**(1) 15W LED STREET LIGHT**

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| **Parameter** | **Specifications** | **Applicable IS** |  |
| Total System Wattage  (Luminary Wattage) | Max. 15W |  |  |
| LED Assembly | SMD LED Chips mounted on Copper MCPCB where  the base metal is of Aluminum | 16106 | 900 nos |
| LED Drive Current | 350 – 1000 mA |  |  |
| Luminary Housing | Suitable for side entry mounting for 25mm to  40mm OD pipe bracket complete with bracket &  locking bolt |  |  |
| Luminous Flux | Minimum 1300 lumens | 16106 |  |
| Luminary Angle | Fully Cut-Off |  |  |
| Light Distribution | Batwing |  |  |
| **NOTE** | **Rate To be give for 2 Years replacement Warranty** |  |  |
|  | **AND** |  |  |
|  | **Rate To be give for 5 Years replacement** |  |  |

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| **Parameter** | **Specifications** | **Applicable IS** |
| Light Source | SMD LED Chip | LM80 / 16106 |
| **LED Make** | **Highest performing high-density**  **discrete LEDs of Nichia / CREE / Osram / Philips / LG / Samsung / Refond / Everlight / Seoul / Bridgelux Only** |  |
| LED Efficacy | Minimum 130 lm/W | Efficacy at actual LED  driving condition |
| LED Wattage | ≤ 1W |  |
| Lamp Life | Minimum 50,000 hours | 16102-2 & 16106 |
| CCT | 5700 – 6500 °K | 16102-2 CCT range as per standard or ANSI |
| CRI | Minimum 80 | 16102-2 & 16106 |
| Lamp Body | Should have aluminium inserts to dissipate the  heat to ambient air and block any accumulation of dust  The anti glare diffuser shall not be easily removable from lamp body |  |
| Total Harmonics  Distortion | < 20% | 16102-2 |
| Driver Efficiency | ≥ 85% | IS 15885 |
| Power Factor | Minimum 0.9 | 16102-2 |
| Operating Voltage | 100 – 300V AC |  |
| Srge Voltage | Withstand 2.5 Kv |  |
| Working Temperature | -10 to 50 °C |  |
| Working Humidity | 10% - 90% RH |  |
| Safety Requirement | All Test | 16102-1 |
| Adequate Dielectric  Protection | Isolation- Minimum 1.5 kV dielectric resistance in  the design to prevent any possibility of electric shock to user from leakage or short circuit current from lamp body |  |
| Other Requirements | Quick Start, No Flicker, No Noise  The Drivers should meet BIS standards |  |

**SELF BALLASTED 9W LED BULB FOR DOMESTIC USE**

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| **Parameter** | **Specifications** | **Applicable IS** |
| Lamp Wattage | Max. 9W | 16102-1 & 16102-2 |
| Bulb Efficacy | ≥ 100 lm/W | 16102-1 & 16102-2 |
| Base Cap | B22d |  |
| Beam Angle | ≥ 240° | 16102-2 |
| Outer Body Luminary  Temperature | Max. 60C (±5) at 30C ambient Temperature |  |
| Ingress Protection | IP20 |  |
| Luminous FlGx | Minimum 800 lumens | 16102-2 & 16106 |
| Lumen Maintenance @  25°C ambient (±2°C) | Minimum 80% after 6000 hours | 16102-2 & 16105 |
| Rated Voltage | 140 – 270V AC |  |