



# LED Lighting

HPL is one of the few manufacturers in the country that has pretty much backward integrated state-of-the-art manufacturing with two manufacturing facilities in Gurgaon & Jabli and one each in Kundli, Sonapat and Gharaunda. R&D centres in Gurgaon and Kundli, facilities are approved by the Department of Scientific and Industrial Research (DSIR) & Ministry of Science and Technology.

LED lighting is much more Eco-Friendly and are up to 80% more efficient than traditional lighting such as fluorescent and incandescent lights. What we are seeing is that people are realising these benefits and are moving towards LED lighting realising that. The market has witnessed a phenomenal growth over the past few years and the trend is expected to continue in the coming years. Further, there is an increased focus by the Government towards energy conservation and efficiency, boosting the demand for LED lights. The Government of India has expressed increased interest in converting existing street lights into LED and this is expected to increase demand for LEDs in coming years.

India is an attractive market for both domestic as well as international LED players. The reason for this is the benefit that they provide in terms of energy saving and conservation. The new applications which are coming are related to connectivity, better controls, and application of sensors and moving towards wireless technology. When it comes to an individual, what they are looking for is more convenience and comfort, apart from the cost. The efforts towards wireless technology and application of controls which help in controlling the light intensity are things which will benefit them. For a commercial outlet,

the aspects related to energy saving, conservation and cost benefits become supreme. Here as well, connectivity and control will help in providing customised Lighting solutions.

## What is LED?

LED is a two-lead semiconductor light source which emits light when activated. This effect is called electroluminescence and the colour of the light is determined by the energy band gap of the semiconductor. LEDs find application in environmental and task lighting, with several advantages over incandescent light sources including lower energy consumption, longer lifetimes, improved physical robustness, smaller sizes, and faster switching.

LEDs may be broadly classified into three categories, (a) miniature LEDs, used as indicators, (b) mid-range LEDs, used in light panels, emergency lighting, auto tail lights and (c) high-power LEDs, used for lighting purposes. LEDs for lighting applications constitute the major market, although LEDs are also used in various forms across industries such as automotive lighting, railway signals, backlighting, displays and signage and medical appliances.

LEDs are now used in applications as diverse as aviation lighting, automotive headlamps, advertising, general lighting, traffic signals, camera flashes,

and even LED wallpaper. However, LEDs also find applications in various forms across industries, including automotive lighting, railway signals, backlighting, displays and signage and medical appliances.

Due to the low domestic manufacturing capabilities, over 75% of LED lighting products are imported and the remaining 25% accounts for low value-add assembly activity. More than 10% of the LED lights assembled in India are exported to countries like Europe, the United States, Australia, Asia-Pacific, the Middle East, Latin America and South Africa.

### HPL stepping forward as leader in the category

HPL manufactures a wide range of LED lamps (including down-lighters), luminaries and LEDs at varied wattages and had a huge market share and a 5th largest LED manufacturer in fiscal 2015 in the market for LED lamps. The company provides its customers energy efficient indoor commercial and domestic luminaries with superior design. Their lighting products are suited for use as task lighting, which is intended to be functional and concentrated, HPL LED Glo bulb which not only saves electricity but a revolutionary product in terms of design, longer life and best suitable for accent lighting, which is intended primarily for decorative purposes. The LED lamps have been certified to be in conformity with the Indian Standard Index by the BIS standards under compulsory registration order by MEITY- Ministry of Electronics & Information Technology.

#### HPL's Led Lighting range:

- Consumer Lighting
- Industrial Lighting
- Commercial Lighting
- Outdoor Lighting

HPL is one of the few manufacturers in the country that has pretty much backward integrated state-of-the-art manufacturing with two manufacturing

facilities in Gurgaon & Jabli and one each in Kundli, Sonapat and Gharaunda. R&D centres in Gurgaon and Kundli, facilities are approved by the Department of Scientific and Industrial Research (DSIR) & Ministry of Science and Technology. These have in-house tool rooms and testing facilities and are manned by 105 engineers. HPL has gained an indispensable presence in electronics manufacturing space due to our 20-year experience in manufacturing. Nowadays Technology is moving at a faster pace than at any other time. HPL endeavours to design and develop the most technologically advanced and innovative products as per the existing consumer needs.

Technologies which help to save energy while maintaining the current requirements, which saves cost while also ensuring modern aesthetic for a compact & sleek design. In this regards HPL Electric are working continuously to provide the most innovative products, providing best energy saving and conservation options while providing the best in class to the Indian Markets.

#### Market for LED Lighting in India

The GDP in India is forecasted to be 7.62% between 2016 and 2020, driving economic growth and improving spending capacity of consumers. The growing interest in newer technologies and solutions, increasing awareness created by LED suppliers through product promotion and advertising is expected to increase adoption of LEDs.

Further, large scale promotion of energy efficiency by the Government has fuelled growth of the LED market in India, resulting in the residential segment adopting LED lighting, which offers higher energy savings of around 60-75%, as compared to older technologies namely, CFL, incandescent, metal halides or sodium vapour lamps. Moreover, growing interest in intelligent and smart lighting is expected to change market dynamics with the announcement for the establishment of smart cities, which will increase demand for LED lighting, based on intelligent and connected infrastructure. Further, under the

'Make in India' initiative, 100% foreign investment under the automatic route has been permitted in construction, operation, and maintenance in specified rail infrastructure projects, which is expected to fuel demand for LED products for local consumption.

The Indian LED lighting market is expected to reach ₹ 31,010 crores in 2020, growing at a CAGR of 62% between 2016 and 2020. The Government of India's increased interest in converting existing street lights into LED is expected to increase demand for LEDs in coming years and the deteriorating power situation across the country and limited budget allocation for starting power projects have directed the Government's focus towards 'energy conservation and efficiency'.

The global LED lighting market is expected to cross revenues of ₹ 150,000 crores in fiscal year 2015 with a market penetration of over 30% in the overall general lighting market space. The global LED lighting market is likely to grow at a CAGR of over 40% until 2020.

#### Government measures and initiatives to improve market demand and manufacturing ecosystem

The Government has announced policies such as the Modified Special Incentive Package Scheme to encourage and subsidize investment in indigenous value addition. The Bureau of Energy Efficiency ("BEE") and EESL, working with electricity distribution companies, have developed a business model to sell subsidized LED lights to households at ₹ 10 against the market retail price of approximately ₹ 400. All existing Government schemes to distribute CFL lamps are being modified for distribution of LED lamps. The Government of India has been making efforts to adopt LEDs for street lighting in key cities and also for architectural lighting applications for national monuments. The Ministry for Renewable Energy, Government of India and the BEE for municipalities and local bodies have also been driving initiatives such as distribution of solar LED lanterns in villages to promote energy-efficient lighting in the country. ■

