To,  
M/s. Antares Systems Limited,  
# 24, 3rd Stage, 4th Block,  
Basaveshwaranagar, Bangalore- 560 079.  
Tel: 080-4935 2000. Mobile no. 7980042472/835693287  
Email: [manojkumar.d@antaressystems.com](mailto:manojkumar.d@antaressystems.com)

### **AGREEMENT TO THE PROCESS RELATED TERMS AND CONDITIONS FOR THE ONLINE E-TENDERING BUSINESS RULE DOCUMENT OF ONLINE E-TENDERING FOR SUPPLY OF LIGHT FITTING AT GROUND FLOOR, WAGLE INDUSTRIAL ESTATE, THANE (WEST).**

Dear Sir,

This has reference to the Terms & Conditions for the E-tendering mentioned in the Tender document  
This letter is to confirm that:

- 1) The undersigned is authorized representative of the company.
- 2) We have studied the Commercial Terms and the Business rules governing the E-tendering as mentioned in RFP of SBIIMS as well as this document and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the E-tendering tool and have understood the functionality of the same thoroughly.
- 4) We confirm that SBIIMS and Antares Systems Limited shall not be liable & responsible in any manner whatsoever for my/our failure to access & bid on the E-tendering platform due to loss of internet connectivity, electricity failure, virus attack, problems with the PC, any other unforeseen circumstances etc. before or during the E-tendering and E-reverse auction event.
- 5) We also confirm that we have a valid digital signature certificate issued by a valid Certifying Authority.
- 6) We, hereby confirm that we will honour the Bids placed by us during the E-tendering process.

With regards,

Date:

Signature with company seal



Name:

Company / Organization:

Designation within Company / Organization:

Address of Company / Organization:

Scan it and send to this Document on -----

## **SECTION – 1**

### **INSTRUCTIONS TO THE TENDERERS**

#### **1.0 Scope of work**

Sealed Tenders are invited by SBIIMS on behalf of SBI for supply of light fittings.

#### **1.1 Site and its location**

The light fittings to be supplied at SBI RACPC, DOSTI PINNACLE GROUND FLOOR, WAGLE INDUSTRIAL ESTATE, THANE (WEST).

#### **2.0 Tender documents**

- 2.1 The work has to be carried out strictly according to the conditions stipulated in the tender consisting of the following documents and the most workmen like manner.

##### **Instructions to tenderers**

##### **General conditions of Contract**

##### **Priced bid A**

- 2.2 Complete set of tender documents including relative drawings can be downloaded from the website [www.sbi.co.in](http://www.sbi.co.in)
- 2.3 The tender documents are not transferable.

#### **3.0 Site Visit**

- 3.1 deleted

#### **4.0 Earnest Money**

- 4.1 The tenderers are requested to submit the Earnest Money of **Rs. 7,500.00 (Rupees Seven Thousand five hundred Only) by means of Demand Draft / Pay Order** from any Scheduled/ Nationalized Bank drawn in favour of **SBI Infra Management Solutions Pvt. Ltd.** and payable in **Mumbai**.
- 4.2 EMD in any other form other than as specified above will not be accepted. Tender not accompanied by the EMD in accordance with clause 4.1 above shall be rejected.
- 4.3 No interest will be paid on the EMD.
- 4.4 EMD of unsuccessful tenderer will be refunded within 30 days of award of Contract.
- 4.5 EMD of successful tenderer will be retained as a part of security deposit.

#### **5.0 Payments:**





No advance payment will be made. 100% payment will be made subject to satisfactory supply of material. 5% will be deducted and will be kept as retention amount for one year. It will be released after satisfactory completion of Defect Liability Period of one year.

#### **6.0 Security Deposit**

6.1 Total security deposit shall be 5% of contract value and will be deducted from the final bill and will be retained as retention. The amount will be released after successful completion of Defect Liability period of one year.

6.2 deleted

#### **7.0 Signing of contract Documents**

The successful tenderer shall be bound to implement the contract by signing an agreement and conditions of contract attached herewith within 30 days from the receipt of intimation of acceptance of the tender by the Bank. However, the written acceptance of the tenders by the Bank will constitute a binding agreement between the Bank and successful tenderer whether such formal agreement is subsequently entered into or not.

#### **8.0 Completion Period**

Time is essence of the contract. The work should be completed in all respect accordance with the terms of contract within a period of **30 days** from the date of award of work.

#### **9.0 Validity of tender**

Tenders shall remain valid and open for acceptance for a period of 90 days from the date of opening price bid. If the tenderer withdraws his/her offer during the value period or makes modifications in his/her original offer which are not acceptable to Bank without prejudice to any other right or remedy the Bank shall be at liberty forfeit the EMD.

#### **10.0 Liquidated Damages**

The liquidated damages shall be 0.50% per week subject to a maximum of 5% of contract value.

#### **11.0 Rate and prices:**

##### **11.1 In case of item rate tender**

11.1.1 The tenderers shall quote their rates for individual items both in words and figure. In case of discrepancy between the rate quoted in words and figures, the unit rate quantity in words will prevail. If no rate is quoted for a particular item the contractor shall not be paid for that item when it is executed.

The amount of each item shall be calculated and the requisite total is given. In case of discrepancy between the unit rate and the total amount calculated from multiplication of unit rate and the quantity the unit rate quoted will govern and the amount will be corrected.

11.1.2 The tenderers need not quote their rates for which no quantities have been given. In case the tenderers quote their rates for such items those rates will be ignored and will not be considered during execution.



- 11.1.3 The tenderers should not change the units as specified in the tender. If any unit is changed the tenders would be evaluated as per the original unit and the contractor would be paid accordingly.

The tenderer should not change or modify or delete the description of the item. If any discrepancy is observed he should immediately bring to the knowledge of the Architect/ SBIIMS.

- 11.1.4 Each page of the BOQ shall be signed by the authorized person and cutting or overwriting shall be duly attested by him.

- 11.1.5 Each page shall be totaled and the grand total shall be given.

- 11.1.6 **The rate quoted shall be firm and shall include all costs, allowances, loading unloading etc. except G.S.T, which shall be payable / reimbursed at actuals.**

- 11.1.7 The SBIIMS Pvt. Ltd. reserve their rights to accept any tenders, either in whole or in part or may entrust the work in phases or may drop the part scope of work at any stage of the project within its sole discretion without assigning any reason(s) for doing so and no claim / correspondence shall be entertained in this regard.

- 11.1.8 In case it is decided by the SBIIMS Pvt. Ltd. to drop one or more items from the scope of work at any stage of the project, the contractor shall not be entitled to raise any claim / compensation for such deleted scope of work. Also, the SBIIMS Pvt. Ltd. may consider issuing work order for various items in phases but within a reasonable time interval and the contractor shall be bound to execute the same within the stipulated time period and as per rates quoted by them in this tender without any claim for price escalation.

Signature of the Contractor with Seal



## **LETTER OF DECLARATION**

To,  
SBI, Local Head Office, 3rd floor, C-6, G-Block  
Synergy Building,  
Bandra- Kurla Complex, Bandra (East),  
Mumbai-400 051..

Dear Sir,

### **SUPPLY OF LIGHT FITTINGS AT UDYAN BUILDING AT SBI RACPC, DOSTI PINNACLE GROUND FLOOR, WAGLE INDUSTRIAL ESTATE, THANE (WEST).**

Having examined the terms & conditions, drawings, specifications, design relating to the works specified in the memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum and having acquired the requisite information relating thereto and affecting the quotation, I/We hereby offer to execute the works specified in the said memorandum within the time specified in the said memorandum on the item rate basis mentioned in the attached schedule and in accordance in all respect with the specifications, design, drawings and instructions in writing referred to in conditions of Tender, the articles of agreement, conditions of contract and with such conditions so far as they may be applicable.

### **MEMORANDUM**

(a)	Description of work	Supply of light fittings at SBI RACPC, DOSTI PINNACLE GROUND FLOOR, WAGLE INDUSTRIAL ESTATE, THANE (WEST).
(b)	Earnest Money	<b>Rs. 7,500/- (Rupees Seven Thousand five hundred only)</b> by means of Demand Draft / Pay Order from any scheduled Nationalized Bank drawn in favour of "SBI Infra Management Solutions Pvt. Ltd." and payable in Mumbai.
(c)	Time allowed for completion of work from the date of issue of work order.	<b>30 days</b> from the date of work order.

Should this tender be accepted, I/we hereby agree to abide by and fulfill the terms and provisions of the said conditions of Contract annexed hereto so far as they may be applicable or in default thereof to forfeit and pay to SBIIMS, the amount mentioned in the said conditions.

I/we have deposited Demand Draft / FDR for a sum of **Rs. 7,500/- (Seven Thousand five hundred only)** as Earnest money deposit with the SBI Infra Management Solutions Pvt. Ltd. Should I/we do fail to execute the contract when called upon to do so, I/we hereby agree that this sum shall be forfeited by me/us to SBI Infra Management Solutions Pvt. Ltd.

We understand that as per terms of this tender, the SBIIMS may consider accepting our tender in part or whole or may entrust the work of various buildings proposed (i.e. Institute Building, Staff Qtrs. And Director's Bungalow) in phases. We, therefore, undertake that we shall not raise any claim / compensation in the eventuality of Bank deciding to drop any of the building / buildings from the scope of work of this tender at



any stage during the contract period. Further, we also undertake to execute the work entrusted to us in phases on our approved rates and within the stipulated time limit without any extra claim for price escalation as provided for in Clause 11.1.7 and 11.1.8 "Instructions to Tenderers" of this tender.

We, hereby, also undertake that, we will not raise any claim for any escalation in the prices of any of the material during the currency of contract/execution/completion period.

Yours faithfully,

Signature of contractor  
With Seal

#### **4.0 TECHNICAL REQUIREMENTS**

##### **4.1 GENERAL REQUIREMENTS**

- 4.1.1 All fixtures shall be complete with accessories and fixings necessary for installation whether so detailed under fixture description or not
- 4.1.2 Fixture housing, frame or canopy shall provide a suitable cover for the fixture outlet box of fixture opening
- 4.1.3 Fixture shall be installed at mounting heights as detailed on the drawings or instructed on site by the client's representative
- 4.1.4 Fixtures and/or fixture outlet boxes shall be provided with hangers to adequately support the complete weight of the fixture. Design of hangers and method of fastening other than shown on the drawings or herein specified shall be submitted to the client's representative for approval
- 4.1.5 Fixture shall be completely wired and constructed to comply with the regulations and standards for Electric Lighting Fixtures, unless otherwise specified. Fixtures shall bear manufacturer's name and the factory inspection label unless otherwise approved
- 4.1.6 Wiring within the fixture and for connection to the branch circuit wiring shall be not less than 1.5 sq.mm. copper for 250 Volt application. Wire insulation shall suit the temperature conditions inside the fixture and wires bypassing the choke shall be heat protected with a heat resistant sleeve
- 4.1.7 Metal used in lighting fixtures shall be not less than 22 SWG or heavier if so required to comply with specifications or standards. Sheet steel reflectors shall have a thickness of not less than 20 SWG. The metal parts of the fixtures shall be completely free from burrs and tool marks. Solder shall not be used as mechanical fastening device on any parts of the fixture



- 4.1.8 Ferrous metal shall be bonderized and given a corrosion resistant phosphate treatment or other approved rust inhibiting prim coat to provide a rust-proof base before application of finish
- 4.1.9 Non-reflecting surfaces such as fixture frames and trim shall be Alluminium die cast
- 4.1.10 All the fixtures are as per the IP - 54 insulation class
- 4.1.11 Vendor shall be responsible for measuring the level of illumination after installation
- 4.1.12 Lighting fixtures shall be designed for minimum glare and for continuous operation under specified atmospheric condition
- 4.1.13 All fixtures shall be complete with accessories like power factor improvement capacitors, ballast, ignitor etc
- 4.1.14 Very flat aluminium section with colour highlighted, flush-integrated end caps of anodized aluminium. Visible construction  
height 18 mm. With integrated plastic cover of polycarbonate for protection of the indirect optic against soiling. Includes 2-point wire suspension in Y-form and transparent cable for suspension heights to 1500 mm.···01 White.

#### 4.2 **OPTICAL SYSTEM**

- 4.2.1 Direct/indirect distribution. 48 high power LEDs, integrated in separate mini LED louvers with UXP-Technology®. 8 LED segments as square cooling units integrated into the luminaire body ensure optimal thermal management, whereby six have indirect, symmetrical light distribution and the remaining 2 on the outside have direct, asymmetrical distribution. LED with constant colour stability and a colour rendering index of Ra > 80 over the complete service life.
- 4.2.2 Lighting fixture reflectors shall generally be manufactured from sheet steel of aluminium of not less than 20 SWG. They shall be readily removable from the housing for cleaning and maintenance without disturbing the lamps and without the use of tools. They shall be security mounted to the housing by means of positive fastening devices of a captive type.
- 4.2.3 Polystyrene egg-box type louvers shall be provided whenever specified. Appropriate captive type fixing devices shall be incorporated for securing these.

#### 4.3 **BALLAST**

- 4.3.1 Lighting fixtures ballasts shall be designed manufactured and supplied in accordance with the relevant standard IS 6616 and shall function satisfactorily under site conditions specified. The ballasts shall have a long service life and low power loss
- 4.3.2 Ballasts shall be mounted using self-licking, anti-vibration fixings and shall be easy to remove without removing the fittings
- 4.3.3 Ballast shall contain a thermosetting type compound not subject to softening or liquefying under any operating conditions or upon ballast failure. The ballasts shall be of the inductive and heavy duty type Filled with polyester of equivalent. They shall be free from



hum and protected from the atmospheres. Ballasts which produce a humming sound shall be replaced free of cost by the supplier. HPMV lamp ballasts shall be provided with suitable tapings

#### 4.4 **STARTERS**

- 4.4.1 Lighting fixtures starters shall be of the safety type (i.e. if the lamps fails to ignite at the first start, no further starting must be possible without attending to the tube light. Starters shall have bimetal electrodes and high mechanical strength
- 4.4.2 Starters shall be replaceable without disturbing the reflector or lamps and without the use of any tool. Starters shall have brass contacts and radio interference capacitor

#### 4.5 **CAPACITORS**

- 4.5.1 Lighting fixture capacitors shall have a constant value of capacitors and shall be connected across the supply of individual lamp circuits
- 4.5.2 Each capacitor shall be suitable for operation at 240 volts  $\pm$  5% single phase 50 Hz with a suitable value of capacitor so as to correct the power factor of lists corresponding lamp circuit to the extent of 0.98 lag
- 4.5.3 The capacitors shall be hermetically sealed preferably in metal container to prevent seepage of impregnating material and ingress of moisture

#### 4.6 **LAMP HOLDER**

- 4.6.1 Lamp holders for fluorescent tubes shall be of the spring loaded, low contact resistance, bi-pin rotor type, resistant to wear and suitable for operation at the specified temperature, without deterioration in insulation value, contact resistance of lamp holding quality. The shall hold the lamp in position under normal condition of shock and vibration
- 4.6.2 Lamp-holders for incandescent and HPSV lamps shall be of G.L.S. type manufactured in accordance with relevant standards and designed to give long and satisfactory service

#### 4.7 **LUMINAIRES**

- 4.7.1 LED suspended luminaire. With 6 LED indirect symmetrical segments, 2 LED segments with asymmetric direct distribution. With 48 high power LEDs, neutral white light colour, colour temperature 4000 K, colour rendering index  
Ra > 80, integrated in separate mini-LED louver with UXP technology. Luminaire luminous flux 6000 lm. Total power consumption 102 W. Construction height 18 mm. LED segments flush integrated into the square luminaire body ensure optimal thermal management. With integrated plastic cover for protection of optics against soiling. Luminaire body of flat aluminium profile, white, with colour highlighted, flush integrated end caps of anodized aluminium. Complete with 2-point wire suspension in Y-form and transparent cable for suspension lengths to 1500 mm. Protection rating IP20. With digitally dimmable electronic transformer, Dali.
- 4.7.2 Street light fixture shall be of single die cast aluminium housing with provision for the easy removal of gear box during maintenance. Acrylic bowl shall be linked to one end and



toggle shall be provided. Neoprene rubber and felt gasket shall be provided between acrylic bowl and fixture to prevent entry of insects and moisture

- 4.7.3 Industrial low bay fitting shall be of die cast aluminium housing, high purity Al. Reflector, acrylic cover and wire guard

4.8 **LAMPS**

- 4.8.1 LED Lamps shall be supplied and installed in all lighting fixtures furnished under this contract
- 4.8.2 Lamps used for temporary lighting service shall not be used in the final lamping of fixture units
- 4.8.3 LED Lamps shall be of wattage and type as shown on the drawings and schedules. Where not shown, the details shall be ascertained from the client before procurement
- 4.8.4 LED Lamps for permanent installation shall not be placed in the fixtures until so directed by the Client's representative, and this shall be accomplished directly before the respective portions are ready for occupation

**5.0 TRANSPORT, DELIVERY AND STORAGE**

The prices shall be **F.O.R. site basis** including packing & forwarding charges. The quoted price must include all the costs for necessary mode of transportation up to the final location of fixture or site store. The fixture should be supplied with required storage arrangements suitable for placing in open storage yard. All incidental expenses during transportation shall be part of quoted prices including **transit insurance**. The charges for loading and unloading of equipment at site should form part of offer.

**6.0 GUARANTEE AND WARRENTY**

The Bidder shall stand guarantee for the performance of entire fixtures and components for twelve (12) months from the date of commissioning or eighteen (18) months from the date of dispatch, whichever is earlier, as agreed up on and as reproduced in the purchase order within the tolerance specified or as permitted by the relevant standards for the equipment in his scope of supply. The Purchaser also reserves the right to use the rejected equipment or part thereof until the new equipment meeting the guaranteed performance is supplied by the Bidder.