

STUNNING DESIGN



RESEARCH AND DEVELOPMENT

The Research and Development faculty of RST is the source of technology for business activities of the Company.

The key Research and Development functions include:

- Development of new product improvement of existing products.
- Continuous up gradation and Introduction of new manufacturing process/technologies.
- Transfer of the R&D initiatives to production with demo of actual production runs.
- Benchmarking competitive product performance and reliability for optimisation of relevant RST products performance/process.
- Undertake Failure Mode Effect Analysis (FMEA).
- Provide process training to production personnel.



PRODUCT TESTING TECHNIQUES & EQUIPMENTS

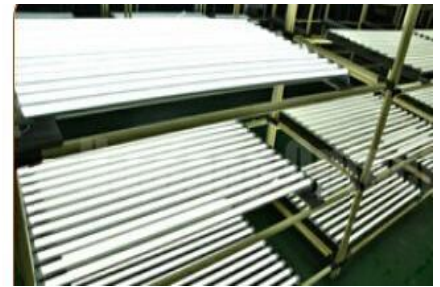
Using LPCE-1 (Lisun Group) Integrating Sphere Spectrophotometer Test System photometric and colorimetric measurement of luminaries is performed, the measured data meets the requirements of CIE and IES LM-79 for the measurement of photometry and colorimetry.

LPCE-1 Integrating Sphere Spectrophotometer Test System measure parameters like:

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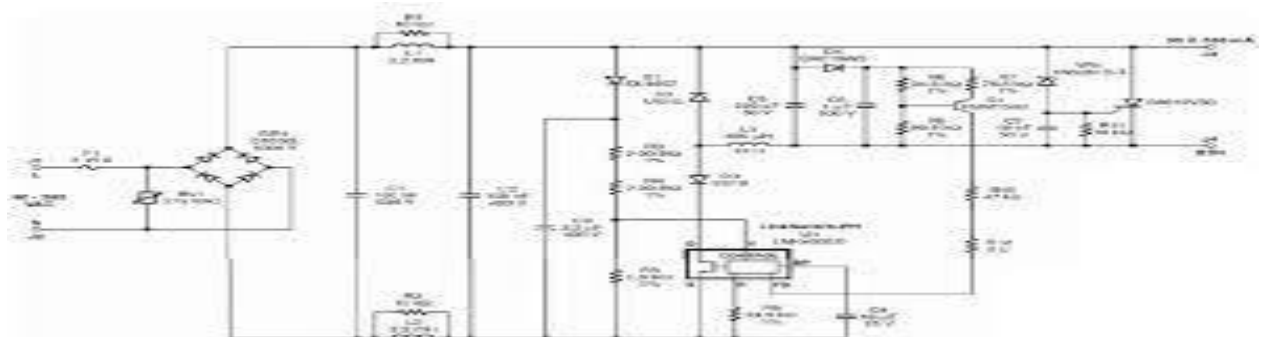
- CCT (Correlated Colour Temperature), CRI (Colour Rendering Index), Chromaticity Coordinates, Colour differences, peak wavelength;
- Luminous flux, luminous power, luminous flux efficiency (Lumen per Watt);
- Electrical Parameters like Power Factor, Current, Voltage, Power, etc.

LED Products are made to go through Oven Test to check the reliability of products at high temperatures. LEDs, casing and driver circuit undergo tests in switched on mode at 80 degree Celsius for 500 continuous burning hours.



LED Products are also put through Life Test of 5000 – 10000 hours for testing lumen maintenance and reliability of products. Along with Life Test; products are tested with continuous ON-OFF relay based 10 seconds ON and 5 seconds OFF switching cycle test at various voltages ranging from 90V AC to 300V AC.

SPECIAL DESIGN & ELECTRICAL PROTECTIONS



All products are designed keeping in mind Indian operating conditions like temperature, humidity and other factors & conditions.

Drivers are being designed and manufactured having Protections like Over Current, Over Voltage, Short Circuit, Thermal Shutdown, Open Load, EMI and EMC. All the drivers have built-in constant current limiting circuit and active PFC.

The drivers are designed and manufactured with efficiency of greater than 80% and spike protections of 2KV to 10 KV.

Performance of these drivers is exceptionally good under extreme Indian conditions, in turn providing a reliable and robust LED light