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MAY 2020

THE LIGHTING MAGAZINE

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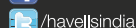
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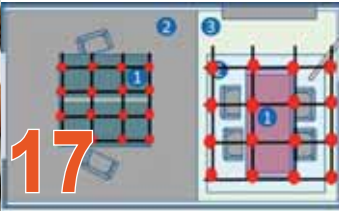
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CORONA VIRUS CAUSES DISRUPTION TO INDUSTRY

While ELCOMA celebrates 50 years of its existence in India, this year will also be the year that will herald the return of manufacturing to India.

The Government of India, through EESL, set very aggressive timelines for implementation of ELCOMA's "Vision 2020" where over 700 million LED lamps and 3 crore streetlights were to be replaced by 2020. This timeline, coupled with the expectation of very low product costs, ensured that the industry got very little time to establish manufacturing of components required for finished products. This meant that industry had to rely on components imported from other countries for manufacture of finished lighting products.

Recognizing this issue, ELCOMA is in the process of preparing a "Vision 2022" program which will focus on enabling the infrastructure to ensure manufacturing of at least 80% components required for the Lighting Industry within India. Before the end of the year 2022, India should be mostly reliant on local sourcing of components and ready for exports of fully indigenously manufactured lighting products.

We would also like to extend our heartiest congratulations to Sh. J.P. Agarwal for being deservedly decorated with the Padma Shree award on 26th January 2020 which is the fourth highest civilian award in the Republic of India, awarded to citizens of India in recognition of their distinguished contribution in various spheres of activity. His contribution to the Indian Lighting industry is commendable and unsurmountable.

The Corona Virus, COVID-19, has caused havoc among all industries worldwide and the Indian Lighting industry which was just about to recover from the slowdown in the last few months, is also feeling the pinch, with supply chain of raw materials and finished goods from China being severely hampered. Let us hope that the crisis resolves itself quickly and we can return to business-as-usual soon. ELCOMA has submitted a representation to the government for rehabilitation and revival of the industry.

As a result of the COVID-19 spread, the ELCOMA Governing Body has decided to postpone the Governing Body meeting and 50 years event which was scheduled to be held on 18th April at ITC Bharat, Gurgaon and also cancel the 50 years event and Gala dinner on 29th June 2020. The new dates for these events would be communicated shortly. The 2nd GB meeting of 2020 was instead held on 24 April over a video conference system.

SHYAM SUJAN

Secretary General

Electric Lamp and Component Manufacturers Association of India (ELCOMA)



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COUNTDOWN TO 50 YEARS

On 29th June 2020, ELCOMA will be completing 50 years of its existence in India. I would like to extend my heartiest congratulations to ELCOMA members for the same. 50 years sound quite a feat, especially when I hear myself say it and realize that I myself was born midway in ELCOMA's life.

When I joined ELCOMA a few years back, I happened to go through history of our association. I found that the founders of ELCOMA had to struggle a lot to make the Lighting Industry in India the most enviable vertical in our manufacturing sector. What we are today, is because the founders of ELCOMA had a vision which we are now witnessing as having been fulfilled. Be it highest quality standards and products, taxes and levies, liaison/relationship with government, customers and International partners – we have achieved a lot jointly as an industry.

Our founders always wanted lighting products to be available to consumers at the most affordable prices. Our lamps, both Incandescent and LEDs, are the cheapest in the world. The best part is that they are better in quality and specifications because they are modified to meet the tough Indian conditions.

Being the youngest Captain of ELCOMA and current President, I believe that I have a responsibility to carry forward the vision of ELCOMA founders for the next 50 years. I am proud to know that all ELCOMA members are like one family and have never had any dispute or issues in these 50 years. I am pleased that ELCOMA is celebrating its foundation day on 29th June 2020 when all its members and stakeholders will join together to celebrate the event and relive the memories of these momentous 50 years.

Due to the COVID-19 pandemic, we have had to defer the celebrations slated for 29 June 2020. We are however trying to mark the occasion by organizing a celebratory event over video conference, the details of which will be announced shortly by ELCOMA.

I would once again like to congratulate all ELCOMA members and the entire Indian Lighting fraternity on this event of 50 golden years of ELCOMA.

God bless all.

Best wishes

A handwritten signature in black ink that reads "Raju".

RAJU BISTA
President, ELCOMA



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INDIAN LIGHTING INDUSTRY HAS WITNESSED VARIOUS TRANSFORMATIONS AND EVOLVED

In conversation with Mr Rajesh Naik, Executive Vice President & Country Head – Illumination, Bajaj Electricals Limited about his professional journey and the state of Lighting Industry in India

You have been in part of the Lighting Industry for close to 3 decades. During this period, a lot of technological transformation has taken place. Which is the most significant technology change you have witnessed?

Being in the industry for over 28 years has allowed me to observe the transformation and prepare towards adopting newer technologies carefully. During this entire journey, the industry has witnessed many changes. However, two of the most significant transformations are related to energy efficiency. Energy efficiency since the beginning has been of paramount importance in our country as we had a shortage of power supply

The first significant change was seen with the

introduction of CFL. Though the adoption rate was relatively slower, over a period of time, it occupied the entire lighting segment, from home to office spaces. Another meaningful development that the industry saw was the introduction of LEDs and LED chips for Lighting Applications. After LEDs were introduced in the complete visible spectrum, the industry quickly adopted it and customers were able to get enormous energy saving advantage. This provided an impetus to the growth of the sector.

LED being the most progressive technology, do you think Indian Lighting capital in Industry is fully geared to face the challenge of providing world class products as per Indian conditions?

Indian Lighting sector has witnessed many such transformations and has always coped successfully and adapted to the technological advancements which have benefited the end consumers in terms of quality and life of the products. In my opinion, the industry has all the capabilities and is totally equipped for serving the Indian market in the prevailing market and economic situation. However, when we talk about LED chips specifically, I feel that there is a gap. There is much scope for adapting and exploring this technology further to witness the endless possibilities of technology.

Does the Connected Lighting or Intelligent Lighting have any future in India? If so, what are the requirements that Indian industry needs to prepare for?

The conversation about Connected Lighting has been a trending topic for quite some time now. Being one of the pioneers in the industry, we began talking about Connected Lighting in 2010. Back then the concept was in a nascent stage and was not adopted commercially. Today, it is not just a concept, but we are witnessing Smart Lighting being universally accepted, contributing to modern lighting requirements of Smart Cities. Today, communication in the industry is all about PSE. The increased communication and the benefits associated with Connected Lighting

technology are further helping drive acceptance of it for smart living spaces. What we need currently is a robust framework that allows easy adaptation of these latest concepts for our Smart Cities-both indoors and outdoors.

How are you preparing Bajaj to take on the challenges of new technology?

When it comes to technology, we have always been at the forefront of innovation, which has eventually helped us evolve as one of the market leaders in India. Our proactive approach towards technology adaptation has resulted in various marketing arrangements with our partners across the globe, enabling us to offer solutions across different platforms. Since Smart Lighting is an integral part of VMS segment, we have ensured that we have a strong presence in that segment through strategic tie-ups and partnerships. Parallely, we are also looking for outdoor partners for improved alliances. In 2015, we were honoured to have deployed Bajaj Electricals' lighting solutions for our first Smart City project – Jaipur in association with CISCO even before the Smart City Mission was formally announced by the Government of India. Currently, we are working on multiple projects and dedicated platforms which allow us to stay ahead of the competition. As an organisation, we are equipped to take on any challenge that arises and convert it into an opportunity through our strategic offerings.

Do you think the Lighting Industry in India has matured enough to be self-reliant in manufacturing state-of-the-art smart lighting products?

The Indian Lighting Industry has witnessed various transformations and evolved into an extremely adaptable industry. In my opinion, over the years, the players have matured enough to be self-reliant and experienced enough to cater to the various requirements of the industry. I am very positive that in the coming years, we will continue to see the evolution of the lighting industry.

EESL played a very important role in bringing in LED Bulbs and Streetlights in

“The increased communication and the benefits associated with Connected Lighting technology are further helping drive acceptance of it for smart living spaces. What we need currently is a robust framework that allows easy adaptation of these latest concepts for our Smart Cities - both indoors and outdoors”

India on large scale. At the same time, it has eroded not only the manufacturer's profits, but has also reduced retail prices substantially. Do you agree that the sacrifice by the industry is to be seen as a significant support in bringing in a new technology product at a very short time?

Indeed, the industry has made substantial sacrifices over the years to accommodate the technological transformation from the CFL to LED, which I believe is an important process for sustainable evolution. EESL was introduced with an impressive business proposition and a huge volume that attracted a considerable number of players. The propositions were offered with 35-40% CAGR, which further attracted many of the initially hesitant players. The entry of new players led to a price war. The accelerated adoption brought by EESL has helped the industry to reduce the cost of the product. Reduction in the cost has led to faster adaptation by the consumers. However, it has impacted profit margins.

Has the reduced procurement and consumer price been at the cost of the quality of products?

Yes, the quality compromise has been witnessed in the industry. However, it is not observed by the seasoned players or the lighting experts, but mostly by the unorganised players. These players often compromise on both the aspects of price and quality - by tweaking the costs and offering lower quality products to gain market share.

LED being easier than CFL to assemble, hundreds of new traders/ manufacturers have entered into the foray to manufacture LED products. Do you think they will continue to survive long? Will such small operators be able to establish a new brand for themselves?

With very limited regulations and lower entry barriers, it becomes quite easy for unorganised players to enter the industry. These players, however, do not take a leadership position, but certainly cause disruption in the industry. These players

operate for around 3-6 years depending upon their capital and bandwidth to work on lesser margins. It will be interesting to see how these new entrants manage to consolidate in the coming future.

What are the new areas of growth identified by Bajaj in India?

Being the pioneers, our focus is to stay relevant and be present in all the technological advancements that come our way. We aim towards providing our lighting solutions for Smart Cities and have a dominant presence in the outdoor space. We continuously strive towards providing Smart Lighting solutions for infrastructural developments, hence creating more liveable, safe and yet sustainable solutions in India.

You have been a senior member of ELCOMA for quite some time and have played a very important role during the period of shift from conventional to LED technology. What is your vision for Lighting industry in India for the next 5 years or so? Where do you see the industry headed?

My association with ELCOMA goes back a long way, and I have witnessed its evolution over the past two decades. ELCOMA is the only industry body where brands and manufacturers work together towards enhancing value for the consumers and protecting the industry. However, few new entrants currently not associated with ELCOMA do create some issues in the market that disturbs the complete ecosystem, including trade. As an organised body, ELCOMA should focus on getting them on board as well so that the industry can make significant progress, and everyone can take an equal advantage of this growth.

How do you spend your spare time? What are your hobbies and what do you do for personal entertainment?

I enjoy listening to music. Apart from that, I prefer spending quality time with my family on weekends.

AUTHOR: ILLUMINATION EDITORIAL BOARD

“The industry has all the capabilities and is totally equipped for serving the Indian market in the prevailing market and economic situation”



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IllumiNation chats with Mr Sunil Sikka, former President of Havells India Ltd who is currently an Independent Director on the Board of Surya Roshni Ltd, Sudhir Power Ltd and is also an advisor to ELCOMA

You have been associated with the lighting Industry for more than 40 years. During this period, a lot of technological transformation has taken place. Which is the most significant technology change you have witnessed?

In seventies, I thought the entry of high pressure sodium lamps in street lighting application was a big game changer of that era. By the turn of the century, I thought, CFLs would change the lighting canvas in terms of efficiency.

The mother of all disruptions and the most significant technology change in the recent times is the advent of LEDs in lighting. In less than seven to eight years, it has become synonymous to the word 'lighting' across all applications globally.

With the coming of LED technology, do you think Indian Lighting industry is fully geared to face the challenge of providing world class products?

India is one of the earliest adopters of LED technology and its manufacturing. As a country, we are in a long-drawn growth phase in terms of new infrastructure which is expected to last for at least next ten to fifteen years. Urban development of infrastructure, roads, malls, commercial spaces are being constructed across the country which shall be the core growth driver of LED Lighting. New installations readily accept the use of LED in all forms owing to many benefits like efficiency, life expectancy, dimmability, choice of colors, IoT enabling, beside competitive prices over conventional lighting.

Do you think the Lighting Industry in India has matured enough to be self-reliant in manufacturing state-of-the-art Smart Lighting products?

Demand aggregators like EESL worked as a catalyst and an accelerator towards scaling up demand and bringing down the cost of LED products dramatically. The Indian Lighting Industry has risen to the challenge of augmenting assembly capability by leaps and bounds, besides indigenizing some of the

components like housing, lenses etc. We still remain heavily dependent on Chinese imports for LED chips/packages or LED substrate manufacturing and packaging, besides which we have an almost negligible ecosystem available in the country for efficient electronic passive component manufacturing, Industry and the Government have got to work together to create requisite ecosystem of components for making EMS and LED manufacturing more reliant and export worthy. At present industry has more than fifty percent dependence of components in value terms on imports, mainly from China.

EESL played a very important role in bringing in LED Bulbs and Streetlights in India on large scale. Do you think it is time for EESL to shift to other more important activities in Energy Conservation rather than continuing on LED products?

To my mind, EESL did a great job in popularizing LED lamps and accelerating its growth initially. Now that the concept has caught on across the nation while the cost has come down drastically with scale, it should be left to the matured lighting industry ecosystem of distribution to further increase its penetration.

Retrofitting of streetlights may continue for some more time as it is still incomplete, but subsequently it should also be left to follow its own course competitively in a free market environment like other products.

Your association with ELCOMA has given added support to its secretariat. What made you decide to associate with this industry body?

The primary objective of ELCOMA, ever since its inception, 50 years back has been to provide an unbiased, apolitical platform to the domestic lighting industry including multinationals and component manufacturers to build consensus on standards / specifications, besides working pro-actively with compliance and regulatory bodies like BIS, BEE, MeitY, MoEF, MoCI and MoCA for formulation and implementation of policies. It also works for the benefit of consumers at

“Industry and the Government have got to work together to create requisite ecosystem of components for making EMS and LED manufacturing more reliant and export worthy”

large in educating and providing information by holding nationwide conferences, seminars, exhibitions, publishing magazine on latest in lighting and providing skill development training in lighting. I have been working very closely with ELCOMA for many years. I also led ELCOMA as President for two terms which provided me enough working experience to add value in terms with dealing with all stake holders amicably and efficiently.

You are actively involved in the preparing Vision 2022 document at ELCOMA. What, according to you, should be the focus areas to be addressed on priority through this approach?

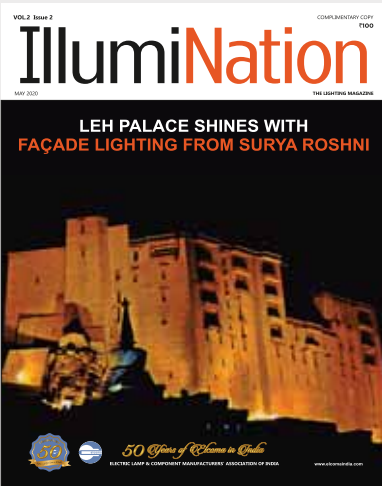
India, as we all know, is a consumption driven economy and since we are in a long growth phase, demand shall continue both from the new installations and as well as replacement

market. However, in my view, we should now start initiating a road map towards a world class, large-scale manufacturing of LED and its components in India which shall reduce our import vulnerability and help the nation's economy in general. We have big advantage of labor arbitrage and availability of skilled working population, which is our new-found demographic dividend, beside Government of the day is proactively willing to help such initiatives. ELCOMA is in process of making Vision 2022 document to solicit help from both Industry and Government to make India a large hub for manufacturing and exporting lighting products out of India.

AUTHOR: ILLUMINATION EDITORIAL BOARD

IN A LIGHTER VEIN

- How do you spend your spare time : Mostly reading
- Favourite movie : Guide
- Favourite Food : Grilled cumin Fish
- Hobbies : Music, mainly ghazals
- Favourite Film Star : Dev Anand Waheeda Rahman
- Your best friend : My wife
- Your national hero : Pandit Jawaharlal Nehru
- Favourite holiday destination : Male, Maldives
- Best Book read : Rajat Gupta's "Mind Without Fear"



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LIGHTING CRITERIA AND DESIGN ETHOS IN THE ERA OF DIGITAL TRANSFORMATION

A masterclass on lighting design for today by Sudeshna Mukhopadhyay,
Chief Design Officer, iBahn Illumination

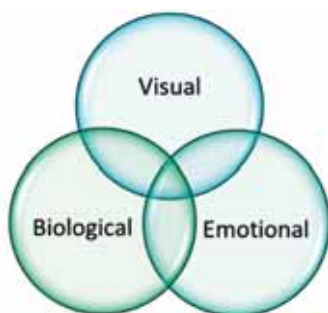
Lighting industry is witnessing a marvelous transformation and disruption process, with digital lighting becoming the largest participant in the Internet of Things. Quality of lighting offerings are now influenced by innovations in smart phone technology, wireless communication platforms and various “assistant services” like voice, music etc. Concurrently, lighting research and its influence on health and well being of living beings is now well established. Light controls our Circadian rhythm and secretion of our daily hormones cortisol (activity or stress hormone) and melatonin (sleep hormone). Absence of light increases melatonin and decreases productivity. Lighting influences well being of human beings, impacts growth of flora and fauna and behaviour of birds and animals. Light is also used to treat diseases like Alzheimer's, sleep disorder, depressions (SADS-Seasonal Affected Disorder), etc.

No matter how the lighting technology and application metaphorizes itself, quality lighting will remain primal to ensure visual quality, enhance space architecture, impact mood, well-being and performance.

It is very heartening to see that recent releases of lighting and interior design standards and regulations are more inclusive and address aspects beyond visual needs and energy efficiency codes. In the ardent desire to meet energy codes, designers in the last decade had to compromise much on visual aesthetics in lighting design because lumens per watt and technical specifications became the sole criteria of evaluating “good lighting design”.

With major improvements in LED efficiencies, meeting energy codes is a given hygiene factor. This allows designers a lot of freedom

to use lighting for “non-visual” purposes. It is extremely heartening to see such projects by Indian design community in recent times. More and more, lighting designers are considering daylight as an integral part of the lit environment and seek to blend them with artificial electric lighting. The eye does not differentiate the source of the light that its photoreceptors detect and it is thus imperative to continuously balance the 3 pillars of lighting design – i.e. meeting visual, emotional and biological needs.



Owners, buyers and technical specifiers now need to actively look beyond product design, efficiency and hardware specifications and embrace lighting solutions which increase alertness and productivity, enhance mood, control glucose level, boost metabolism and encourage restorative sleep.

Recent releases of various “well-being” standards, highlight the importance to connect building occupants with the outdoors, reinforce circadian rhythms and reduce the use of electrical lighting by introducing daylight into the space.

There is greater emphasis on Lighting Quality (Colour Rendering and Spectral composition), glare, daylight integration and Lighting Controls. Personalisation by way of lighting controls and user interfaces are encouraged in spaces which boost Wellness.

The fundamentals of lighting design criteria do

not change. For holistic design, both performance standards like EN12464 or the National Lighting Code of India and the WELL Being Standards (IGBC, LEED etc) should be considered for designing the luminous composition and computation of lighting quantity.

In this article, we will discuss a very critical inclusion in the standards

DESIGN GUIDELINES

- Minimize use of direct-only overhead lighting.
- Light fixture luminance to minimize disability and discomfort glare.
- Use of light sources with high CRI.
- Using light sources with long lamp life.
- Minimize contrast between work surface and wall & ceiling surfaces.
- Select materials with high reflectance values-ceiling, walls, floors, furnishings.

Circadian Lighting Parameters

Lighting installation which helps to keep our circadian rhythm in sync, does not simply mean the installing of white tuneable lighting system. The biological effects of light on humans can be measured in Equivalent Melanopic Lux (EML), a proposed alternate metric that is weighted to the ipRGCs instead of to the cones, which is the case with

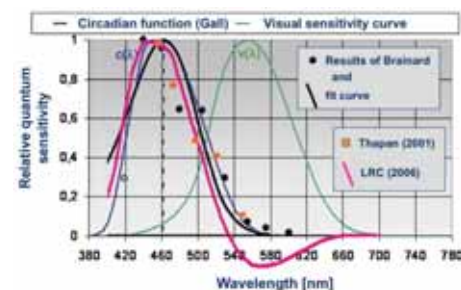


Fig. : Circadian action spectrum according to different sources
Action spectrum $c(\lambda)$ for biological effects and visual sensitivity curve $v(\lambda)$ combined from different sources (Source : Societe Suisse de Physique)

traditional lux. EML is measured on the vertical plane at eye level of the occupant.

For example, to design a Workspace to meet the Circadian Lighting parameters, at least 75% or more of the workstations, should have at least 200 EML equivalent melanopic lux present, measured on the vertical plane facing forward, 1.2 m [4 ft] above finished floor (to simulate the view of the occupant). This light level may incorporate daylight and is present for at least the hours between 9:00 AM and 1:00 PM for every day of the year. Alternatively, electric lighting alone should provide at least 150 EML.

The unit Equivalent Melanopic Lux (EML) was proposed by Lucas and others (Lucas et al., "Measuring and using light in the melanopsin age." Trends in Neuroscience, Jan 2014). To calculate the Equivalent Melanopic Lux (EML), multiply the Visual Lux (L) designed for or measured in a building by this ratio (R):

$$EML = \text{Visual Lux (L)} \times \text{Melanopic Ratio}^{\circ}$$

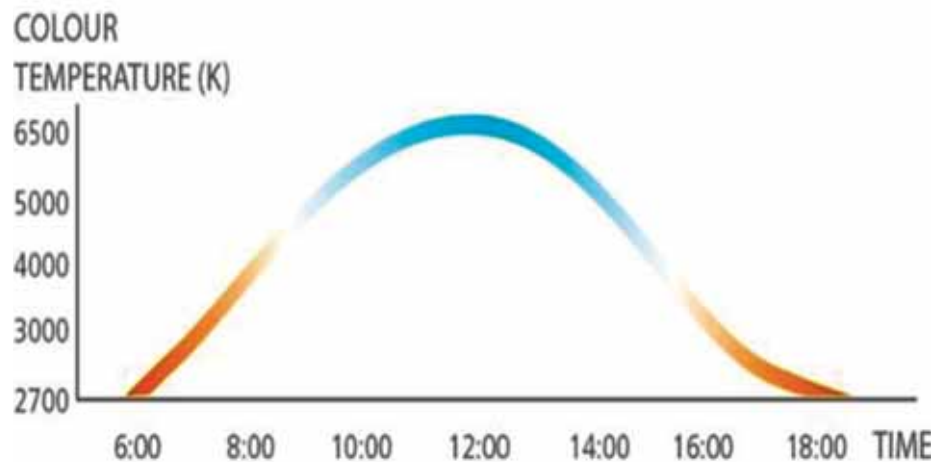
For example, if incandescent lights provide 200 lux in a space, they will also produce 108 Equivalent Melanopic Lux. If daylight is modeled to provide the same visual brightness (200 lux), it will also provide 220 Equivalent Melanopic Lux.

CCT (K)	Light Source	Ratio
2700	LED	0.45
3000	Fluorescent	0.45
2800	Incandescent	0.54
4000	Fluorescent	0.58
4000	LED	0.76
5450	CIE E (Equal Energy)	1.00
6500	Fluorescent	1.02
6500	Daylight	1.10
7500	Fluorescent	1.11

Fig. : Reference WELL Standard

It must be emphasized that only meeting Circadian Criteria does not imply meeting the lighting criteria of WELL being norms.

Flexibility, personalisation, dynamics in lighting, time and duration of exposure to lighting, need to be considered as well. Lighting system and its control options should be designed to facilitate such options. Modern control technology platforms can personalise



space for any user by controlling and dimming lights. In doing so, it also enhances user comfort and productivity and transforms environments and creates ambience and may be a spectacle to break monotony and alleviate mood.

Meeting Visual Criteria

The current lighting performance standards give a lot of flexibility to lighting designers, as they do not require them to light up a space uniformly. Instead the balance between task, immediate surroundings, ceiling and walls, is the main criteria. This gives the designer a lot of freedom to select light fittings of their choice and not restrict them to selecting ceiling mounted direct lighting solely on the basis of system efficacy. Such design practice is also recommended in the well being Standards with the flexibility to define task area, designers can choose and combine products with different light distributions to get the right balance of general, task/local lighting and accent. The primary design principles of layering lighting can now be put into practice. Colour rendering is the connecting node between performance and comfort. While it may not be a direct contributor to meet the

visual requirement, but visual comfort, well being, ambience and health is influenced on color quality.

Glare is a critical criteria which to be considered carefully. LEDs being point sources with collimated beams, have a high potent of causing glare if not used well. It is important to evaluate light fittings based on shielding angle and surface brightness. The overall comfort factor of an installation depends on this parameter. Responsible lighting design ensures reduction of negative impact on environment. It has many sub facets. Reducing power wastage is not limited to low watts/m² alone. Linking lighting systems with daylight (dimming when there is daylight) or occupancy(dimming when there is no occupant) also saves energy. Light pollution, spill light can have negative impact on our ecology and environment. Overlit cities, especially with blue rich white light, are proving to have serious impact on night sky, flora, fauna, animals and bird life and human health (adverse effects of reduced sleep). It is also important to evaluate lighting equipment in terms of economic life (less replacement means less wastage) and material usage in terms of recyclability. Sustainability is also



about how you are powering the lights. Large LED installations can be powered by alternative non-fossil fuel sources like solar, wind etc.

Economic impact of a lighting solution should be evaluated in totality and over its lifetime. It is not to be restricted to what it costs to buy, but also on what it cost to maintain and dispose. Having said that, manufacturers need to also make solutions affordable at the point of purchase. It is heartening to see that in India, many manufacturers are investing locally in developing and manufacturing local solutions, not only products but also total solutions.

These lighting design principles, besides EML, are not new. However, upto the mid of last decade, implementation of such concepts had challenges in engineering, implementation, maintenance and costs. Wired Control Systems have been prevalent in India for over two decades. Although robust, they required in-depth and specialised engineering design, specialised contractors

for installation and maintenance, making it complex and expensive. The Indian market, while exposed to various protocols of wired control system, did not experience high acceptance and penetration.

The lighting criteria mentioned in the earlier section, can now be easily implemented with Smart Wireless Lighting System on platforms like Bluetooth Mesh, WiFi, Zigbee, etc which helps you to connect light points more easily without the hassle of additional control wiring. Creating layers of ambient, task, accent, decorative lighting is easily done, which is an important element to manage the volumetric brightness in a space. Users can make their own groups and set the light intensity, colour to create personal mood and ambience. Light fixtures can be connected to wireless sensors (daylight and occupancy) and can be reconfigured easily at site, post installation.

Digital and Wireless Smart Lighting is the key enabler for Internet of Things (IoT) lighting. Multitude of data collected from connected lighting systems will now provide insight into

human activity and space utilisation patterns, allow for scheduled maintenance / replacement thereby ensuring efficiency and be adaptive to human mood and behaviour in sync with functional activities or even seasonal or daily weather variations. It is able to connect and communicate and serves as a pathway for information and services. Users can control light point by point, remotely, can get real-time data on lighting system status and operations, track lighting performance, life and improve the overall management.

With such enabling smart technology at our disposal, this decade should witness marvels in lighting application and design, embracing and integrating visual, emotional and health aspects of lighting, simply and in a cost effective way, benefiting the all stakeholders.


SUDESHNA MUKHOPADHYAY
Chief Design Officer
iBahn Illumination Pvt. Ltd

Views expressed in this article are those of the contributors and do not necessarily reflect those of the editors or publishers

THE HISTORICAL LEH PALACE IS LIT UP BY SURYA ROSHNI



The 500 year old palace that overlooks the high altitude town of Leh, gets a facelift with lighting by Surya Roshni



The former royal palace of the Namgyal Dynasty overlooks the town of Leh, Ladakh, in the Indian Himalayas. The palace was constructed circa 1600 by Sengge Namgyal. The palace was abandoned when Dogra forces took control of Ladakh in the mid-19th century and forced the royal family to move to Stok Palace.

Historic Background

In the early fifteenth century, Dragpa Bumdey, King of Ladakh, built the first fortifications in Leh as well as a small royal residence along a mountain ridge high above the town. The king also founded three Buddhist temples, two within the old town walls, and the other by the palace on the peak of Tsemo, a nearby mountain. At the turn of the seventeenth century, Leh became a royal capital of the Himalayan Kingdom of Ladakh, which at the time ruled over most of western Tibet. It was at this time that King Sengge Namgyal built Leh Palace, also known as Lachen Palkar Palace. The massive nine-story stone structure lies at the base of the Tsemo ridge and towers over the old town. It was designed in the Tibetan style and modelled after the Potala Palace in Lhasa. King Sengge Namgyal also constructed massive rammed earth walls around the original residential area of the old

town. Lachen Palkar Palace was abandoned in the mid-nineteenth century after the royal family left Leh following the Dogra invasion.

The Leh Palace is nine storeys high; the upper floors accommodated the royal family, while the lower floors held stables and store rooms. Structures around the palace's base include the prominent Namgyal Stupa, the colourfully muralled Chandazik Gompa and the Chamba Lhaxhang Maitreya (Buddha) temple built in 1430 AD, with medieval mural fragments located between the inner and outer walls.

Despite years of decay, the historic character of Leh old town has remained largely intact. Much of the palace is in deteriorated condition, and little survives of its interior decorations. The Palace Museum holds a rich collection of jewellery, ornaments, ceremonial dresses and crowns. Chinese thangka or paintings, which are more than 450 years old, with intricate designs still retain the bright colours derived from crushed and powdered gems and stones. The palace is being restored by the Archaeological Survey of India.

The Project

The tender for the Façade Lighting of the Palace was issued by NPCC in October 2019

and Surya Roshni executed the project in March 2020.

Surya Roshni supplied and installed over 280 façade lights for the project. Each of the fittings were in 3000K CCT, CRI > 90, had Phospho-chromatised and polyster powder-coated extruded copper-free aluminium casings which had IK10 protection against impact and Static Weight Resistance of 5000 kg.

The Luminaires installed at the Leh Palace include

- 134 nos of 55W, 7010 lumen, surface mounted Projector Luminaires with 355 degree swivel base
- 110 nos of 6W, 350 lum, surface mounted Window Sill Lights with 8x170 degree beam and IP67 ingress protection
- 30 nos of 12W, 1020 lm, 1000mm Luminaires with Symmetric 40 degree light distribution and IP65 ingress protection
- 6 nos of 16W, 1722 lm, surface mounted Projector Luminaires, 355 degree swivel base and IP67 ingress protection

AUTHOR: SURYA ROSHNI LIMITED

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IMPACT OF THE NOVEL CORONAVIRUS ON INDIAN LIGHTING INDUSTRY

IllumiNation analyzes the impact of the virus outbreak on LED Supply chain and Lighting Industry in India

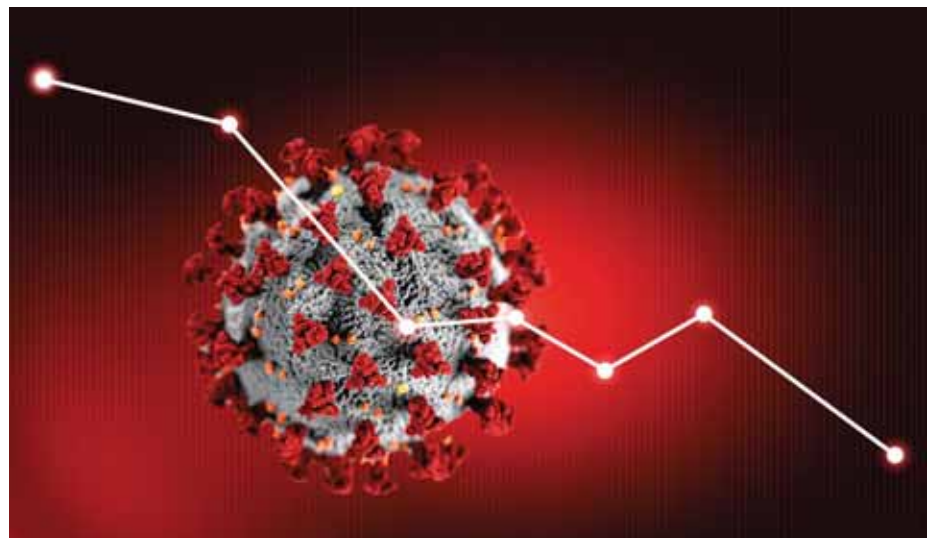
As a result of the Novel Coronavirus outbreak in China, the Chinese authorities locked down several cities in the country which is leading to delay in resumption of production in most factories supplying finished goods or components for industries across all verticals including lighting.

Indian Lighting Industry is dependent on a large extent on Chinese components such as ICs, LED packages, etc for the production of finished goods. It was expected that after the Chinese New Year, the factories would resume production around February 10, 2020 which was set to be the official date for restarting of work. Several provinces and cities in China postponed the date as they were afraid that the Coronavirus would further spread. Also, many of the workers traveling from their hometown to the work places were required to undergo a 14 day self-quarantine before going back to the factories and offices. As a result, operations could not resume even until the end of March due to lack of labor. As of the end of April, most of factories have resumed operations and are operating at only 50% of their installed capacities.

LED wafer and chip production is not impacted too much by the epidemic and delays of restarting production after Chinese New Year, because most chip manufacturers have high inventory due to oversupply in 2019. However, materials for LED chips such as sapphire substrate, etc may become short in supply if the work delay continues. It is possible that LED chip prices may increase after April/May 2020.

The LED package manufacturers, whose operations are more dependent on labour, are going to be affected more. Most of these factories are located in Guangdong and Jiangxi provinces and although they are not the center of the epidemic, because their manpower demand is large and most of the employees come from the expatriate population all over China, if the medium and long-term problem of labor shortages is not resolved, the impact will be more severe. If the workers cannot resume work soon, the lack of labour will directly impact their production. Additionally, the inventory level of LED package is also lower, so if production does not resume soon, there may a direct impact on manufacturing in India as well.

“Prices of LED bulbs and lights may see a rise of between 10%-15% as Indian manufactures face supply shortage of electronic components due to this Coronavirus outbreak in China. This may impact the connected lighting solutions and professional lighting segment more as it has large share of imported components”



Hubei province, where the Coronavirus outbreak began, is one of the automobile production centers of China and has been heavily impacted by the epidemic. It is still hard to tell when the production will restart and lack of components will hold back automobile manufacture, resulting in impacts on automotive LEDs worldwide. Panel and backlight module manufacturers are also suffering from lack of materials due to delayed production. Utilization rate of panel production would slow down if materials supply does not recover soon.

Prices of Products set to rise?

ELCOMA believes that like the mobile and electronics industry, domestic lighting industry will also be affected due to the Coronavirus epidemic as the supplies of electronic components are hit due to a shutdown in China. Prices of LED bulbs and lights may see a rise of between 10%-15% as Indian manufacturers face supply shortage of electronic components due to the Coronavirus outbreak in China. This may impact the connected lighting solutions and professional lighting segment more as it has larger share of imported components.

"With this Coronavirus, we are starting to see a big shortage of electronic components such as chips. The demand supply equation is not working," ELCOMA Vice President Sumit Padmakar Joshi told PTI. According to Mr Joshi, while manufacturing an LED bulb in India, over 60 per cent of the components,

which are mechanical in nature are sourced locally, while around 30 per cent, which include electronic drivers and chips, are imported from Chinese vendors and are in short supply now.

"I do expect that there would be impact on the prices of the lighting products as we are seeing supply constraints here," said Joshi adding "we could have an inflationary impact may be to the tune of 8 to 10 per cent."

Most of the industry players have inventory till February and from March onwards, products with increased prices may be in the market. Several prominent brands in the Lighting Industry have already announced the increase in prices of their products citing higher component costs and higher custom duties.

A Wake Up call for Indian Industry?

Indian manufacturers are looking at other destinations like Taiwan, Hong Kong and South Korea for importing components, however, the demand supply equation is still not working. "As the factories are shut and logistics taking time, those components are in short supply. We also do not see supply regularising till the time situation normalises. The whole value chain has gone for a toss," said Mr Joshi, who is also Managing Director, Signify Innovations India (formerly Philips Lighting India).

Mr. Joshi also believes that it would take 3-4 months for the supply chain to normalize, post which the cost pressure may ease. He also believes that this should be a wake up call for the Indian industry as well to focus more on localisation of components in long term.

"Localisation is the key because our industry is big. There needs to be a long-term solution for electronic components getting manufactured in India not just for lighting but for other industries also," he said adding the government needs to fast-track its Make-in-India initiative.

"Localisation is the key because our industry is big. There needs to be long-term solution for electronic components getting manufactured in India not just for lighting but for other industries also"

Sumit Padmakar Joshi

Vice Chairman and Managing Director - South Asia,
Signify Innovations India (Formerly Philips Lighting India Limited)



AUTHOR: ILLUMINATION EDITORIAL BOARD



HIND LAMPS : THE PIONEER OF LIGHTING MANUFACTURING IN INDIA



Looking back at the incredible journey of the first “Made in India”
Bulb Manufacturer, Hind Lamps



AN EARLY PICTURE OF THE HIND LAMPS FACTORY IN SHIKOHABAD

It was nearly the beginning of time. The lighting industry was just starting to glow.

A philanthropist, business visionary and freedom fighter, Sh. Jamnalal Bajaj's eldest son, Sh. Kamalnayan Bajaj, himself an eminent industrialist, was at the helm of the Bajaj Group of Companies. He was one of leaders of industrial development of post-independent India. It was his entrepreneurship that brought Kaycee Glass Works, a small lamp and glass-shell making factory at Shikohabad and Bajaj Electricals together and in 1946-47, Kaycee Glass Work amalgamated with Bajaj Electricals.

In the year 1951, Bajaj Electricals took a step forward. It entered into collaboration with N.V. Philips Gloeilampenfabrieken of Holland and

three leading British Electrical firms, Associated Electrical Industries Ltd., Crompton Parkinson Ltd. and GEC Ltd., to form Hind Lamps.

Bajaj Electricals provided half of the capital while the European partners brought in the other half. The know-how and technical management was provided by Philips. This was a time when joint ventures were rare, unlike today when they have become the accepted pattern of business. Hind Lamps was one of the forerunners in this field.

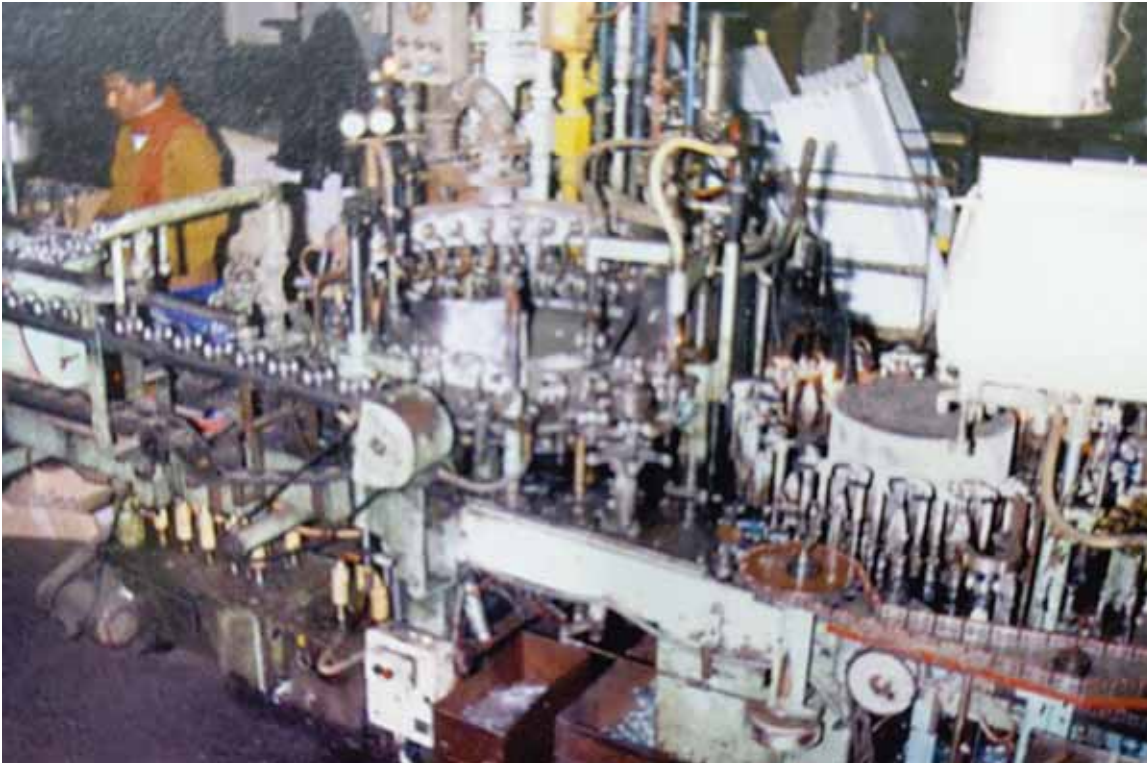
The respective agreements were signed on 23 November 1951 and Hind Lamps commenced operations on 1 January 1952 with Mr. E. Kroeje taking charge as General Manager and Occupier. Mr. T. Gupta and Mr. P. S. Sood were appointed as Managers and

M/s Price Waterhouse Peats & Co. became the first auditors.

The light that was about to brighten millions of Indian homes was lit.

Hind Lamps started operations with only one chain of GLS Lamps with a production volume of 3.7 million lamps per annum. This grew to five chains and the production capacity exceeded 54 million lamps per annum. Propelled by the ever-growing demand, Hind Lamps established a second unit at Kosi in Mathura district of Uttar Pradesh, in the year 1999 with two GLS Lamp chains and a capacity of 25 million lamps per annum.

In the year 1961, Hind Lamps commenced production of TL Shells on Vertical Tube Drawing process which was changed to the Horizontal Tube Drawing Machines (Danner



Process) in the year 1984-85. The capacity was further enhanced in the year 1994-95 to 18 million TL Shells per annum. The Hind Lamps Glass Factory then ventured onto Lead Glass Tube drawing with one line in the year 1994-95 and added another line in the year 1996-97 with a combined capacity of over 2000 MT per annum.

Considering the health hazards involved in the process of bulb-blowing by mouth and the

advancement in technology, Hind Lamps stopped the process in 1974, replacing it with automatic machine blowing. One 8 head and two 16 head Carrousel machines took over this process.

Hind Lamps also ventured into miniature lamp manufacturing in 1957 and had a peak capacity of 54 million lamps per annum.

Pre-empting the growing popularity of Fluorescent Lamps, Hind Lamps began manufacturing of Fluorescent Lighting in the year 1961 with one unit to which another unit was added in the year 1986 bringing the total capacity to 12 million lamps per annum.

GLS Lamp
C a p s



manufacturing was taken up by the company in 1954 with a capacity to produce 4 million caps per annum. Present capacity of this unit is 180 million caps per annum. This was followed by adding Brass Cap manufacturing machine for miniature lamps with a capacity of 50 million caps per annum.

In 1996, the company was granted ISO certification by the Standardisation Testing and Quality Certification (STQC) Directorate, Department of Information and Technology, Govt. of

India, followed by a CE Certificate in the year 1999 granted by TUV Rheinland Product Safety GmbH, AM Grauen Stein Koln Germany.

To enforce TQM in the organisation, Juran Quality programme in coordination with Qimpro Consultants, Mumbai and Quality Circle programme under the Quality Circle Forum were undertaken by the Company.

Throughout its early years, Shri Kamalnayanji Bajaj put the company on the right course and paved the way for it to grow. After his death in 1972, Shri R. P. Nevatia steered the company to achieving new milestones.

It is with great respect that we pay homage to the leadership of pioneers like Mr Bajaj who had the vision and the perseverance to establish Hind Lamps which grew from humble beginnings in the pre-independence era and evolved from a small lamp manufacturing business to a large lighting company.

EXCERPTS FROM A BOOK
"CELEBRATING 50 YEARS OF HIND LAMP"
Compiled by Mr. Mukul Upadhyaya and Dr. Subodh Dubey

SIGNIFY ILLUMINATES THE HOWRAH BRIDGE WITH DYNAMIC LED LIGHTS

City of Joy's iconic landmark is illuminated with Signify's Color Kinetics lighting system



Signify, the world leader in lighting, formerly known as Philips Lighting, announced the illumination of the Howrah Bridge in Kolkata using its Color Kinetics lighting system. The iconic 76-year-old bridge, an engineering marvel linking the two cities of Howrah and Kolkata, has been illuminated using 650 dynamic colored LED light points that highlight the structure's impressive design.

The recently installed lighting system is energy efficient and also features an option of programmable light shows that can be synchronized with music, adding more gleam and glow to the bridge making it even more attractive for tourists and locals alike in the evening hours.

"We at Signify are committed to transforming monuments in an eco-friendly manner by enhancing their beauty with our energy efficient lighting solutions. Our LED lights will enhance the aesthetic appeal of the iconic Howrah bridge, which is also one of the key

attractions of the City of Joy. This project joins the ever-growing list of cultural landmarks illuminated with our Color Kinetics lighting system such as the Rashtrapati Bhavan, Qutub Minar, Parliament House, India Gate, Somnath Temple and North & South Blocks of Central Secretariat, amongst many others." said Sumit Padmakar Joshi, Vice Chairman and Managing Director, Signify Innovations India Limited.

The Howrah Bridge, also known as Rabindra Setu named after the great Bengali poet Rabindranath Tagore, was commissioned in 1943 and is built over the Hooghly River in West Bengal. It is currently the sixth-longest bridge of its type in the world and is a defining landmark of the City of Joy. It is also thought to be the world's busiest cantilever bridge and handles about 100,000 vehicles and more than 150,000 pedestrians every day.

AUTHOR : SIGNIFY INNOVATIONS INDIA LIMITED

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Garnet



Lights that bring your home to life

Wipro Lighting is proud of being one of the most trusted brands in lighting industry. We have continuously focused on embracing the latest & finest technology to deliver highly efficient products for different lighting application areas & have always believed in offering our customers the best in class, latest design, environment friendly lighting products & solutions. Wipro lighting has introduced IOT based smart connected home lighting solutions that are easy to use and can be controlled through mobile app & Voice control assistant. Wipro Lighting has won several prestigious awards for product design, innovation & quality excellence like the Red dot design awards, Frost & Sullivan award for LED lighting visionary innovation leadership and many more.



- **Wide voltage range of 150-300 V**
- **Anti glare design with deep optics**
- **Driver with 2.5 kV surge protection**
- **Good color quality with Ra>80**



BIS CONDUCTS RAIDS ON NON-COMPLIANT MANUFACTURERS

ELCOMA's advocacy against BIS Non-Compliant Manufacturers is bearing results. BIS is now finally cracking down hard on non-compliant manufacturers

The use of BIS Standard Mark without a valid license from BIS is illegal as per section 17(3) of the Bureau of Indian Standards Act, 2016. Any contravention can result in imprisonment of upto two years or a fine upto Rs. 2,00,000/- which may be extended up to ten times the value of goods or articles produced or sold.

You can forward complaints to cro@bis.gov.in or sro@bis.org.in or contact the BIS office at +91 - 11 - 23230131 and +91 - 44 - 2254 1220.

The Ministry of Electronics & Information Technology (MeitY) has notified the Electronics and Information Technology Goods (Requirement for Compulsory Registration) Order, 2012. As per this Order, no person can “manufacture or store for sale, import, sell or distribute goods which do not conform to the Indian standard specified in the order and do not bear the Standard Mark with unique registration number obtained from BIS”. Strict action can be initiated against such offences, which includes imprisonment up to 2 years or a fine of 2 lakhs, which may subjectively be extended up to 10 times the value of goods produces or sold or kept for sale.

Based on complaints received, Bureau of Indian Standards (BIS) has carried out several raids at units and seized crores of rupees worth of such non-compliant LED bulbs and luminaries. Use of such non-compliant products is illegal as they have not undergone the prescribed tests for safety as per notified Indian Standards.

BIS Raid at NOIDA

A team of BIS officers from DLBO-II conducted a search and seizure operation at Neo-Neon Pvt. Ltd, A-151, Sector 83, Phase II, Noida, U.P. on 31.01.2020 based on the complaint of unauthorized use of the BIS registration mark. During the operation, the firm was found to be manufacturing various LED products without having valid Registration from BIS. Evidence was collected from the said premises and brought to BIS. Approximately 250 cartons filled with LED products without valid registration were seized during the raid and superdari was given to the firm for the same. Documentary evidence indicating unauthorized usage of registration mark was also collected during the operation. Active cooperation was accorded to the BIS team from NOIDA Police.

Electrical goods with fake logo seized

Chennai: For the first time in Chennai, Bureau of Indian Standards (BIS) has seized nearly 1,000 electrical goods which had fake BIS logos on them. Officials said this is the first incident in Chennai after the Centre passed the Compulsory Registration Scheme for electronic goods, under which a trader is mandated to register the goods he sells with BIS logos. During raids at Leo Industrial Estate at Pallikaranai on Tuesday, officials found that manufacturers had allegedly misused BIS logo and BIS Compulsory Registration Mark on LED fluorescent lamps, street lights and flood lights. "Though we have seized steel, gold, water pipes and electric cables for violating BIS Act of 2016 earlier, this is the first time we came across electrical goods in such a large number," a BIS official said. Those who wish to report such cases can contact BIS office at 044-22541220 or can send an e-mail to sro@bis.org.in.





As a responsible and aware consumer please do not buy any Non-BIS-Compliant products.

Non-Compliant products are Not Safe because they do not follow the safety and other standards prescribed by the industry do not Last Long because they use sub-standard or cheap components are Not Efficient because they are not certified for energy efficiency

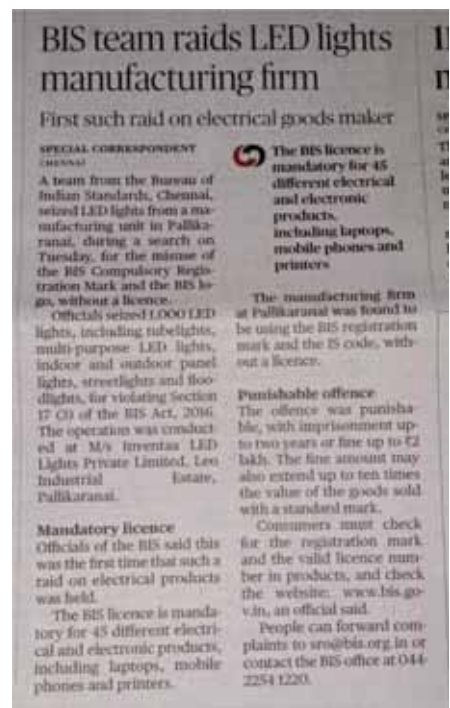
You can check for the authenticity of the BIS Standard Mark by verifying the license number and model number through a mobile app, named 'CRS'. You can do the same by downloading the 'BIS Certified Products' app from Google Play Store



BIS Raids at Chennai

Based on a complaint, BIS carried out an enforcement raid at M/s Luvina Lighting Company at Broadway, Chennai and seized around 3,500 LED lights of various types, which were affixed with fake BIS Standard Mark. The company had been selling these LED lights without obtaining BIS license.

BIS also conducted a raid at M/s Inventaa LED Lights Private Limited, Leo Industrial Estate, Pallikaranai who was found to be using the BIS registration mark and the IS code, without a license. Officials seized 1,000 LED lights, including tube lights, multi-purpose LED lights, indoor and outdoor panel lights, streetlights and floodlights, for violating Section 17 (3) of the BIS Act, 2016



AUTHOR: ILLUMINATION EDITORIAL BOARD

MAKE IN INDIA

Bhavin Soonderji, CEO, TRIDONIC proposes a blueprint for the Indian Lighting Industry to Make in India

The Indian Lighting Industry as a whole is facing multiple challenges and the industry has always looked up to ELCOMA to set a direction for the LED Industry. Protectionism only brings system inefficiencies and lethargy and the era of license raj and higher tariffs ended long ago.

The Indian Lighting Industry is fully in favour of Make in India or any other such programs that allow Indian employment and industry to flourish. However the Industry must be mindful that the technologies and applications are changing far quicker than any of us can imagine. Those who have been in the Industry for more than 20 years have been witness to the dissemination of traditional technologies that have built companies and careers in the past.

Unfortunately, at present the primary factor governing the Indian Lighting Industry is only price. When price is the primary defining factor for a consumer then there are many ways to cut cost and it is always at the expense of quality and performance. Competitiveness is no longer about efficiency or technology or innovation, it is entirely based on who is able to provide the cheapest product to the customer.

When price as the primary criteria, there are several obvious issues

- Limited resources are deployed for development or innovation due to lack of margin or profitability
- Manufacturers optimize parameters to meet minimum standards. No consideration is made towards Total Cost of Ownership
- High dependency of vendors on brands volume to justify low margins leads to further compromises
- There is always a cheaper supplier waiting to replace the existing one

Many leading brands of national and international repute make products for the same application with different specifications and different prices. This in turn devalues their own brand and technology and makes it harder to push for better/higher technology or specifications.

Since the end customers are not technology savvy, for them all products seem the same and therefore the cheapest one is the one they buy. Another fallout of the price based product positioning is that none of these products are suitable for export. Almost none of the well-established brands in India are able to sell these products outside of the Indian market or even to countries like Africa where there are greater concerns on money and affordability.

Protecting sub-standard products by increasing duties only hurts the Indian Economy in the long run. But protecting only one type of component is counter productive as would be scrapping of concessional duties on all parts.

It is impossible to do this because the capacity in India does not exist to service the requirements of the Indian Market. Scrapping benefits will only harm the industry as a whole and lead to well-known practices in the market which are against corporate and national policies.

If all the manufacturers come together on a common platform, it will make it possible for Indian companies to become significant players in the International supply chain with a healthy bottom line enabling innovation and development efforts.

ELCOMA helped introduce the Star Labelling Program for traditional light sources and LED Lamps as well. Similarly if ELCOMA can enable star labelling programs for other products in the LED domain, it would go a long way in resolving this problem.

“Competitiveness is no longer about efficiency or technology or innovation, it is entirely based on who is able to provide the cheapest product to the customer.”

ELCOMA could promote Star Labelling programs for A) Luminaires; B) Drivers and controls; and C) LED modules. BEE has already adopted such a program in the case of Electronic ballast which led to the decline of inefficient magnetic ballasts and adoption of electronic ballast which benefited the country and the industry.

International associations like The Zhaga Consortium and DiiA (Digital Illumination Interface Alliance) work towards standardising DALI and has members from all over the world working towards certification and interoperability of control gear, etc. In order to certify a product under these standards (represented by the D4i mark) the manufacturer a) must be a member of the DiiA and b) the product must be tested and pass the standards set by them.

ELLCOMA, being a nodal agency, could join hands with Zhaga as well as DiiA to adopt a similar role as a market aggregator of sound technical products. This will serve as a differentiator and besides ensuring that only the best practices are adopted by ELCOMA members, the non-compliant market players would automatically be weeded out of the system.

The direct benefits of such a system would accrue to

Manufacturer

- Produces better products
- Competition forces innovation rather than price
- Raises the technical aspects of products
- Product pricing in line with the technology used
- Top line increases due to demise of grey market players

Consumer

- Has access products which enable a lower TCO
- Higher quality of products to choose from
- Pays for desired product quality / specification

- Lower replacement cost
- Lower operational cost
- Does not need to buy sub-standard, low quality products
- Does not need to buy non-compliant products

The Nation

- Innovation and R&D are promoted
- Loss of revenue from grey market and non-compliant manufacturers is reduced
- Revenue from compliant players increases
- Responsible manufacturers align their products to minimise the waste of precious resources

In today's context the easiest way to start a lighting company is to go to China, pick up components and assemble them in India. Although BIS has been a deterrent, there are still a large number of non-compliant products being sold in the Indian markets as is evidenced by the recent raids carried out across India by BIS.

It is only by upgrading standards and ensuring quality that we will ensure a level playing field and uplift the market. Simply protecting industry by way of tariffs is a short-term measure, which will not always lead to consumers being offered the best-in-class products.

AUTHOR : BHAVIN SOONDERJI,

**CEO, TRIDONIC
(Atco Controls Pvt Ltd)**

Views expressed in this article are those of the contributors and do not necessarily reflect those of the editors or publishers

WHAT IS REQUIRED TO PROMOTE MAKE IN INDIA

1. Promote Energy Efficiency Standards which become a deterrent to low quality and low standard products being produced. Import duties and GST should be linked to this, which rewards higher performers and penalizes lower performers.
2. Promote EE and other standards of quality, performance etc and make registration of such products mandatory on the website of a Government Body or a Certification Authority. This will help represent a larger cross-section of the industry and will help integrate different associations within India which may be working at cross-purposes
3. Government must ensure that India starts down-stream electronics production like chip manufacturing, packaging of phosphor on LED dice, etc
4. Since MSME are the real drivers of growth, MSME development should take place with the help of ELCOMA and Government
5. Strict penalties should be levied on companies that fail to provide LED products (LED Luminaires, LED Lamps, Batters, LED Drivers and LED Modules, etc) as per the standards. BIS and/or MEITY should have a lot more punitive powers than present to prosecute non-compliant manufacturers
6. Urge MSMEs to upgrade skills and technology
7. Work with government to make funds available to MSME via grants for innovation, testing facilities etc



SIGNIFY ACHIEVES CARBON NEUTRAL OPERATIONS IN INDIA

Signify, the world leader in lighting, has achieved carbon neutrality in India, which is a part of its growth markets. The achievement is part of a total of five more markets – specifically ASEAN, Far East, India, Indonesia and Pacific – achieving carbon neutrality, boosting Signify's number of markets with carbon-neutral operations to 15 out of a total of 19. This brings Signify a big step closer towards achieving 100% carbon-neutral operations in 2020, one of the goals of its “Brighter Lives, Better World” sustainability program.

By focusing on energy efficiency, renewable energy consumption and office space optimization, the five markets have reduced their overall carbon emissions by 19% in 2019. This includes a reduction of 33% from non-industrial sites, 17% from industrial sites, 32% from business travel and 18% from logistics. Signify offsets its remaining emissions through contributions to projects that have a positive environmental and social impact, including small- to medium-sized wind farms in India and a hydro plant in Vietnam that operates without using a dam.

“I'm extremely proud of the relentless commitment of all our employees that resulted in this great milestone, showing that carbon neutrality is possible and that it is possible today,” said Sumit Padmakar Joshi, Vice Chairman and Managing Director - South Asia at Signify Innovations India “We hope that our achievements inspire other companies around us and we call upon them to join initiatives that will result in global carbon neutrality by 2050.”

Signify introduced its “Brighter Lives, Better World” sustainability program in 2016, setting ambitious sustainability goals for 2020, consisting of two pillars:

As part of the company's leadership in energy

SUSTAINABLE REVENUES:

- 80% of revenues will come from sustainable products, systems and services by 2020
- More than 2 billion LED lamps and luminaires delivered by 2020

SUSTAINABLE OPERATIONS:

- 100% carbon neutral for operations
- 100% use of renewable electricity
- Zero waste to landfill in manufacturing
- Strive for a safe and healthy workplace with a total recordable case rate of less than 0.35
- Ensuring a sustainable supply chain with a minimum supplier performance rate of 90%

efficiency measures Signify is committed to the World Green Building Council's initiative to have all of its buildings be carbon neutral by 2030. In addition, Signify supports The Climate Group's EV100 initiative to operate a 100% electric and hybrid lease fleet by 2030 and its RE100 initiative to scale up the use of renewable electricity. To further support these initiatives, during Climate Week New York 2019, Signify called on companies and countries to join the Three Percent Club, so carbon neutrality can be achieved by 2050.

Signify was named Industry Leader in the Electrical Components and Equipment category of the 2019 Dow Jones Sustainability Index (DJSI), receiving recognition for all its sustainability improvements for the third consecutive year.

AUTHOR : SIGNIFY INNOVATIONS INDIA LIMITED

Views expressed in this article are those of the contributors and do not necessarily reflect those of the editors or publishers

“We hope that our achievements inspire other companies around us and we call upon them to join initiatives that will result in global carbon neutrality by 2050”

Sumit Joshi,
Vice Chairman and Managing Director - South Asia
Signify Innovations India



MR. J.P. AGARWAL RECEIVES THE PADMA SHREE AWARD

ELCOMA is proud to announce that the highly prestigious Padma Shree award has been conferred upon Shri J.P. Agarwal, Chairman of Surya Roshni Limited. On 26th of January 2020, Sh. J. P. Agarwal (or JP ji as he is popularly known) was conferred the Padma Shree award, which is the fourth highest civilian award in the Republic of India, awarded to citizens of India in recognition of their distinguished contribution in various spheres of activity. It is a proud moment for the entire Lighting Industry and an acknowledgement that the award is well deserved for JP ji, who spent most his time in assisting poor and needy under various programs in the social venture Surya Foundation. His contribution to the development and growth of the Indian Lighting industry is unparalleled and unsurmountable.

Sh. Agarwal is the chairman of Surya Roshni Limited (formerly Prakash Surya Roshni

Limited), which is a household name in India for Lighting, Steel, Fans, Kitchen Appliances and PVC Pipes. Surya exports its products to over 44 countries and has a turnover over Rs. 6000 crore. He is also founder chairman of the Surya Foundation, a social NGO established in 1992, with a view to promote a greater sense of national consciousness and social awareness among our countrymen particularly the youth. Surya Foundation is working in the fields of Youth Development, Ideal Village Projects, Development of Naturopathy and Yoga, Education and Think Tanks for vital areas national development.

A graduate from Calcutta University, JP ji is influenced by the thoughts and life of Swami Vivekananda and plunged into the field of social service very early in life. He established International Naturopathy Organisation (INO) with a view to promoting and reaching

Naturopathy to each and every village. Presently he is a member of National Board of Development and Promotion of Yoga and Naturopathy, Ministry of Ayush. Sh Agarwal also renders help to many charitable causes in the form of a scholarships to needy and poor students and donations to various social service organizations.

Our heartiest congratulations to JP ji and wish him to carry on the work of servicing the poor and needy.



AUTHOR: ILLUMINATION EDITORIAL BOARD

THE GLOBAL LIGHTING ASSOCIATION ELECTS NEW EXECUTIVE COMMITTEE,



The Global Lighting Association (GLA) met early December in Tokyo and elected an inaugural Executive Committee in anticipation of its incorporation as a non-profit association in Switzerland. Completion of the incorporation process is expected early in 2020.

Maurice Maes, as a representative of LightingEurope, was appointed President. He is employed by Signify, formerly known as Philips Lighting, as Head of Standards & Regulations.

Reflecting a commitment to increase activities in support of the global lighting industry, the GLA elected two Vice Presidents to assist with the anticipated additional workload. They are Chen Yansheng, President of China Association of Lighting Industry and Pekka Hakkarainen, representing the National Electrical Manufacturers Association in the United States. Michael Ng from the Taiwan Lighting Fixtures Export Association was elected Treasurer.

"The time is now for the GLA to enable and promote, at a global level, the full potential of modern lighting to enhance human well-being alongside sustainability goals," said Maurice

Maes, "and this can only be done by the GLA taking an active role in harmonizing and ensuring better enforcement of regulations and standards across the globe."

The GLA today represents over 25 regional and national lighting trade associations, collectively representing over 5000 lighting manufacturers, and the association looks forward to welcoming new members to participate in the next phase of its journey.

About the Global Lighting Association

The Global Lighting Association is the voice of the lighting industry on a global basis, fostering growth for the lighting industry by promoting the value of lighting, as well as trade practices and healthy regulatory frameworks that stimulate innovation and fair competition. The GLA shares information on political, scientific, business, social and environmental issues of relevance to the lighting industry and advocates its position to relevant stakeholders in the international sphere.



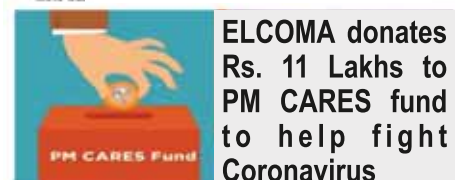
ELCOMA SEEKS INDUSTRY REHABILITATION PACKAGE FROM GOVERNMENT

Excerpts from Letter submitted by ELCOMA to PMO, DPIIT, Ministry of Power, MeITY and Ministry of Commerce among others

The Indian Lighting Industry has been badly affected by the outbreak of COVID 19. Not only have business operations been disrupted and completely shut down leading to significant revenue loss, but the entire industry is continuing to pay all the fixed overheads like salary and wages including PF/ESI, power, electricity, rent, maintenance and establishment expenses as well as interest on term loans and working capital. The industry is also expected to bear losses on inventories and delays in realization of receivables as well as logistics and supply chain issues for at least a period of 6 months.

The Indian Lighting Industry estimates this loss to be in the tune of Rs. 8000 crores in this financial year. To help ease the impact of these losses, the industry has suggested a 10 point rehabilitation program to the government.

- Government should not putting the entire burden of meeting fixed costs and complete wage bills on the shoulders of industry in a period where there is no inflows/revenues for more than 3 months. Allow businesses to take calibrated calls of payment of minimum stipulated wages, leave adjustments, selective pay cuts and job cuts that enable them to keep their businesses economically viable
- Government can support the Indian Lighting Industry by shouldering the payroll burden and providing financial relief to the employees/workers by paying partial (or complete) wages of employees for at least 2 quarters (Apr-Jun and Jul-Sep 2020)
- Government can support the Indian Lighting Industry by paying the PF/ESI for all employees for minimum 2 quarters (Apr-Jun and Jul-Sep 2020)
- Finance this loss by separate line of credit, named as "COVID 19 WORKING CAPITAL TERM LOAN" or CWCTL) where all the working capital bankers, shall proportionally finance the shortfall in working capital margin, during the period of 6 months from May, 2020 to October, 2020. This CWCTL is to be repaid after a moratorium of one year, from August, 2021 in 20 quarterly instalments. Interest shall be paid on Repo Rate (presently 4.4%) by Central Government directly to these banks and there shall not be any need for additional securities except residual charge of the present charges for working capital limits on parri passu basis.
- For the repayment of term loan instalments, there could be moratorium of 12 months in the repayment of the entire remaining installments and the interest on term loan for the period of 6 months shall be financed by "FUNDED INTEREST TERM LOAN - FITL" by respective banks/institutions, to be repaid in 4 quarters, after payment of the instalments of the principal. The interest on FITL must be directly paid by the Central Government and shall carry same securities as presently available for the term loans. Further, the above CWCTL as well as FITL shall be made either part of SLR investments or alternatively to be additionally funded to the banks through RBI at Repo Rate and must be guaranteed by Central Government to banks/lenders.
- GST paid by manufacturers for the first 3 quarters of this financial year (April-December 2020) should be refunded within one month of payment
- Promote an initiative to make up to 50% components for LED Luminaires and upto 35% components for LED Lamps in India.
- Give 50% subsidies for equipment / machinery procurement and another 50% interest free loan for 5 to 7 years for establishment of product development test lab and raw materials, etc.
- All pending and relevant standards, schemes and labelling programs which are pending implementation may be extended by 12 months to ensure that the industry has sufficient time to comply
- Waiver of demurrage charges payable on import consignments for the period April-Jun 2020 for All modes of import including Air Shipments
- Allow the industry to use CSR for next 2 years for rehabilitation of temporary and permanent staff by way of various options like ESI, PF, family welfare, children's education etc.



AUTHOR: ILLUMINATION EDITORIAL BOARD

BRIEF FROM ELCOMA LED COMMITTEE MEETING

1. STANDARD FOR TLED LAMPS

Draft standard on TLED lamps was prepared by the ET 23 panel where the following criteria were discussed/recommended

Lamp Efficacy – The panel recommended that based on current data shared by manufacturers, EESL tender specifications and IEA (International Energy Agency), the minimum efficacy level should be 100 lm/W

Efficacy Level	Minimum Efficacy (lm/watt)
1	100
2	120
3	140

CRI – Considering the CRI values specified in IEA specification, EESL tender specification and manufacturers product leaflets available online, the ET 23 panel decided to specify a minimum CRI value of 80 with acceptance criteria (initial and measured) same as given in IS 16102 (Part 2).

Life – ET 23 panel suggested that the standard should specify minimum life of the LED tube light of 25K hours since IEA specifications state that the minimum life of LED tube light is 25000 hours for level 1 and as per procurement specifications laid down by EESL, minimum life specified is 30000 hour. However ELCOMA members feel that they should oppose this proposed specification on life and the clause on life should be same as LED lamps where it is mentioned rated life as 25K hours or as declared by manufacturer.

Lumen Maintenance – The ET23 panel wishes to follow the IEA specification where the lumen maintenance at 6000 hours is 91.8% for claimed life between 25000 hours to 35000 hours, 94.1% for claimed life between 35000 hours to 50000 hours and 95.8% for claimed life above 50000 hours. In absence of the data for lumen maintenance values at 6000 h. ELCOMA would like to recommend that the

lumen maintenance clause of TLED be the same as per LED lamps standard IS 16102.

2. REVISED BEE STAR LABELLING SCHEME IMPLEMENTATION DATE

As per notifications, the implementation date is 1st July 2020. In view of the current COVID-19 pandemic, ELCOMA has requested BEE for an extension of the said date.

3. CRO PHASE 4

MEITY has published draft series guidelines and FAQs of CRO phase 4, where LED modules are included as Standalone LED modules and Lighting Chain (Rope Lighting) are included. ELCOMA has requested MEITY to extend the time line for discussions on the draft guidelines

4. BATTERY WASTE RULE 2020

Published through Gazette notification issued by Ministry of Environment on 20th February 2020, this draft notification invited comments from all stakeholders by 20th April 2020.

Some of the salient features of this notification included a) inclusion of LED lamps with emergency circuit and containing battery, Solar lanterns, streetlights with battery and operated by switch; b) Scope of notification includes export and import; c) EPR targets; and d) Responsibility of dealer to apply for registration to State Pollution Control Board, collect battery waste, submit details of waste collected to State Pollution Control Board and to file Annual Returns.

ELCOMA shared the following feedback to MoEF

- Since emergency lighting is included request MoEF to include solar lantern and other lighting applications which operate by switch in the exemption list.
- Export to be excluded.
- Responsibility of bulk consumer as defined in the notification includes battery collection and hand it over to recyclers.

So, this responsibility shall be deleted from the list of responsibilities of manufacturers and producers.

- Request for implementation prospectively and not retrospectively.
- Include this EPR in the same EPR authorization of CFLs, TLEDs pertaining to the E-Waste Guidelines 2016, so there will be one EPR authorization.

5. PUBLIC PROCUREMENT ORDER :

During the meeting it was discussed that ELCOMA must respond to MeitY's notification on Public Procurement (Preference to Make in India) Order 2017 where the criteria for percentage domestic value addition in terms of BOM required for LED products to qualify as domestically manufactured was defined as 65%. It was agreed to inform MeitY that the industry will agree to 50% Indian components in LED Lamps and Luminaires and a letter was submitted accordingly.

AUTHOR: ILLUMINATION EDITORIAL BOARD



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SIGNIFY ILLUMINATES WORLD'S LARGEST CRICKET STADIUM

Signify provides cricket fans in India a pitch perfect view at the Motera cricket stadium in Ahmedabad

Signify, the world leader in lighting, is providing cricket fans in India with a perfect view on the nation's favorite sport as it illuminates the Sardar Patel Stadium (commonly known as Motera Stadium), the world's largest cricket stadium located in Ahmedabad, in association with Larsen & Toubro. The newly constructed stadium was the venue for the public gathering addressed by the President of the United States, Donald Trump and Prime Minister of India, Narendra Modi during the former's visit to India.

Signify has equipped the Motera Stadium, which can host 110,000 spectators and is one of India's premier cricket stadiums, with 580 luminaries of Philips ArenaVision LED Floodlighting system for day-and-night games. This installation complies with the ICC

(International Cricket Council) Broadcasting standards for sports illumination. The stadium, owned by Gujarat Cricket Association, is a regular venue for Test cricket and One Day Internationals (ODI) matches. It features two cricket grounds, a cricket academy, an Olympic size swimming pool, a gymnasium and 75 corporate boxes.

The lighting system has been designed exclusively for sports and multi-purpose venues, offering outstanding light quality, higher energy efficiency, effective thermal management and a long lifetime.

"We are very proud to illuminate the world's largest cricket stadium using our Philips ArenaVision LED Floodlighting system. It is also India's first LED floodlit cricket stadium that meets the ICC Broadcasting standards.

This system will offer an unparalleled sporting experience for cricket fans in the country," said Sumit Padmakar Joshi, Market Leader of Signify's operations in India. "At the same time, it will help the stadium in achieving its responsible and environmental goals enabling durability through longevity and significantly reduce maintenance costs."

AUTHOR : SIGNIFY INNOVATIONS INDIA LIMITED

Views expressed in this article are those of the contributors and do not necessarily reflect those of the editors or publishers



ESSCI TO DEVELOP A 5 YEAR PLAN TO REVAMP SKILLS TRAINING



STRATEGY MEETING IN PROGRESS

The Electronics Skills Sector Council of India (ESSCI) has decided to introduce new ways and methods of skills training to make training more student friendly and at the same time also ensuring that these skills lead to assured employment after the training.

In a strategy meeting held recently, it was decided to review existing skills training system and add more value to it by certain actions which will ensure that priority will be given to digitalization, emphasis on MSMEs, Start-Ups, Defence

manufacturing, automobiles, electronics, fabs, batteries and medical devices etc. The plan will ensure that ESSCI follows government's plans that focus on key initiatives such as space programs like Gaganyaan, Ayushman Bharat, Safety and Security of Citizens, Public Communication Systems, Team India, Jan Bhagidari, rural push and court digitalization.

The vision 2025 document will be executed in 3 phases: Start 2020, review 2022, second review 2024 and final completion 2025. The council has decided to follow the PDCA cycle for continuous changes, i.e. after 2025, a new vision plan will be prepared.

HON'BLE MINISTER OF STATE FOR SKILL DEVELOPMENT AND ENTREPRENEURSHIP, SHRI R. K. SINGH MEETS THE ESSCI TOP MANAGEMENT



A review meeting for Electronics SSC was held on 19th February 2020 at Shram Shakti Bhawan, New Delhi under the Chairmanship of Hon'ble Minister of State for Skill Development and Entrepreneurship, Shri R. K. Singh. Discussions focused around how to generate demand in Skills training to reach masses especially the rural sector. The idea is to ensure immediate employment to all the candidates who successfully complete skills training and prepare the youth for future skill requirements.

On behalf of ESSCI, Mr. N.K. Mohapatra, CEO, made a presentation to the Minister

about the various activities undertaken by ESSCI. It was appreciated that this council has been able to generate 5 Lakh direct and indirect employment besides giving certificates to about 10 Lakhs candidates on completion of various skill based training

Mr. N.K. Mohapatra also informed about the Vision 2025 plan which will envisage expansions to various new areas like Global placements, Electronics Centre of Excellence, Micro- Entrepreneurship, Open source distance learning and prepare for new opportunities as per the countries plan of Infrastructure development.

SIGNIFY ILLUMINATES 5 PLAYGROUNDS IN MEWAT, HARYANA UNDER ITS CSR PROGRAM



“Signify has partnered with Gurgaon based SRF Foundation for this project, which will be expanded to 18 more playgrounds in Mewat in its next phase, benefiting 5,000 more students”

Signify Innovations India Limited (formerly known as Philips Lighting India) recently illuminated 5 playgrounds located in rural government schools in the Mewat District of Haryana under its CSR program called 'Khel Jyoti'. These playgrounds include badminton courts that have been lit up using high mast LED lighting, powered by solar energy. This interesting project has benefited more than 1200 school children, who can now play and practice badminton even after sunset in their newly illuminated playground.

In most parts of India, it gets dark around 5 or 6 pm and children get limited time to play in open fields after sunset. Under this program called Khel Jyoti, the company seeks to light

up playgrounds to create opportunities for young and budding sports talent to play for longer hours even after sunset and enhance their skills.

It's a well-recorded fact that playing sports not only improves a child's physical fitness, but also strengthens their holistic development by teaching them important life skills like patience, cooperation and team-working. By illuminating the playgrounds with solar-powered lighting, children are empowered to come out and play, giving them more autonomy, exercise and confidence.

Signify has partnered with Gurgaon based SRF Foundation for this project, which will be expanded to 18 more playgrounds in Mewat in its next phase, benefiting 5,000 more



“By illuminating their playgrounds using solar power, we enable these budding sportsmen to come out and play even after sunset and practise their sport more rigorously without any constraints”

Sumit Padmakar Joshi,
Vice Chairman and Managing Director, Signify Innovations India Limited



students. The project is enabling these young sportsmen, and especially young girls, to improve their playing skills and many of them have managed to qualify for district and state level competitions, thanks to their newly lit badminton courts.

“Even though India is a country of 1.3 billion people, it has only produced a handful of Olympians and talented sportsmen owing to lack of adequate sporting facilities. With more than half of its population under the age of 25, there is a lot of potential for India to leverage its demographic advantage and create its mark in international sports in the future. At Signify, our vision is to unlock the extraordinary potential of light for brighter lives and a better world. By illuminating their playgrounds using solar power, we enable these budding sportsmen to come out and play even after sunset and practise their sport more rigorously without any constraints.” said Sumit Padmakar Joshi, Vice Chairman and Managing Director, Signify Innovations India Limited.

Signify's CSR programs in India are focussed

on 'Illuminating the future' by bringing the power of lighting to schools, villages, playgrounds and providing skill-based training's to underprivileged youth. By lighting their lives, people can play, study and work after dark. Furthermore, young men and women can become trained electrical professionals, increasing their professional opportunities.

In 2019, the company successfully completed ten CSR projects spread across six states in India, positively affecting 54,000 lives. The company illuminated 37 schools, 6 playgrounds and 32 villages through solar powered lighting. Additionally, the company provided skill-based training to 3,395 youth to train them as electricians, including a pilot batch of women electricians.

AUTHOR : SIGNIFY INNOVATIONS INDIA LIMITED
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JACUAR LIGHTING HOSTS ONE-OF-ITS-KIND DIALOGUE 'PLAY LIGHT'

A confluence of industry experts and designers discussed the unique trends and the science behind lighting up spaces



On 23rd January, 2020 in New Delhi, LED Lights and lighting solutions market leader, Jaquar Lighting held its first dialogue panel titled Play Light at its Orientation Centre in Delhi.

The first edition of Play Light was a live symposium model on eccentric designs with discussions on the role of aesthetic appeal of lighting in modern interiors. Three detailed panel discussions formed the crux of the day's proceedings touching upon Lighting Psychology, Lighting Trends and Outdoor Lighting. The expert panel comprised of both local and internationally renowned designers, consultants and architects from prestigious design studios such as Grid Architecture, AND Studio, Chromed Design, Lipika Sud Interiors, Aparna Kaushik Architects, Design Matrix amongst others.

The first panel discussion on Lighting Psychology focused on the cognitive and emotional role that lighting plays in our daily lives, and how light creates more than just visual effects such as shape, image,

perception, intensity and contrast. The panel highlighted that lighting helps an individual navigate new spaces, enhancing one's experience in varied settings.

The second panel discussion was on decorative lighting trends that are currently transforming all kind of spaces through the use of technology such as sensors and façade lighting. Additionally, it was stressed that façade lighting plays a key role in architectural expression and aids in enlivening a building while also extending a sense of security to the space.

The final panel discussion touched upon the significance of outdoor lighting in landscaping. It helps in adding drama and aesthetic appeal to the home exteriors contributing a beautiful effect to the surroundings. The panel concluded that geography plays a crucial role in the choice of lighting owing to varying requirements and ideas of beauty.

Speaking on the first of the PLAY LIGHT series, Ranbir Mehra, Director, Jaquar Lighting said, "Jaquar Lighting as a business caters to consumers across segments – from value offerings to premium and luxury clientele. Being awarded international design awards for our smart street lights, we are encouraged to continue our consistent efforts in coming up with innovative lighting solutions that work harder than a normal light – serving more functions than one. Case in point, our smart street light performs various functions – it acts as a Wi-Fi router, a grid charger and an HD security camera among others. Similarly in the home space, our lights are designed to not just appear visually appealing, but also employs the theory of photo therapy which is soothing and conducive to relaxation, depending on the purpose. We are also the only company in the country that customizes

"In the home space, our lights are designed to not just appear visually appealing, but also employs the theory of photo therapy which is soothing and conducive to relaxation"

Ranbir Mehra
Director
Jaquar Lighting



chandeliers according to specific-designs using Swarovski crystals in record delivery time.

Having said that, collaborating and ideating with the best minds in the business has always been a crucial part of our growth strategy. Today's session was a small peek into the large canvas that Jaquar Lighting works with to come up with the best solutions for the market."

Speaking on the Jaquar Lighting business he added, "Since we introduced Jaquar Lighting into the market, our consistent focus has been to introduce smart, innovative solutions for our customers. While designing products we do not just consider aesthetics, we stress equally on functionality, and the emotional appeal of the product. We understand how lights can be a crucial element in setting the mood whether at home, at work, at the mall or outdoors. This is perhaps why we have been able to maintain a CAGR of 90% in the last four years, while expanding our operations to over 50,000 retail outlets across the country. Our goal for 2022 is to drive sales up to 1,000 crores. In the next few months, our 9 lakh sq ft lighting factory will

also be ready for production – the only facility in the country to produce LED in-house, and one of the biggest in Asia. This scale of production coupled with our after-sales services, we believe, will help us make our product portfolio smarter, more robust and unique."

About Jaquar Lighting

Jaquar Lighting offers complete lighting solutions – for residential, commercial and outdoor use. From LED bulbs and tube lights, to chandeliers, landscape lighting and accessories; Jaquar Lighting has a holistic solution, with an extensive range that is synonymous with quality and reliability. Some of the prestigious projects that have been won by Jaquar Lighting include: Governor House Dehradun, Jammu & Kashmir Assembly Srinagar, Air Force Headquarters Delhi, National Defence Academy (NDA) Pune and ISRO among others. Jaquar Lighting also has corporate tie-ups with Sayaji Group, Lemontree, Jaypee and more.

AUTHOR : JAQUAR LIGHTING

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CORONAVIRUS CAUSES POSTPONEMENT OF INTERNATIONAL LIGHTING EVENTS

light+building

Due to the threat posed by COVID-19, Messe Frankfurt, the organizers of Light + Building, the largest International Lighting Fair which is held biennially in Frankfurt, postponed the event which was originally supposed to take place between 8-13 March 2020.

In view of the world-wide situation caused by the Corona pandemic, and the prohibitions on events and travel restrictions associated with it, Messe Frankfurt decided, jointly with its partners – ZVEI and ZVEH – and with the Trade Fair Advisory Council, to defer the eleventh Light + Building and to hold it, in accordance with its normal sequence, from 13 to 18 March 2022.

The LED professional Symposium + Expo, another important lighting event in Europe, has been cancelled. The event was planned from September 22 to 24, which would be a week before the new date of Light + Building.

Another lighting event that has been postponed due to the increased spread of the coronavirus in Europe is Prolight + Sound 2020. Messe Frankfurt announced that Prolight + Sound 2020 will now take place

from 13 - 16 April 2021. The event was originally taking place from March 31 to April 3 2020.

The fate of the Guangzhou Light Fair, another International Lighting event that the industry looks forward to, is still unclear. The organizers of the fair which is supposed to be held between 9-12 June 2020 have not announced any postponement yet.

Messe Frankfurt India is enthusiastic about the LED Expo India which is scheduled for Dec 3-5 2020 at Pragati Maidan, New Delhi and is currently not foreseeing any postponement or cancellation of this event. However the LED Expo in Mumbai slated for May 2020 has also been postponed to 18-20 Sep 2020.

Due to impact of Corona virus on the Indian Lighting Industry, ELCOMA has decided to postpone the Light+LED Expo which was planned for December 2020. This is now expected to be organised in 2021.



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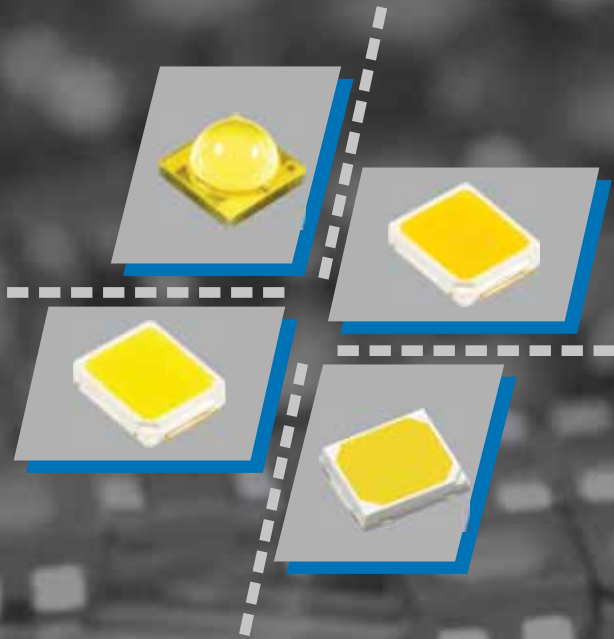
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