

## **Specification for Underwater LED based Light (for Nuclear Pool) & Driver cum Power Supply Module**

The Light fittings are intended for under water 10meter below surface application, in 10R radiation field, for industrial precision work. The light fittings shall deliver high quality cool day light. The offered fittings shall be an established product and proven for the intended application. It shall have life of 70,000 operating hours upto 70% lumen reduction. It shall conform to the specifications as follows:

These Luminaries are required for one to one replacement of existing Binay LED under water light fittings driven by Binay LVDC-BUS power supply module.

<b>Sr. No.</b>	<b>Particulars</b>	<b>Tender Specification</b>
1	Make & Model	Binay Opto Electronics Pvt Ltd Model: Bn-25W- Undwtr-NclrPI- DCB24-BRC2018-MD1 Powered by LVDC-BUS PSM Unit
2	Application	Suitable for Precision work at 10 meter below surface of water, in Nuclear Pool.
3	Type of Light	Cool day light
4	Material & Installation	Material : Stainless Steel Suitable for mounting on the SS stand
5	<b>Electrical (Driver Circuit cum Power Supply Module) LVDC-BUS PSM Unit</b>	
	Drive Circuit	<b>Non integrated type</b> , enclosed in box, to be kept out of water, mounting on wall
5.1	Input Voltage to Drive Ckt	100-270V AC
5.2	Output Watts	700W, Suitable for 12 Luminaries
5.3	Output Voltage of Drive circuit	24V DC (Nominal)
5.4	Cable from Drive to Fitting	15 metre
5.5	LED Luminaries Protection	The drive circuit shall protect LED luminaries from electrical disturbances, surges, spikes and electrical faults.
6	<b>Optics</b>	
6.1	Light Source	Power LEDs
6.2	LED Make	Philips/ HP/ PowerLED/ Nichia Corp/ Binay optics
6.3	Lumens out put	2000 Lumen
6.4	Colour	Cool day light
6.5	CRI	70
6.6	Beam Angle	40 degree
7	LED Luminaire Enclosure IP	Suitable for continuous operation 10 meter underwater
8	Submergence under water	10 meters
9	Cable Specification	3C X 2.5 sqmm copper conductor, flexible cable, sealed at luminaire

10	Environment-Radiation Field Water temperature	The luminaries shall be suitable for working in radiation field of 10R for the expected life. Water temperature varies from 30°C to 50°C
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### **Testing**

The LED fitting shall be tested before delivery for verification of the performance. The test report shall be generated and sent to purchaser.

### **Packing and Shipping**

All the materials shall be suitably packed and protected so as not to suffer deterioration, damage or breakage during transit from supplier's works to purchaser.

Each package shall be stenciled in bold character with indelible paint, protected with shellac to indicate shipping marks package numbers, kind of packages, contents, dimensions, legal and gross weights in kgs and other necessary details to identify the particular components shall be given.

### **Warrantee**

All the material shall have guarantee against any manufacturing deficiency/defect for 12 months from date of delivery.