

Original Estimate

Name of Work: Interior designing and allied works at Level-6 of Faculty Building Annexe at IIT Kanpur. (SH: Electrical Work)

S. No.	Description	Unit	Qty.	Rate	Amount
	LIGHT FIXTURES				
	1200mm Linear Light				
1	Supply, Installation Testing & commission of Suspended mounted Direct type LED luminaire in 50mm width & 1200mm Length with system power [25W ± 5%] , Available in Cool/Neutral White color temperature (6500K ± 355K) , made of extruded Aluminium housing and Snap fit type PDC Aluminium endcaps, Powder coated Corrosion Resistant Nano coating technology. The fixture is provided with flat UV stabilized PS Diffuser. High efficiency electronic driver with rated voltage of 140-270V, Power factor > 0.95 and THD < 5%, Inbuilt surge protection of 3 KV & additional SPD with 6KV protection, should have mis wiring, Over voltage & Short circuit protection. Driver should be maintenance-friendly with easy access to driver from top of the Luminaire. The Luminaire lumen output > 110 LPW & System efficacy of >1900 Lm , CRI of 80, IP20 Protection . The LEDs used have a life of 50000 burning hrs & Lumen maintenance as per L70. Comes with standard warranty of 2 Years. Luminaire performance & Safety :IEC 60598, IS 10322-5, IS 161-03/05/06/07, Surge : IEC 61000-4-5, EMC : EN 55015 IES, LM 79, LM 80, & TTC certificates will be provided from a NABL accredited lab. Necessary Certification: CE Certified, ROHS compliant, BIS certified (Make:PHILIPS (SP170P LED25S-6500) PSU or equivalent as per approved list of make)	Nos.	36	4660.00	167,760.00
	2400mm Linear Light				
2	Supply, Installation Testing & commission of Suspended mounted Direct type LED luminaire in 50mm width & 2400mm Length with system power [50W ± 5%] , Available in Cool/Neutral White color temperature (6500K ± 355K) , made of extruded Aluminium housing and Snap fit type PDC Aluminium endcaps, Powder coated Corrosion Resistant Nano coating technology. The fixture is provided with flat UV stabilized PS Diffuser. High efficiency electronic driver with rated voltage of 140-270V, Power factor > 0.95 and THD < 5%, Inbuilt surge protection of 3 KV & additional SPD with 6KV protection, should have mis wiring, Over voltage & Short circuit protection. Driver should be maintenance-friendly with easy access to driver from top of the Luminaire. The Luminaire lumen output > 110 LPW & System efficacy of >3700 Lm , CRI of 80, IP20 Protection . The LEDs used have a life of 50000 burning hrs & Lumen maintenance as per L70. Comes with standard warranty of 2 Years. Luminaire performance & Safety :IEC 60598, IS 10322-5, IS 161-03/05/06/07, Surge : IEC 61000-4-5, EMC : EN 55015 IES, LM 79, LM 80, & TTC certificates will be provided from a NABL accredited lab. Necessary Certification: CE Certified, ROHS compliant, BIS certified (Make:PHILIPS (SP170P LED50S-6500) PSU or equivalent as per approved list of make)	Nos.	3	9320.00	27,960.00
	LED ring Dia 900mm				
3	Supply of 900mm dia Pendent Mounted Ring LED. Fixture to be made of extrusion Aluminum housing in white finish with HET plastic diffuser. LED Used shall be SMD type with Minimum system Lumens 5100 @60W & efficacy 85lm/W,Life of fixture : 50000 burning Hrs. @ L70 Lumen maintenance, CCT of 4000/5700K (SDCM<=3), CRI Ra >=80, PF >0.95, THD<10%, operating Voltage Range of 150-270 V AC. Minimum Internal Surge Protection 2.0KV. Manufacturer shall have inhouse lab approved by NABL or ministry of science of govt of India. LM 79 and LM80 reports need to be submitted from a NABL/UL accredited lab to verify above parameters. Both the fixture and Driver should have separate BIS approval. Luminaire should have RoHS, EMI EMC as per IEC 61547, CISPR 15. (Make:PHILIPS (SP682P 60W-4000 PSU OC DIA900) or equivalent as per approved list of make)	Nos.	2	23985.00	47,970.00
	Stretch Fabric light				

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4	<p>Supply of DALI dimmable and tunnable Suspended LED stretch fabric Luminaire, with extruded aluminum housing delivering upto 3890lumen/sq m and it draws 55W/sq m maximum from standard 220-240V AC supply . Fixture offers excellent light output, long source life, high CRI, and energy efficiency, in a beautiful, clean plane of light. Industry-best quality of 80+ CRI and color consistency within a 3-step MacAdam ellipse provides a glare-free direct view luminaire, and abundant, uniform daylight illumination evenly lit across the entire task surface.The diffuser shall be Special translucent stretch fabric having good resistance properties - Flame retardant, Anti-bacterial, Anti-Fungal and Anti-Static, Impermeable to Water and steam for uniform and optimum light distribution. Fixture should have IP20, CCT 4000k, PF ≥ 0.95, THD≤10%, CRI 80 and drive should have Surge Protection upto 2KV and must be compatible with DALI 2.0 for both tuning and dimmable option. The LED Driver shall be easily available in India for repair and service. DALI 2 Driver must be of Fulham SP / Tridonic Prog / Osram OTI Make only with Part 251, 252 and 253 for energy measurement data. The luminaire shall be with following certifications: LM79 & LM80 issued by LED manufacture along with Photo Biological Safety Standard. Luminaire should have RoHS, EMI EMC as per IEC 61547, CISPR 15.</p> <p>(Make: Wipro LM98 (DALI) or equivalent as per approved list of make)</p>	Nos.	1	19542.00	19,542.00
	12w Recessed COB Lights				
	14W COB LED Downlight luminaire				
5	<p>Supply of 14W COB LED Downlight luminaire having 800 lumens, with cut-out (Φ) dia of 54mm and height of 150mm, suitable for pendant mounting. Luminaire shall be made up of white powder coated extruded Aluminium housing with inbuilt heat sink to provide better thermal management to enhance LED life.Suspension wire of 1.5m should be supplied with the luminaire. The luminaire should be equipped with the secondary optics of high efficiency reflector with clear glass to have precise light beam to cut down glare to UGR <19. LM 80-08 compliant LEDs from reputed makes such as Nichia/Cree/ Bridgelux/ Lumiled/ Philips should be provided. LEDs used in the product shall comply with EN 62471 for Photo-biological safety and certificate for the same from manufacturer shall be provided. The luminaire should be IP20 rated. The LED shall be compliant with LM80-08 standard with L70 life of 50000 Hrs tested at maximum current (Complete LM 80 test report for LED should be submitted for 10000 hrs of testing). The LEDs used should be with CCT of 4000 K and CRI of Minimum 80. LED Driver shall be Integrated type, Isolated, Constant Current operated driver with range 140-280V AC. Driver Efficiency > 80% & 2KV internal surge protection, Power factor greater than 0.95 and total harmonic distortion (THD) of less than 20% should be integral to the luminaire. Manufacturer shall have inhouse lab approved by NABL or ministry of science of govt of India. LM 79 and LM80 reports need to be submitted from a NABL/UL accredited lab to verify above parameters.</p> <p>Compliance to Indian Standards of IS10322 Part 5 / Sect 5:1967; 16105 : 2012; IS 16106 : 2012; IS 15885(Part2/Sec13) : 2012; IS 16108 : 2012,</p> <p>Cylindrical suspended light (Make:- Philips or equivalent as per approved list of make)</p>	Nos.	12	2700.00	32,400.00
	Strip Light				
6	<p>Supply of 50mtr IP65 flexible LED strip light made of silicon coated, Strip should have minimum efficacy at System level ≥100lumens/watt with nominal system lumens 900lm/mtr, Life of LED strip : 35000 burning Hrs. @ (ta 45 C) @L70 Lumen maintenance , CCT of 3000K, CRI Ra ≥80, an operating Voltage Range of 100 - 300 VAC, and surge protection of 3KV.</p> <p>(Make:Philips Marathon Rope Strip Light 120led per meter 9w/mtr or equivalent as per approved list of make)</p>	Mtr.	20	130.00	2,600.00

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	Controller-Strip Light				
7	Supply of Controller for Strip lights (Make:-Philips or equivalent as per approved list of make)	Nos.	20	343.00	6,860.00
	PIR Motion & Light Sensor				
8	Supply of BLE 5.0 AES 128 Bit encryption based, AC Powered Wireless PIR Motion & Light Sensor (0-2000 lux). Ceiling mounted with maximum height of 4m and maximum detection range of 14m dia at 4m mounting height. Device to device range 30m and Default range setting-(19-512lux) . System shall support easy commissioning and configuration via Mobile Application along with user and site management features. Optional Cloud Application must be available for control and monitoring of the devices along with analytics reports. Mobile Application shall have features of commissioning of the sensors along with setting step dim function, sensitivity levels and time day options. Device must have security key for commissioning and replacement for future. Device must have security key for commissioning and replacement for future. Dimension (D x H):89.8 x 107.7mm(+/-2) (Make:-Wipro WCS-IS-SNPAL or equivalent as per approved list of make)	Nos.	1	2330.00	2,330.00
	Wall Switch Controller- Stretch Fabric Ceiling Light				
9	Supply of BLE 5.2 AES 128 Bit encryption based wireless battery powered 8-button wall switch that controls ON/OFF, intensity and CCT of an individual or group of luminaires and scene setting. Operates on 220-240V AC input voltage in an ambient temperature of 0 to 50 deg celsius and device to device range 30m. System shall support easy commissioning and configuration via Mobile Application along with user and site management features. Optional Cloud Application must be available for control and monitoring of the devices along with analytics reports. Dimensio: 44.4 x 33.2 x 105mm(+/-2) (Make: Wipro ISEN-WCS-8BTN or equivalent as per approved list of make)	Nos.	1	31330.00	31,330.00
	Controller				
10	Supply of wireless IoT System having BLE 5.0 AES 128 Bit encryption based 32 child DALI controller , operates on 90-277 VAC, 50/60Hz, DALI 2.0 protocol. For DALI output, it provides 12-20V DC and 160mA max for 32 DALI devices. 0 - 100% dimming, device to device range 30m. Controller must control individually control standard DALI or Tunable DALI Drivers independantly or combination of both. System shall support easy commissioning and configuration via Mobile Application along with user and site management features. Optional Cloud Application must be available for control and monitoring of the devices along with analytics reports. Mobile Application shall have features of individual & group control for On/off/dimming/ colour tuneing / Scene Control / Animation etc. Device must have security key for commissioning and replacement for future. Dimension (L x W x H):70.9 X 45.4 X 26.1mm(+/-2) (Make: Wipro WCS-IS-DA32 or equivalent as per approved list of make)	Nos.	1	33456.00	33,456.00
	Occupancy Sensor				

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11	Supply of occupancy sensor powered by intelliscan technology(Occupancy & motion detection) which uses 5.6GHz low impedance antenna which cancels out the risk of radio interference. It will switch off the lights in a room or area when it is vacated and thus save energy. Sensor should have Light level optimisation with daylight harvesting and it should have ability to detect breathing & heartbeat of occupants for better funtion. Sensor can be mounted at a ceiling height of max 3.5mtr with a detection radius of 4m(minor movement detection), 5m(Major movement detection)and 4m(Breathing detection). Its smart daylight sensing technology offers additional saving through daylight override and daylight switching. (Make:-Philps or equivalent as per approved list of make)	Nos.	15	2330.00	34,950.00
	Fan				
	Ceiling Fan				
12	Supply, Installation, Testing and Commissioning of ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. metal(Aluminiumalloy) blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, steel/Al body Power Factor not less than 0.9, Service Value 63 DELHI SCHEDULE OF RATES (E&M)-2025 (CM/M/W) minimum as below, 350 RPM (tolerance as per IS : 374-2019), THD (Total Harmonic Distortion) less than 10%, suitable for operation with regulator for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 0C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC supply, Ceiling Fan compliant to IS 374:2019 fan i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required.				
	600 mm	Each	7	2741.00	19,187.00
	Wall Fan (400mm)				
13	Supplying, installing, testing and commissioning of wall bracket fan of 400 mm, complete with moulded propeller type blades, and accessories suitable for operation on 230 / 240 Volts, 50 Hz, single phase, A.C. supply.	Each	12	2741.00	32,892.00
	Total				459,237.00