Light of Opportunity

Fuelled by government initiatives and led by LED, the lighting industry in India has bright prospects.

BY BINITA SINGH
On December 20, 2013, the 68th session of the UN General Assembly had declared that the world would celebrate 2015 as the International Year of Light and Light-based Technologies (IYL 2015). The importance of light in our daily lives cannot be overemphasised. It is vital and crucial to human endeavour and cutting across the disciplines of science, has contributed to sustainable living solutions and solving of global challenges. Light science and its applications and light technologies have touched and revolutionised almost every field of science—from medicine to communication via the internet. It is central to forging links between the global society, cutting across cultural, political and economic diversities. The year will be used as unique opportunity to raise global awareness through IYL 2015 programmes of the UN.

India is uniquely poised to tap the opportunities in IYL 2015 backed by innovation, government initiatives and market sentiment. Aniket Pargaonkar, Project Manager, ValueNotes, a company specialising in management of competitive and market intelligence, information and research, summarises India’s edge saying, “The Indian lighting industry is at par with global competition when it comes to technology and innovation.” Most major players in the lighting industry in India, including Philips India, Havells and Crompton Greaves are backed by strong R&D, with their technology centres continuously engaged in developing “more and more energy efficient lighting technologies at affordable prices”. India is globally recognised as one of the cheapest R&D destinations in the world with a highly talented resource pool and Pargaonkar points to the growing number of R&D bases being set up by a large number of MNCs in the lighting space in the country. For instance, in 2008, Philips inaugurated a global R&D centre for lighting in India. This was its third such unit in the world. The facility, situated in Noida, not only caters to the needs of the Indian market but also to the Asia Pacific, European and North American markets. Philips’ other R&D centres are located at Eindhoven in the Netherlands and in Shanghai, China. Notably, in 2014, the LED lighting division of the company witnessed a growth of 48 per cent year on year and its synergistic ties with ABB are expected to increase its stake further.

Synchronised Show
Growing at a CAGR of ~16 per cent till 2020, the Indian lighting industry is forecast to reach ₹367 billion by that year. Currently, the industry in India is valued at around ₹152 billion. Shyam Sujan, Secretary General, Electric Lamp & Component Manufacturers’ Association of India (ELCOMA), calls the Indian lighting industry “proactive” in its outlook and in its endeavour to manufacture all lighting products within the country. The lighting industry in the country is dominated by organised players, who command an estimated 60–70 per cent of the market with a portfolio of high quality products and strong distribution channels. Key players in the list include Philips, Surya Roshni, Bajaj Electricals, Crompton Greaves, Osram, Havells, Wipro, Halonix, GE, Anchor, Indo Asian, HPL, Orient, Eveready, SYSKA, Oreva and Moser Baer. The last four along with
Havells, GE and OSRAM are primarily focussed on the LED market. The different light options available in India include lamps comprising GLS, FTL, CFL and other lamps, luminaires including high mast, and accessories, components and control gears. According to ELCOMA, the market size of each segment in 2013 was ₹5,011 crore, ₹5,597 crore and ₹1,071 crore respectively. The total light market, excluding LED, in 2013 was valued at ₹11,679 crore, while LED accounted for ₹1,825 crore. The total value of the lighting industry in the year under consideration was ₹13,504 crore.

**LED Leads the Race**

“CFL is history now,” remarks Sujan, explaining the contours of the changing lighting industry and attributes this decline to the entry of LED lights. In 2014, with targetted initiatives and major promotion, the industry reached more than 500 million pieces of CFL as against 20 million pieces in 2005. India has a CFL manufacturing capacity of more than 1 billion pieces. “But after the introduction of LED and the government’s plans to replace all lighting points with LED, the scenario will change in next two to three years,” adds Sujan. Currently, CFLs constitute about 17 per cent of the lighting industry in India.

The Government of India as well as industry association ELCOMA have actively promoted the usage of CFL lamps over incandescent lamps as they are more energy efficient. The share of CFLs in the lighting industry in the country grew gradually as their prices fell with increasing supply. Consumers also became more energy conscious with rising levels of awareness. In this context, the Government of India’s Bachat Lamp Yojana aimed at reducing the cost of CFLs sold to end users and promoting CFL usage in India is worth mentioning here. Executed through the Bureau of Energy Efficiency (BEE), the programme’s objective is to provide CFLs at the cost of incandescent light bulbs. “The difference in the cost will be covered by the sale of Certified Emission Rights under the Clean Development Mechanism of the Kyoto Protocol,” explains Paragaonkar. However, the CFL segment is facing several challenges now. Competition from the more energy efficient LED lamps and the environmental threat associated with the disposal of CFL lamps are the two major constraints, while the expected reduction in the cost of LED lamps will further strain the industry.

The entry of LED lighting has changed the domestic manufacturing scenario, says Sujan, as the industry is now importing LED components and finished goods. “India does not have the requisite technology on LED currently, and therefore, depends on imported technology,” he explains. Major players in the LED space are working hard on their LED R&D and strategy and Sujan is confident that “this is going to change the scenario.” The government too is trying to turn around the over-reliance on LED imports with policies to encourage both foreign and domestic manufacturers to establish LED fabs under the Modified Special Incentive Package Scheme (MSIPS) to provide cash grants of up to 20 per cent of the cost of project to companies that set up a semiconductor fab in India subject to a minimum initial investment of approximately US$ 50 million. Another incentive is the Preferred Market Access Policy of the Government of India, under which it provides 50 per cent of the tendered quantity of LED products procured by the government to companies that do at least 50 per cent value addition through manufacturing in India. To further reduce the reliance on LED imports, a total of US$ 2.5 billion has
been injected into two major semiconductor plants, including the ST Microelectronics Fab in Gujarat.

For the industry, the current challenge is to bring LED technology to India, start production of LED lighting at a fast speed and provide more affordable and good quality LED products in the country. A TechSci Research report titled, India LED Lighting Market Forecast & Opportunities, 2020, has projected that the country’s LED lighting market will register a growth of over 32 per cent during 2015–20. In the next five years, the main factors boosting the market will include declining LED prices, government initiatives to provide LED lights at subsidised costs and LED installation projects for streetlights and the growing awareness among consumers on account of awareness programmes by manufacturers and regulatory bodies. The manufacturing cost will also witness an incremental decline every year with increasing domestic production of LED lamps.

A LED lamp comprises diodes, drivers and a semiconductor chip. Currently, chips are imported from Europe and USA. The components too are mainly imported and assembled in the country. Lighting products are imported from China, Europe, US and South East Asia. In 2013-14, imports accounted for nearly ₹2,000 crore. They grew at a rate of ~25 per cent from 2012-13 to 2013-14. India is, however, exporting lights including CFL and LED. In 2013-14, light exports were around ₹800 crore. In volume terms, exports stood at around 1.85 crore units. In 2013-14, the biggest export destination for Indian companies was USA, followed by Germany and the UK. Exports have grown at a rate of ~9 per cent from 2012-13 to 2013-14.

The lighting industry is working on production of more affordable CFLs and LEDs and also on increasing consumer awareness through workshops and exhibitions. There is already a discernible preference among consumers for more energy efficient light options.

**Conducive Policies**
As the western nations have already switched to the highly energy-efficient, long lasting and cost-effective LED lighting, the Government of India’s policies too are geared towards promoting energy efficient lighting options and are conducive for the growth of the industry. “Several policies and schemes promoting energy efficient lighting products have been designed by the government,” informs Pargaoankar. The Ministry of New and Renewable Energy (MNRE) and the Bureau of Energy Efficiency (BEE) have been driving initiatives such as distribution of solar LED lanterns in villages to promote energy-efficient lighting. Government efforts to promote energy efficient lighting include use of LED lamps for street lighting and architectural lighting of national monuments. For instance, the Government of Andhra Pradesh along with EESL (Energy Efficiency Service Ltd) is introducing a new scheme called Delp (Demand Side Management based Efficient Lighting Programme) under which one can exchange two incandescent lamps in usage with two LED bulbs worth ₹400 each, by paying just ₹10 for each. Delhi plans to replace 500,000 streetlights with LED bulbs. There are also plans to install LED bulbs in 100 districts every year. There is a rather unique initiative under which the Delhi Government will provide two LED bulbs to each household at the cost of ₹10 (at par with the cost of a 60W yellow bulb), and then add a monthly charge of ₹10 to household power bills for a year to recoup the subsidy. The central government too is providing the industry a concerted push for the final shift. The government will replace all streetlights in the country with LED streetlights—about 30 million pieces. Under various government schemes for public distribution, more than 300 million lamps will be distributed in two years. It will be mandatory to replace all down lights with LED down lights in retail outlets.

Pargaoankar feels that the next steps for the government with regard to policy inducement could be restructuring of the tax regime which currently levies VAT of 14.5 per cent. Reduction in the VAT and a uniform VAT structure across all states will increase penetration of LEDs in existing lighting areas. Standardisation of manufacturing processes and products is another important milestone that can be achieved through
mandating BIS technical specifications. In addition, imported LED lamps should undergo rigorous tests to prevent dumping of inferior goods in the local market.

**Opportunity Led Market**

Elcoma expects stupendous growth of the lighting sector in the next three to four years. The segment will grow from ₹5,540 crore in 2014 to ₹5,920 crore in 2020. “Investors in this segment will benefit provided they enter within the next six months to one year,” says Sujan. The government allows foreign direct investment (FDI) in the lighting industry and there are currently several MNC players in the market including the LED segment. Japanese LED manufacturers Toshiba and Panasonic are among the top LED manufacturers who entered the Indian market most recently. Toshiba announced the setting up an Indian manufacturing base through its subsidiary GreenStar in September 2014. The company is targeting a CAGR of ~40 per cent over the next five years to reach US$ 40 million. Recently, Opple Lighting became the first major Chinese lighting brand to enter the Indian market. The company is expected to roll out 30 large format exclusive brand stores across the top 30 cities in the country in the next three years. MLS Co Ltd from China is another recent entrant and has started operations in a big way by putting up its manufacturing facility in India.

**Government Incentives**

The Government of India’s initiative to electrify all rural households by 2020 under the rural electrification plan and the spurt in automotive lighting will be among the primary growth drivers going forward. The Automotive Mission Plan 2006–2016 document has estimated that the total turnover of the automotive industry in India would be to the tune of around ₹636,000 crore in 2016, a substantial increase from ₹204,000 crore in 2006.

LED market is forecast to grow at a rate of nearly 40 per cent. Investments made by the government in infrastructure with plans to develop 200 low cost airports connecting tier II and III cities in 20 years, road and highway projects worth ₹400 billion and the 100 smart cities project among other initiatives will drive the growth of the industry.

According to India LED Lighting Market Outlook to 2019 – Next Wave of Growth Driven by Government Initiatives, a report released by Ken Research in February this year, the nascent LED light segment has been growing at a CAGR of 56.1 per cent in the last five years. This report too lists government initiatives, rising concerns with respect to energy conservation and falling prices of LED lights as major growth drivers for the industry. A February 2015 report by 6Wresearch, titled India LED Lighting Market (2015–2021), forecasts that the LED industry will grow to US$ 2.2 billion by 2021. Streetlighting is one of the key growing applications in India’s LED lamp market, boosted by the many initiatives of the central and the state governments to deploy LED bulbs at various locations. Pilot projects to replace traditional streetlights by LED bulbs in a phased manner are underway in various states and union territories including Chandigarh, Delhi, West Bengal, Maharashtra, Andhra Pradesh, Gujarat, Uttarakhand and Punjab. According to ValueNotes, in terms of geography, northern and western regions of India will continue to be the biggest markets for LEDs. The southern region, however, is expected to see the fastest growth, as with rapid industrialisation and corporate development in many southern cities, a lot of new infrastructure projects have been announced which will push the sales for LED products.

ValueNotes also sees the share of LED rising significantly, while incandescent lamps will be gradually phased out. It forecasts that the LED segment will grow at a rate of nearly 40 per cent in the coming years, which is more than double that of the overall lighting industry. The growing emphasis on green buildings and smart homes will also drive the sector’s growth, especially in outdoor and indoor applications. Rising household demand fuelled by the rapidly growing real estate market is another factor that will drive the growth of LED industry.

With lighting accounting for ~20 per cent of the power consumption across India, there is a drastic need to shift to more energy efficient lighting sources. LED promises to light the way.

*(Based on interviews and secondary research)*