

IllumiNation

JANUARY 2020

THE LIGHTING MAGAZINE

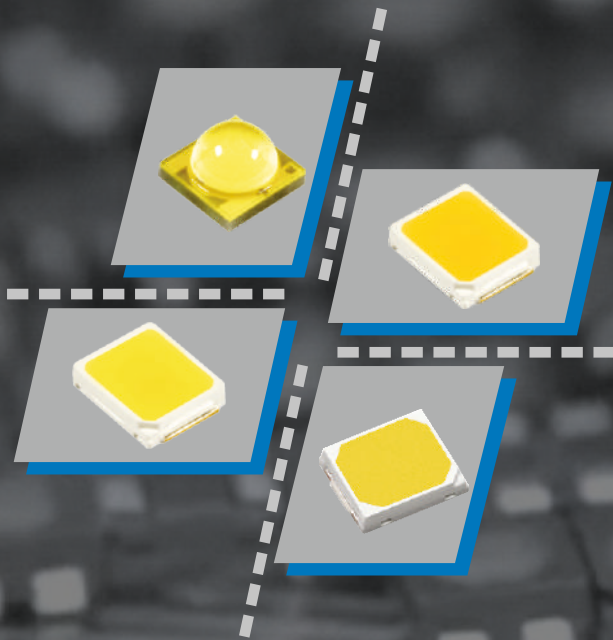
GURDWARA PULPUKHTA SAHIB RADIATES WITH FAÇADE ILLUMINATION TECHNOLOGY BY JAQUAR



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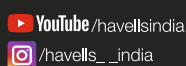
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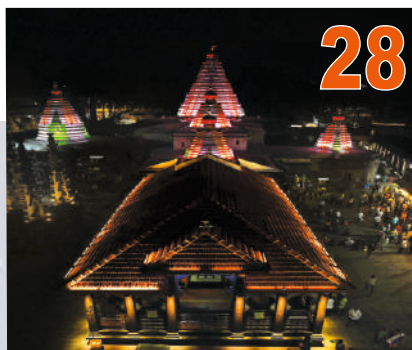


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CONTENTS



CAPTAIN SPEAKS

- 10** INNOVATIVE SOLUTIONS WILL OVERCOME CHALLENGES OF INTELLIGENT LIGHTING
- GAUTAM SETH, JMD, HPL ELECTRIC

CHAT TIME

- 14** CHATTING WITH PUNEET DHAWAN,
EXECUTIVE VICE PRESIDENT OF ORIENT ELECTRIC



COVER STORY

- 18** MAGNIFICENCE OF HISTORIC PULPUKHTA SAHIB GURUDWARA IS ENHANCED WITH LED ILLUMINATION BY JAQUAR LIGHTING



TECH TALK

- 16** INCREASING APPLICATIONS AND RISING MARKET OF UV LED

FEATURE STORY - *50 Years of Elcoma in India*

- 22** THE ELCOMA STORY
23 ELCOMA VISION 2020
24 MY JOURNEY WITH ELCOMA - SHYAM SUJAN,
SECRETARY GENERAL OF ELCOMA
25 CONGRATULATIONS ON COMPLETING 50 YEARS - A LETTER
FROM SHEKHAR BAJAJ, CMD BAJAJ ELECTRICALS
26 NEW BEGINNINGS - DR. A. D. KULKARNI,
CMD LITEX ELECTRICALS
26 CONGRATULATIONS ELCOMA - S. K. BANSAL
DIRECTOR MERCURY LAMPS
36 HOMAGE TO A LEGEND - REMEMBERING
HARCHARAN SINGH MAMAK

FEATURE STORY

- 28** BAJAJ ELECTRICALS ILLUMINATES THE
KARVIRNIVASINI AMBABAI TEMPLE IN KOLHAPUR

EVENT CORNER

- 30** ELCOMA GB/AGM MEETING AT JAQUAR LIGHTING, MANESAR

INDUSTRY SHOWCASE

- 38** ISA INTERNATIONAL LIGHTING AWARDS 2020 FOR BOGIBEEL
BRIDGE, ASSAM TO BAJAJ ELECTRICALS
40 ISA INTERNATIONAL LIGHTING AWARDS 2020 FOR JAWDUT
PROJECT AT RIYADH TO JAQUAR LIGHTING
41 ISA INTERNATIONAL LIGHTING AWARDS 2020 FOR
LIGHTING OF GOLDEN TEMPLE TO OSRAM LIGHTING
42 EESL WINS INTERNATIONAL AWARD FOR OUTSTANDING
ACHIEVEMENT IN LED PENETRATION IN INDIA

INDUSTRY NEWS

- 32** ILLUMINATING NATION WITH SMART LED STREET LIGHTS -
EESL FELICITATED FOR INSTALLING 1 CRORE STREET LIGHTS
35 ESSCI CELEBRATES ITS 7TH ANNUAL DAY
43 LIGHT INDIA AND LED EXPO TO MERGE
44 OTHER INDUSTRY NEWS



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Shyam Suján
Electric Lamp and Component Manufacturers' Association of India
202, 2nd Floor, DLF Tower-A, Jasola District Centre, Jasola Vihar, New Delhi -110025
Tel: +91-11-41556644/46604947

EDITOR

Shyam Suján,
Secretary General, ELCOMA

EDITORIAL BOARD

Sudeshna Mukhopadhyay
Krishan Suján
Natasha Tandon
Jayaganesan K
Pruthwiraj Lenka
Shakti Leekha
Subrata Sen

EDITORIAL CONTACT

info@elcomaindia.com

MARKETING AND ADVERTISEMENT CONTACT

Nikita Gupta
nikita@elcomaindia.com

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CELEBRATING 50 YEARS

On 29th June 2020, ELCOMA will complete 50 years of its existence in India. On this day 50 years ago, 11 manufacturers of Lighting Industry got together to establish an association that would work towards the benefit of the Industry in India. During the 70s all industries had to follow strict government control and norms and even the scale of manufacturing was controlled. There was a clear distinction between small, medium and large manufacturers and different rules and regulations existed for each category. There were multiple instances when multinational companies were asked to withdraw from the country and these brands were disallowed from selling products in the country. ELCOMA's charter at that time was to have an effective liaison between the government and the industry to address all such challenges.

Starting with 11 members in 1970, ELCOMA continued to add members in the form of manufacturers from small to large scale and from various segments. By 2010, the membership of ELCOMA had reached closed to 100. The contribution by all members to the cause of this industry has been immense. In the fifteen years that I have been associated with ELCOMA, I have felt that all members treat this association as one family and whatever their differences in the market, at ELCOMA they are always united in their approach. In all these years I have never come across any dispute or issue raised by any member of this organization that was against the very spirit of existence of ELCOMA and its charter.

To celebrate 50 years of ELCOMA in India, we have prepared various events which are spread over the entire year. To start with, we have prepared a common desk calendar and year planner depicting the 50 Years of ELCOMA in India. In the month of March, we will organize a celebration at an exotic resort in NCR and invite all ELCOMA members along with their wives for a gala night to relive the 50 year journey of ELCOMA and the Indian Lighting Industry. During the year we will organize visits from international delegates and take them to factories of our members to focus on the advances in technology and manufacturing made by Indian companies. The Light India exhibition will be held in November/December 2020 in which we have organized several events on the theme of the 50 year celebration. The best part is that this time, both Light India and LED Expo will merge and have a common exhibition at the same venue.

From the first issue of this magazine in 2020, we will cover various reminiscences of senior ELCOMA members and we will also pay homage to those members who have contributed to making ELCOMA what it is today through a "Wall of Fame" at the Light India Exhibition.

I would like to congratulate all ELCOMA members for completing 50 years of friendship and fraternity and we look forward to many more years of association with our members.

I also take this opportunity to wish all our readers a very happy and prosperous New Year.

Best wishes

SHYAM SUJAN

Secretary General

Electric Lamp and Component Manufacturers Association of India (ELCOMA)



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ELCOMA PREPARES FOR VISION 2022

I am pleased to inform that in June 2020, ELCOMA will complete 50 years of its existence in India. As mentioned by me in the last issue, we will be celebrating the year by organizing various events. I take this opportunity to congratulate all members of ELCOMA and the ELCOMA Secretariat for keeping the spirit of togetherness and fraternity alive over the last 50 years.

ELCOMA members have proactively been manufacturing almost all products in India for more than 70 years. Recently, when we launched LED in India, the manufacturing of LED products has been diluted by relying more on imported components and assembling in India. We have to change this situation and look forward to establishing manufacturing of components in India so that all LED products are finally made in India. For this initiative, we are preparing a Vision 2022 document which will act as a guide to Lighting Industry to support the manufacturing all lighting products in India. The vision will also prepare the industry for exports promotion. We are in discussion with the government to provide us with necessary support both financial as well modifying policies to help industry to work more smoothly.

Non-compliant products being sold on a large scale in India has disturbed the industry to great extent. ELCOMA has started various initiatives to bring such activities to the notice of the government on regular basis so that the Government can take suitable measures to curb this activity.

The Lighting market has been experiencing a sudden slow-down for the last 6 to 7 months. Looking at the BSE Sensex rising at galloping pace, it is an indication that there is no recession as was feared sometime back. We can foresee that the market will turnaround in due course and we look forward to a happy and prosperous 2020.

With best wishes

RAJU BISTA
President, ELCOMA

The year 2020 being 50th year of ELCOMA, elaborate arrangements are being made to celebrate the same.

1. Light India Exhibition – Invite a large number of foreign delegates, arrange Gala Dinner, create Hall of Fame depicting events over 50 years including list of past Office bearers etc,
2. 50th year celebration in June 2020, by organizing a gala dinner, inviting all members and their families for an entertainment program.
3. Special Medallion to be presented to all members
4. IllumiNation magazine to carry information on 50 years in each issue from January 2020.
5. Year planner and calendar for 2020

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INNOVATIVE SOLUTIONS WILL OVERCOME CHALLENGES OF INTELLIGENT LIGHTING



Mr Gautam Seth, Joint Managing Director, HPL Electric and Power Limited, in conversation with IllumiNation about Intelligent Lighting and controls.

How is HPL looking to address the opportunity offered by Intelligent lighting space?

Intelligent lighting not only adds to interior and designing but is also becoming a necessity of modern times. HPL Electric & Power Ltd. has always been a manufacturer of innovative and advanced solutions and provides an entire range of intelligent lighting.

Intelligent streetlight solution (ISLS) is one such product which is uncomplicated and easy to setup and manage. Its design is robust and reliable and provides a wireless streetlight network solution with secure two way communication for remote monitoring, data collection and control.

In LED segment, HPL has recently launched few intelligent illumination products. Chameleon, the colour changing lamp, operates through remote control, has a hassle free operation, creates wonderful room lighting aura and gives wide operating input voltage range. Kasper, the Inverter Lamp, comes with high power backup, fast charging, in-built Li-ion rechargeable battery, over voltage and over charging protection, surge protection of 2.5KV, automatic switch on and a BIS approved battery.

What in your opinion are the various benefits of connected applications?

Connected lighting is very beneficial for large installations specially streetlights and commercial projects. In streetlights, the performance of each fitting can be measured, besides switching can also be programmed. Similarly in larger commercial installations, the control room can monitor each fitting and can also manually or automatically use dimmer facility and provide different hues as per the requirement of place and mood of the event.

What kind of obstacles do you see for intelligent products in India?

Today, a major part of world's total electricity generation is consumed for illumination purposes and this is a critical area of concern as the power generation in India is less than

the expected demand. Another area of challenge to the industry is development of illumination technology as India lacks technology and capital infrastructure in comparison to the global competitors.

With the emergence of new challenges, there are also new innovative solutions. One such innovation we have witnessed towards energy conservation is being led by the LED lighting technology industry, which has rapidly made tremendous strides towards conservation of energy. LED technology is very versatile and can be used in any application.

Do you think that intelligent Lighting affects illumination delivery? How?

Lighting technology has seen vast innovation. We've seen the emergence of various light sources such as LEDs and OLEDs, but the development of intelligent control of lights, is the most innovative component that has been developed in recent times.

Intelligent lighting controls permit light to be automatically and individually adapted to changing situations and local requirements. These controls were previously implemented as external components connected to existing lighting via defined interfaces such as 0-10V or DALI.

Can you give some examples of Products/Services/Verticals where HPL would be focusing their intelligent lighting product portfolio?

The demand for LED lighting systems is continuously rising across the country due to flourishing urbanization and backed by government initiatives that encourage the use of LED lights. Government projects and initiatives have promoted the investments in energy efficient lighting technologies and increased the applications of LED lights across various industrial, commercial and residential sectors.

HPL has various intelligent lighting products in its portfolio and has supplied illumination solutions to various cities of India with futuristic technology. HPL has also

“Lighting technology has seen vast innovation. We've seen the emergence of various light sources such as LEDs and OLEDs, but the development of intelligent control of lights, is the most innovative component that has been developed in recent times.”

“...in larger commercial installations, the control room can monitor each fitting and can also manually or automatically use dimmer facility and provide different hues as per the requirement of place and mood of the event.”

participated and completed few government projects. Bhopal Smart City is one such example where we had installed more than 21,000 LED street lights.

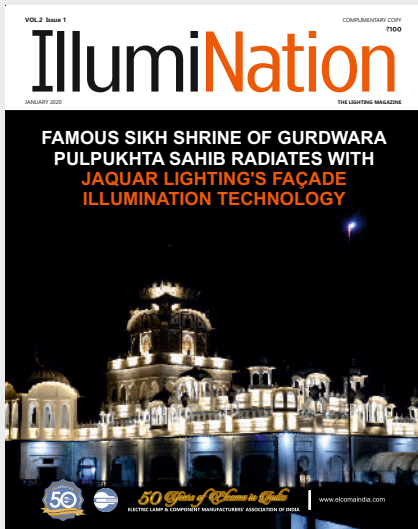
What timeframe do you see these kind of applications becoming a reality in India?

According to the latest report by IMARC Group, titled “Indian LED Lighting Market: Industry Trends, Share, Size, Growth, Opportunity and Forecast 2018-2023”, the Indian LED lighting market was worth US\$ 1.5 Billion in 2017. The Indian lighting industry is expected to grow at a higher rate per annum, ranging between 13% and 15% until 2020. However, with a population of around 1.2 billion people, India is yet to cater electricity to

around 0.3 billion people, which can be another catalyst for growth in the coming years as the government moves towards total electrification of each and every corner of the country by 2022.

India is the promised land with lot of opportunity in infrastructure development and urban town planning with Smart Cities, etc. New Metro rail, Airport and Highway projects will all add to vast demand in Lighting products in next at least 20 to 25 years.

AUTHOR: ILLUMINATION EDITORIAL BOARD



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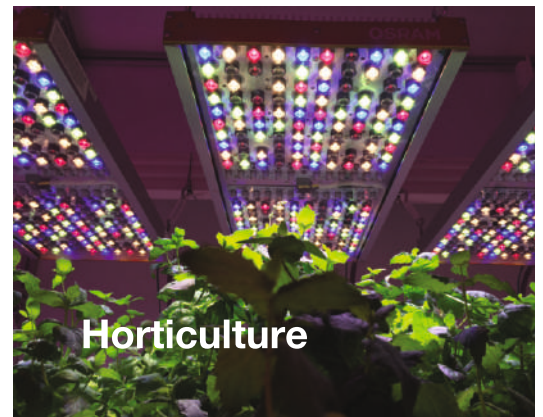
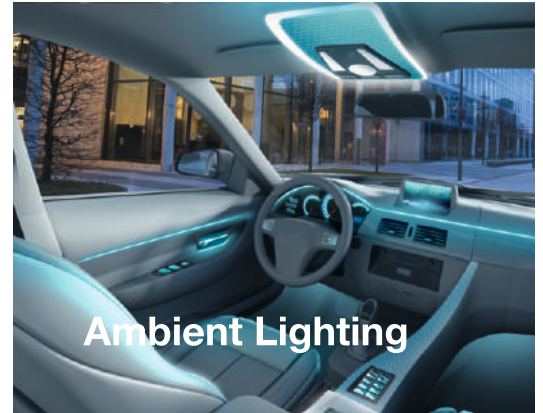
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APPLICATIONS OF SMART LED LIGHTING ARE UNLIMITED

Chatting with Puneet Dhawan, Executive Vice President of Orient Electric

What made you choose Lighting as a profession?

Lighting has always fascinated me. It is one of the most important needs of our lives today.

Even a person with normal vision is as good as blind in a dark room. Lighting enables vision. Lighting is also a productivity tool as it enables us to work in the hours of darkness as well. This was not possible a couple of centuries ago where work stopped at sundown.

I have always wanted to be part of a business that touches the everyday lives of people and thankfully I am part of an industry that brings light to the homes of the consumer. Also, when I got into Lighting in 1991, it was a very specialized field and this motivated me to explore this as a career.

How did you plan your entry into Lighting?

Actually, it was not planned! I was in another division in my first company as Engineer Trainee and was always fascinated by talks of my lighting colleagues especially professional luminaire segment as they often discussed various lighting projects and lighting designs for various industries etc. So, upon completion of my training period, I requested the management to consider me for transfer to the Lighting division which fortunately was accepted and thus started this glorious journey.

Would you like to share an anecdote or incident related to your career in Lighting?

All Lighting Industry professionals spend a large part of their time among lighting fixtures and lamps and as a result, I have developed a unique habit due to my career in the Indian Lighting Industry. Wherever I go, be it any office, home, factory, theatre, airport, railway station, highway or street, I am always curious to know what type of lighting and which brand of lighting fixtures are being used at that place. This invariably forces me to look up to see the lighting fixtures and lamps installed at every place which I visit. It is disconcerting for others who are present along with you and my family was initially very upset that I always used to look upwards while walking on the street or

while in a restaurant or at a shopping mall. In fact, many a times I have stumbled due to this habit.

But now after 30 years in this industry, my family has accepted this habit and I also don't stumble so much anymore.

What do you think is the future of lighting?

Lighting of today is very dynamic. After the introduction of LEDs in lighting, products have become very versatile and LED lighting fits into all kinds of applications. The latest innovation in the lighting Industry now is Smart LED Lighting where the applications are unlimited. This future technology has once again woken up the designers and advocates of lighting to think about how best we can use this technology for future applications.

IN A LIGHTER VEIN

Favorite book : First, Break All The Rules by Marcus Buckingham and Curt Coffman

Favorite movie : Hrishikesh Mukherjee's Chupke Chupke and the SRK starrer Chak De.

Favorite food : Aloo Parantha, Kaali Daal with Lachaa Parantha

Hobbies : Cricket and learning some IT skills.

Favorite Hero/s : Dharmendra and Akshay Kumar

My family ... One of its kind ! No family is perfect, we argue, we fight, we even stop talking at times. But in the end, family is family. There will always be love and we are always there for each other.

How I pass my free time ... Though free time is rare but still if I manage to get some, I like to listen to my favorite hindi songs.

AUTHOR: ILLUMINATION EDITORIAL BOARD

“I have always wanted to be part of a business that touches the everyday lives of people and thankfully I am part of an industry that brings light to the homes of the consumer”

INCREASING APPLICATIONS AND RISING MARKET OF UV LED

Deep UV LED applications market include Sterilization, Purification and Water Treatment

With a wide range of applications, UV LED is considered a new rising opportunity for the LED industry. A recent report by LEDinside predicts that the UV LED market will continue to increase with steady growth in the curing market and rising applications in sterilization for surface, air, static and flowing water and forecasts that the UV LED market value will reach close to a billion US\$ by 2023.

Based on the wavelength of light emitted, UV LED can be categorized into three types, UVA, UVB and UVC LED. UVA LED emits light with wavelengths between 320-400 nm, UVB with wavelengths 280-320 nm and UVC 200-280 nm.

UVA LED has been widely used in light curing applications for display instrumentation, coating, printing and others. UVB, on the other hand, is applied in medical field for skin treatment as studies have found though the UV wavelength of 310 nm can enhance skin growth and improve metabolism. UVC LED, with its high energy, is often used in destroying micro-organisms like bacteria, viruses and is an efficient solution in disinfection.

The manufacture and trade of mercury lamps will be banned from 2021. UV LED is safe and sustainable in comparison with mercury UV lamps and thus can be used in a wider range of applications, opening up a greater market opportunity.

Many LED manufacturers are launching UVC LED products in 2019 to meet the rising demands driven from UVC LED applications including water and surface disinfection. Nichia recently released its new UVC LED product targeting water purification and air sterilization, while Osram Opto Semiconductors has also prepared UVC LED products for innovative applications.



Korean Design Team Puts UV LED on Drone to Clean Subway Trains and Stations

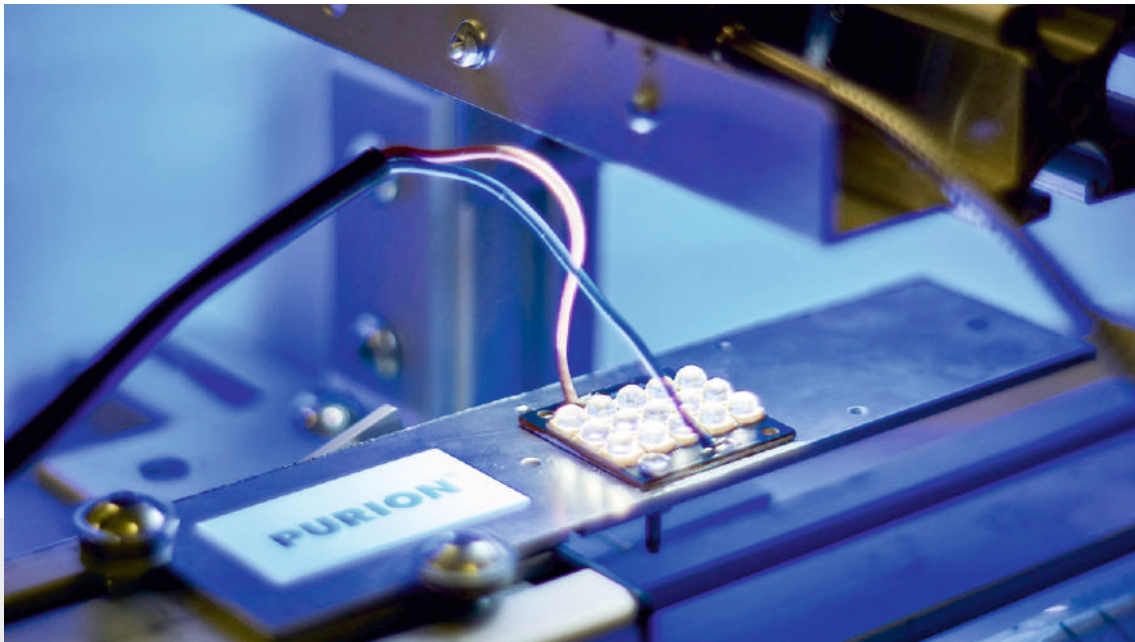
UV LEDs cover a wide range of applications including light curing, medical treatment and disinfection. And now, UV LEDs are put on drones to spew UV light in subway stations and trains for sanitization.

An online magazine, Yanko Design, reported that Korean designers at Off Garage Studio created a UV LED integrated drone as a "space care system," providing autonomous sterilization service. Equipped with sensors and UVC LEDs, the drone is designed to fly smoothly around the station and emit UV LED light in the subways to efficiently and

effectively clean the germs on surfaces as well as purify the air.

Apart from UVC LED, the drone has a front vision sensor, a driving camera, a bottom vision sensor, a side vision sensor and an ultrasonic sensor to ensure flight safety. In addition, it also installed with front LEDs and bottom LEDs that light up in the dark. When the stations close, the drone can float around to provide thorough hygienic services.

The designers call the drone "GHOST," addressing its white color and light design. This product would help to cut down extra cleaning hours and enhance hygiene in public transportation.



numbers of LEDs used and how light sources with different wavelengths were arranged in the module.

Following numerous practical tests, the researchers are now able to operate the UV LEDs directly in water without the need for a tube to encase them. Thus they eliminate reflections to further increase the performance yield of the radiation sources. For the industrial partner PURION, the experts at Fraunhofer IOSB-AST

German Research Center Uses UV LED Disinfect System for Beer Bottling

UV LEDs are recently replacing mercury light as UV light source for disinfection applications. German researchers have developed a UV LED based disinfection system to purify brewing water and clean the caps for bottled beer and soft drinks.

Researchers at the Advanced System Technology (AST) branch of the Fraunhofer Institute for Optronics, System Technologies

and Image Exploitation IOSB in Ilmenau, Germany, have cooperated in collaboration with PURION, a UV technology solution provider, to create UV LED based purifying module to destroy germs during the process of beverage bottling.

Thomas Westerhoff, scientist at Fraunhofer IOSB-AST, and his team designed the UV LED module which delivers a maximum wavelength of 265 nanometers to reach an optimal disinfection performance. Westerhoff indicated that the team had to consider the

have developed a special module that can disinfect the insides of beer caps during the production process before the bottles are filled with beer. This ensures that no germs get into the bottles during the production process.

“We were able to irradiate the inner surface of the caps with a UV power of four watts. Doing that with mercury-vapor lamps on such a small surface is almost impossible,” said the engineer.



UV-C LED Integrated Smart Bottle Keeps Drinking Water Clean

A French/Chinese design store NOERDEN launched a smart bottle which can autonomously sterilize water with built-in UV-C LED sterilization system and remind people to drink more water with a hydration reminder. The smart bottle, named LIZ, is featured with a touch responsive smart lid with UV-C LED that can destroy up to 99.9% of harmful viruses

and bacteria, according to NOERDEN. Users only have to tap the lid twice to start the sterilization process, which sends the UV-C light through the empty bottle or through the water in the bottle to destroy bacteria and viruses by breaking down their DNA. The LED indicator stops flashing when the sterilization is complete.

AUTHOR: ILLUMINATION EDITORIAL BOARD
BASED ON ARTICLE PUBLISHED IN LEDINSIDE

MAGNIFICENCE OF HISTORIC PULPUKHTA SAHIB GURUDWARA IS ENHANCED WITH LED ILLUMINATION BY JAQUAR LIGHTING



The famous Sikh shrine of Gurdwara Pulpukhta Sahib, also called Gurdwara Tahli Sahib, built to commemorate the 6th Sikh Guru, Guru HarGobind's visit and stay here, is now the cynosure of all travelling on the Tanda-Hargobindpur Road in Hoshiarpur District of Punjab - thanks to the brightness it radiates at night with Jaquar Lighting's façade illumination technology.



In addition to instilling pride and establishing the Gurudwara as a landmark in the city, the Gurudwara committee was also interested in saving on energy costs, improving operational efficiency with an LED lighting system that could be easily controlled and managed

Pulpukhta town is about an hour's drive from Hoshiarpur in Punjab. Located near the Kali Bein river, this is where Guru Hargobind Sahib, the sixth Sikh Guru, came to stay in 1629, after defeating the forces of Mughal governor Abdullah Khan, in what is now known as 'the battle of Hargobindpur'. As he dismounted from his horse, Guru Hargobind Sahib tied the reins to a log of a Tahli tree. That wood log is still preserved inside the sarovar (pond) of this Gurudwara. This is the reason why this shrine is also known as Gurudwara Tahli Sahib.

The project and its challenges

Lighting historical, cultural and natural locations of value in cities at night allows for a great enhancement of the location's ambiance and helps in attracting and guiding

visitors to landmarks such as this. Knowing this well, the Gurudwara Authority wanted to ensure that the Tahli Sahib Gurudwara stood out in the city skyline of Pulpukhta.

In addition to instilling pride and establishing the Gurudwara as a landmark in the city, the Gurudwara was also interested in saving on energy costs, improving operational efficiency with an LED lighting system that could be easily controlled and managed, as well as allow for the display of art and culture.

For Jaquar Lighting, the challenge lay in creating a sense of brightness and sparkle that would work both up close, as well as from a distance, without glare or spillage that causes light pollution.

Technically, the solution required products of precise size of luminaires that could fit

For Jaquar Lighting, the challenge lay in creating a sense of brightness and sparkle that would work both up close, as well as from a distance, without glare or spillage that causes light pollution.

properly in the limited space on the walls. They also had to optimize the number of fixtures without compromising on illuminating the structure at its maximum height along with ensuring uniform light distribution.

The Jaquar Lighting solution

Jaquar Lighting's technical experts managed to provide a brilliant solution using just 4 different types of LED fixtures. Wall Washers with 15x15 degree beam angles were used for their high throw to light up the higher walls. For walls that needed a medium throw, at lower heights, they used Wall Washers with

36x40 degree beam angles. In addition, 1000mm and 600mm Wall Washers were put into use to achieve precision lighting wherever it was required.

All these, along with a considered choice of 2700K as the CCT, for its sense of warmth and natural timelessness, result in a stunning monument that adds a completely new dimension to the much loved and revered place of worship. Every Sikh pilgrim and passing tourist will, for sure, feel a wonderful upsurge of emotions that this holy shrine now evokes in the nighttime.

AUTHOR: JAQUAR LIGHTING INDIA LIMITED

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





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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.



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THE ELCOMA STORY



On 29th June, 1970, the Electric Lamps and Components Manufacturers in India founded "Electric Lamp and Component Manufacturers Association of India" (ELCOMA), representing the entire lighting industry. The main purpose that the founding members had in mind was to establish liaison with government bodies and to support each other in matters connected with lighting industry.

In its early years, ELCOMA successfully drew attention of the government to the difficulties faced by the members and highlighted development in new light sources and energy saving solutions to the customers.

During the 1980's and 1990's extensive development and introduction of various types of energy saving lamps offered wide range of choice to the customers and offered indigenously manufactured lamps for all type of applications, thereby saving precious

foreign exchange when the country needed it most.

ELCOMA can be proud of the fact that in spite of inflation, energy price increases and other prices rises, the price of lighting products have become more cost effective. With the success achieved by the Association, new entrants to the lighting industry from organized as well as small sector readily became members and took active interest in the growth and development of the lighting industry.

Functions and Services

The main objectives of ELCOMA and its functions and services are:

- To enable manufactures of lamps and components to federate or corporate by becoming members or associates of the Association, either by themselves or their nominees or act as their representatives or spokesmen for such manufacturers.
- To promote and develop co-operation among the manufacturers of electric lamps and other ancillaries and business and to further facilitate the manufacture of products in particular.
- To promote the consideration and discussion of all questions affecting lamp industry and all ancillary and allied trades, and every branch of such trade and to generally watch over and protect the interest of persons engaged in the manufacture of such products.
- To diffuse among its members information on all matters, affecting the lamp manufacturers to print and publish, issue and circulate such papers and periodicals, circulars and other material relevant as may be seen conducive to any of these objects.
- To promote the distribution of products to all consumers throughout India by the members of the Association and with the object of fostering and promoting esprit-de-corps among the lamp manufacturers in India.
- To collect information and circulate and publish the policies and activities of the Association from time-to-time through pamphlets, circulars, or news bulletins.
- To organize exhibitions, conduct seminars, conferences, symposia, lectures and publish its official bulletin, 'ELCOMA' News Letter and make known to public the activities of the Association.
- To provide to its members statistical information pertaining to lamp industry and keep the members informed regarding latest technical development, quality control and achieve standards and specifications.
- To be in close touch and establish liaison with various institutions and organizations and government bodies connected with the development of Electric Lamp and Component Industry and to carry continuous dialogue with the govt.
- To make representations and to deal with the subjects that affect the Electric Lamps and Component Industry and find ways and means of solving the problems and difficulties relating to subjects like finance, import-export, supply of raw materials, machinery and spares, taxation (all types-customs, excise, octroi, sales tax and GST etc), industrial relations, procedural delays, factory enactments, power, transportation etc.
- To carry out such acts as maybe required for the benefit of the industry to upgrade themselves in terms of knowledge/ technology etc.
- To educate and inform the consumer on the developments in the industry and help the nation to save energy and costs through introduction of better products and applications.
- To act as a link between lighting and other industry association in India and worldwide in matters concerning common interest.

The prominent founding members were

- Philips India Ltd
- Mysore Lamps Ltd
- Bengal Lamps Ltd
- ELMI, Hind Lamps Ltd
- Toshiba Anand Ltd
- Metal Lamp Caps Ltd
- Auto Lamps Ltd
- Sylvania and Laxman Ltd
- Crompton Greave Ltd
- GE Lighting (India) Ltd
- Surya Roshni Ltd
- VWF Industries Ltd
- Kuber Lighting (P) Ltd
- Punjab Anand Lamp Industries Ltd
- Electric Lamp Manufacturers (I) Ltd
- Phoenix Lamp India Ltd
- Mercury Lighting (P) Ltd



ELCOMA VISION 2020



VISION 2020 OBJECTIVES

- Lighting Consumes 18% of the total electric energy produced in the country. Energy Consumption in lighting alone is planned for a 5% reduction by 2020.
- The lighting industry will develop and introduce world class technology with emphasis on local manufacture.
- Product and systems introduced in India will be environmentally friendly.
- Lighting Industry will create employment.
- The industry would develop Backward integration as much as possible to ensure sustainability.
- Quality has always been a benchmark for ELCOMA which has followed national and international standards on quality.
- Promoting R&D and Training/Education.
- Export ambition of the industry is to achieve a total of 25% of the Indian turnover by the year 2020. Also to become an export hub for Asian and the Gulf countries.
- Specialize in luminaire manufacture where the skills both for production and design are amply available.

To launch LED Lighting in India, a vision document was prepared by ELCOMA in 2013. We are proud to announce that as an Industry, we have crossed most of the targets and milestones of the vision document well before the end of 2019.

THE MISSION

With The emergence of LED Lighting Technology and Keeping in mind national requirement to reduce gap between power demand and supply, ELCOMA decided to create an atmosphere of energy conservation both within the industry and to the end users, and with this in mind, ELCOMA proposed a concept paper to the Government of India with

an aim to “.. **reduce India's Lighting Energy Consumption from 18% to 13% by year 2020 by adopting Energy Efficient Lighting and developing India as self-sustainable World-class, Cost-Effective Manufacturing Hub.**”

The Result

As a result of the vision document being accepted by the government in 2014 and the activities undertaken as a result, over 350 million LED bulbs have been distributed by the government through EESL (Energy Efficiency Services Limited) through their Ujala program which has led to 47000 mn kWh energy savings per year and avoided approximately

9400 MW of peak demand. EESL estimates that this has led to over INR 19000 Crores savings per year and over 37 million tons of CO₂ reduction per year (all this information is updated as of 11 Dec 2019 from EESL's Ujala Dashboard).

The EESL Streetlight National Program (SLNP) where over 3 million energy efficient streetlights are expected to be installed across cities in India is currently under implementation with over 1 million streetlights already installed.



MY JOURNEY WITH ELCOMA



Shyam Sujan, present Secretary General of ELCOMA looks back on his 15 years with ELCOMA



I joined ELCOMA in January 2004 when ELCOMA was being operated from a shared space office in Meerut by Mr. J.B. Kansal, the Secretary General of ELCOMA at that time. It was decided to shift the office to Delhi and with very limited funds available, it was a struggle to find a suitable office space. Finally in April 2004, Thorn Lighting, which had an office in Defence Colony, invited us to

set up the ELCOMA secretariat in their office. My office at that time consisted of a single table and Indian Society of Lighting Engineers (ISLE) also shared the same office premises. At about the same time, Mr. H.S. Mamak was appointed as advisor to ELCOMA.

Initially, ELCOMA had very limited interaction with government and industry when compared to ISLE, which was very active organization. ISLE used to interact with government on most of policy issues, conduct conferences and hold a biennial Lighting Exhibition. It was decided to bring awareness and promote ELCOMA within various government departments besides interaction with global organizations.

Slowly and gradually, ELCOMA became known outside the Lighting Industry. We had

very limited financial resources because our only income came from annual subscriptions from members. We decided to hold conferences on new and emerging technologies and instantly met with success. I personally began visiting various countries to attend seminars and make presentations about Lighting Industry in India. Most of these visits were sponsored by global organizations like USAID, UNEP, IEC, GLA, ISA etc. I learnt a lot about new technology and manufacturing. We formed technical committees in ELCOMA and I was able to share my knowledge with members on regular basis. ELCOMA began organizing the "Light India" lighting exhibition from 2008 onwards. This exposition has become the definitive lighting fair for India and sees participation from many international brands in addition to the Indian lighting manufacturers. We have now expanded the ELCOMA Secretariat and moved to a much better and bigger office space at DLF Tower in Jasola, New Delhi. Today ELCOMA is well recognized in all government ministries, Indian and international standards bodies as well as international lighting associations as the mouthpiece of the Indian Lighting Industry.

ELCOMA now hosts several technology conferences each year where we invite several international speakers and delegates. In addition, we publish a bi-monthly lighting magazine called "IllumiNation". We have come a long way in these 50 years from very humble beginnings.

I wish that ELCOMA continues to grow in this mode for many more years to come.

"Today ELCOMA is well recognized in all government ministries, Indian and international standards bodies as well as international lighting associations as the mouthpiece of the Indian Lighting Industry"

**SHYAM SUJAN
SECRETARY GENERAL,
ELCOMA**



CONGRATULATIONS ON COMPLETING 50 YEARS



A Letter from Mr Shekhar Bajaj, CMD Bajaj Electricals



On behalf of the entire family of Bajaj Electricals Limited, I extend my heartiest congratulations to ELCOMA for completing 50 glorious years. ELCOMA has played a significant role and has served the entire Lighting Industry as a guiding force.

My association with ELCOMA is now close to 40 years and I have been part of the change this industry has gone through at different stages. ELCOMA is the only single platform for all the stakeholders of the industry to voice their opinions and concerns to create a robust, healthy environment to conduct business. ELCOMA has successfully played the role of a facilitator between the industry and the Government.

While the players in the Lighting Industry have taken many efforts to adapt and usher in technology changes in India to serve the discerning Indian customer, it has been

ELCOMA which has brought these to the attention of the Government and other agencies thereby enabling all-round development. ELCOMA, in its vision 2020 document has clearly outlined the approach of the industry in supporting the initiatives of the Government towards massive energy conservation methods that have been adopted. With the commitment and sincerity shown, ELCOMA has time and again proved its importance and needs to be commended for its efforts.

I wish ELCOMA all the success in the years ahead and hope it continues to contribute significantly towards a brighter tomorrow for the lighting industry in India.

“ELCOMA is the only single platform for all the stakeholders of the industry to voice their opinions and concerns to create a robust, healthy environment to conduct business”

SHEKHAR BAJAJ,
Chairman & Managing Director,
Bajaj Electricals Ltd



NEW BEGINNINGS



Dr. A.D. Kulkarni, former two-time president of ELCOMA shares some fond memories



Since I was part of a Small/Medium Enterprise (SME), I was pleasantly surprised to be elected as President of ELCOMA in September 2002. As a governing body member I regularly attended ELCOMA Governing Body (GB) meetings and realized that these quarterly meetings lasted for just

couple of hours after lunch and often discussions used to revolve around the role of ELCOMA. Nothing much was discussed besides this so not much was achieved in those quarterly GB meetings. I then thought of appointing an advisor who had good standing in the industry and the name of Mr. Hari Mamak came to my mind. It took me over a year to convince the GB and Mr. Mamak and finally the approvals were received to appoint Mr. Mamak as Advisor to ELCOMA in November 2003 in a GB meeting held in Bangalore.

Once Mr. Mamak was on board and Mr. Shyam Sujan was General Secretary, several new initiatives were launched. These included Captains of the Industry meet which was held just an hour before the GB meeting and the formation of four committees - Lamp, Luminaire, Control Gear and Components. These committees were chaired by a GB member who would report minutes of their

meetings in the GB meeting. Committee members were handpicked by ELCOMA members from their own companies. Generally committees meetings took place a day before the GB meeting

Thus the GB meetings, which were preceded by committee meetings, became a two day affair with a lot of valuable input to the GB.

I had a wonderful two term stint as ELCOMA President with good co-operation of all members. I am particularly grateful to Sh Shekhar Bajaj whom I often consulted and I will ever remain grateful to Late Shri Hari Mamak who agreed to become the advisor and to take ELCOMA to a new height. I am pleased to see that several new initiatives which were started during 2002-04 are still being followed in ELCOMA.

DR. AVINASH D KULKARNI
Chairman & Managing Director
Litex Electricals Pvt. Ltd

CONGRATULATIONS ELCOMA



Mercury Lamps has been a GB member of ELCOMA for the last 20 years and it has been a really wonderful and great journey.

We have seen the Industry grow from small beginnings into Rs 20,000-crore industry with many large and small brands occupying the retail space. We have expanded our own vision and business through the knowledge sharing and discussions held at different platforms hosted by ELCOMA over the years.

We were appointed a member of ELCOMA in 1998 by Mr. J. B. Kansal, the Secretary General at that time and have been witness to and participated in, the various technologies and changes that have been the milestones of the Lighting Industry in India. From

Incandescent lamps to CFLs and now LED, the industry has come a long way and is now gearing up for the next step in the evolution which is taking us beyond LED to emerging technology constructs like Smart, Human Centric and Connected Lighting, etc.

It has been a wonderful journey of challenges, growth and camaraderie for me and I would personally like to thank ELCOMA and its members for carrying on the friendship for 50 years. I wish that this fraternity will continue to usher in new technologies and influence the industry, stakeholders and coming generations of lighting specialists for years to come.

Sanjay Kumar Bansal
Director
Mercury Lamps Pvt Ltd.





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BAJAJ ELECTRICALS ILLUMINATES THE KARVIRNIVASINI AMBABAI TEMPLE IN KOLHAPUR



The famous temple of Goddess 'Mahalaxmi' or 'Ambabai' in Kohlapur which is an integral part of the city from ancient times is a major tourist destination. One of its main attractions is the artistically carved structure and magnanimous deities that date back to the 7th century. Built and rebuilt several times, the temple continues to attract pilgrims from across India. Bajaj Electricals' illumination solutions have enhanced the architectural elegance of the prominent sections of the temple, making it a visual treat for the pilgrims.

As the temple is an archaeological heritage and a historical wonder, the execution at every stage was carried out with utmost care by the Bajaj Electricals team, starting from designing to installation. For the decorative lighting of the temple complex, energy-efficient and programmable solid-state lighting systems were used. The five shikhars at the top of the main temple have been lit up uniquely with the cove above the pillars of Garud Mandap aligned with theme lighting. The pillars of Garud Mandap is fitted with special wall-pack luminaires that provide soothing illumination on the ground and around the mandap. The roof tiles of Garud Mandap have been illuminated uniformly from the edge.

The Bajaj implementation team employed projectors and linear LED strips to light up the outside walls and interior ceiling of the four entrance gates. They also used indirect

lighting for the interior gate to provide clear and glare-free aesthetics. The overall optimised lighting scheme brings out the dramatic effect of the prominent Deepmala cluster with five separate Deepmalas. Similarly, a defined beam of warm white light was used for accentuating the pillars and ceiling murals of the Navagraha temple.

The design team carried out an extensive site survey to get the right measurements of different architectural elements and features. The design was conceptualized based on the different projecting and receding panes of the facade, the surface finish and the colour. The illumination levels were designed, keeping in mind the actual viewing distance and pause-points from where the building is visible to the spectators. The actual surface colours were considered to visualize exact light colour effects on different elements. A three-dimensional space with accurate photometric files of the luminaires was used to perfect the illumination design. Intelligent and compact LED luminaires were selected to minimize the visual impact. The mounting brackets used for luminaires were specially designed to reduce the incursion to the architecture and avoid any irreversible damage to the old stone elements. Luminaires were mounted with clamps, and round lantern-carriages. The cable laying in the temple courtyard was done with proper removal and replacement of the old stone blocks without damaging the structure. Experts beautifully camouflaged the luminaries at specific locations to make the visual impact less obtrusive by using camouflaging materials that blend inseparably with its surrounding.

The colour-changing LED luminaires are controlled through a robust control system, pre-programmed and integrated with an astronomical time clock to run different event-

based programs on a 365-day calendar. The system is also re-programmable and has a manual override system which is simple and easy to operate. The distinctive use of tunable RGB LED fixtures helps to create multiple scenes and themes, including some energy-saving schemes as well. It is controlled by a state-of-the-art intelligent control system. The entire architectural lighting system runs on universal DMX 512 protocol, and it comes loaded with pre-programmed and well-designed themes. The theme activation is done automatically from the controller on specific calendar dates and time with the help of its inbuilt 365-day calendar and astronomical time clock with the auto triggering of different themes, along with the provision of push-button control for manual override facilities. It is also programmed to follow the seasonal variations in sunset/sunrise timings. Also, the system is equipped with non-volatile solid-state memory which offers the option for easy offline re-programming at any occasion.

The entire illumination scheme has been designed with colours and dynamic patterns to suit the serenity of the temple ambience yet matching the vibrancy of various festivals. During Navratri, one of the biggest festivals celebrated in the temple, the lighting of the temple's shikhar is pre-programmed to follow the dress colours of the deity for each day. A unique tricolour theme is designed to reflect the Indian national flag colours on national days, calm and serene white and warm white coloured themes are designed for the regular days with subtle dynamics to keep the ambience soothing and making the entire temple look surreal.

AUTHOR: BAJAJ ELECTRICALS LIMITED

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

“At Bajaj Electricals, we take immense pride to be a significant part of this beautification process of the famous and culturally important monument, Mahalaxmi temple, Kolhapur, Maharashtra and will continue our journey of illuminating monuments and lives across nations.”

ELCOMA GB/AGM MEETING AT



The last AGB/GB meeting was held at Manesar on 4 October 2019. Mr. Ranbir Raj Mehra, Director, Jaquar & Co. invited ELCOMA to hold both GB and AGM at their world class factory-cum-corporate office at Manesar. Built over a sprawling 12 acres, the building is tastefully designed with wonderful landscaping and world class office and factory space.

A total of 31 participants from 19 organizations attended the meeting which began with a spectacular audio-visual show about the journey of Jaquar from its inception to date which was followed by a visit to their world-class factory.

In absence of Mr. Raju Bista, President of ELCOMA, Mr. Sumit Padmakar Joshi, Vice President of ELCOMA chaired the meeting and presented the Annual Report during the 49th Annual General Meeting. The members were apprised of the ELCOMA turnover and profits earned by Mr. Sunil Sikka, Advisor to ELCOMA. Mr. Shyam Sujana, Secretary General of ELCOMA informed about the 2 conferences on Intelligent Lighting to be held at Mumbai and Bangalore during November and December 2019 respectively. M/s. Indo Japan Horologicals, Kolkata were appointed



JAQUAR LIGHTING, MANESAR

as new ELCOMA member.

Mr. Sunil Sikka, also apprised the members about the merger of Light India 2020 with LED Expo and that the tentatively this would be held in last quarter of 2020. He also informed members about a daylong meeting with Sh. Ravi Shankar Prasad, the minister of Telecom and IT, which was attended by ELCOMA along with 60 CEOs from various Electronic Industry verticals.

The minister informed those present that the Government wants India to become manufacturing and exporting hub by year 2024. In this regard, ELCOMA was asked to prepare a white paper on manufacturing and export promotion and submit the same to the government.

ELCOMA is in process of preparing a vision 2022 document to initiate manufacturing of all components and finished products in India and prepare for Exports.

The chairmen of the various committees presented their annual reports to the visitors present.

The meeting came to an end with vote of thanks to members present. Special thanks were given to Jaquar & Co. for hosting the meeting.



ILLUMINATING NATION WITH SMART LED STREET LIGHTS



Street Lighting National Program (SLNP) was launched in 2015, with the goal to retrofit over 1.34 crore conventional streetlights with energy efficient LED lights. The program recently reached the milestone of 1 crore LED streetlight installations and Hon'ble Minister of State (Independent Charge) for Power, New & Renewable Energy, Shri R.K. Singh dedicated these lights to the nation, that are illuminating 2.7 lakh kilometers of roads in India. SLNP is the world's largest streetlight replacement program and is being implemented by Energy Efficiency Services Limited (EESL), a joint venture of PSUs under the Ministry of Power, Government of India.

These one crore LED streetlights installed under SLNP are generating annual energy savings of 6.71 billion kWh, and corresponding reduction of 4.63 million tons of CO₂ emission. These smart LED streetlights have been installed in Delhi, Punjab, Haryana, Chandigarh, Himachal Pradesh, Uttarakhand, Jammu & Kashmir, Uttar Pradesh, Madhya Pradesh, Bihar, Jharkhand, Assam, West Bengal, Sikkim, Chhattisgarh,

Odisha, Andhra Pradesh, Tripura, Telangana, Kerala, Tamil Nadu, Karnataka, Goa, Maharashtra, Gujarat, Pondicherry, Port Blair, Lakshadweep and Rajasthan. The SLNP program is helping to generate employment for around 13000 people in the country. Currently, Andhra Pradesh is leading the way amongst the states, with installation of 28.9 lakh LED streetlights followed by Rajasthan and Uttar Pradesh with 10.3 lakh and 9.3 lakh respectively. As on date, 1,502 Urban Local Bodies (ULBs) across India have been enrolled under the program and out of these ULBs, work has been completed in around 900 ULBs.

To bring large scale transformation, EESL adopted Pay-As-You-Save (PAYS) model where EESL makes the entire upfront investment in installation of the LED streetlights and no additional budget allocation from the municipalities is required. The contract with the municipalities/ULBs is typically for a period of 7 years. The seven-year contract with the local bodies guarantees a minimum energy saving of about 50% and provides free replacement and maintenance of lights at no additional cost to the civic partners. The municipalities pay EESL from their savings in energy and maintenance cost over a 7-year period, making the LED lights affordable and accessible. The large-scale aggregated demand from ULBs has facilitated economies of scale, with mass procurement leading to a price reduction from Rs. 135 per watt to Rs. 85 per watt.

SLNP has witnessed high satisfaction from people across the states, with about 99 percent respondents feeling more comfortable with the LED installations. The program has been responsible for reducing India's energy consumption, mitigating carbon emissions thereby facilitating climate action, and enabling a safer and better way of life for citizens.

AUTHOR: ENERGY EFFICIENCY SERVICES LTD.

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ESSCI CELEBRATES ITS 7TH ANNUAL DAY



The Electronics Sector Skills Council of India (ESSCI) has had a glorious journey since its inception in 2012 as a Sector Skills Council for the electronics sector who strives to build a structured mechanism under the National Skill Qualification Framework under the Government of India's ambitious Skill development programme branded as Skill India Mission.

The Electronics Sector Skills Council of India (ESSCI) celebrated its annual day marking 7 years of its eventful existence in the form of "ESSCI UTSAV 2019" at the Mantra Hall, Hotel the Park, Parliament Street, New Delhi on the 20th September 2019.

The council was able to highlight its achievements and showcase the roadmap as ESSCI embarks upon the SSC Version 2 with renewed focus and to reinvent its capabilities.

The program was well represented by senior officials from the Government, NSDC, Training Partners, Assessment partners, Subject Matter Experts, Industry Stalwarts, International bodies, NGOs and development consultants.

The program was initiated by welcoming the guests and with lighting of The Auspicious Lamp by dignitaries followed by playing of a short film on ESSCI Journey so far and encompassing all landmarks and current



activities was screened to the delight of the audience.

The chairman ESSCI, Sh. Ajai Chowdhry's address to the gathering highlighted the landmarks which ESSCI has achieved so far and gave insights on the way forward and important milestones it is seeking to achieve.

Mr Chowdhry emphasized on quality enhancement and seeking to address higher level job roles in the future and also envisioned the scenario wherein the Industry demands a skilled workforce from ESSCI. He also emphasised on the importance of Industry 4.0 being the future of the industry and challenges which needs to be surmounted. He also informed the gathering about ESSCI having set up a vision committee chaired by Mr. Shyam Sujan, Secretary General, ELCOMA within ESSCI using its experienced governing council members to plan the strategy for ESSCI to step into version 2.0 which ESSCI has initiated.

Mr. Vinod Sharma, Managing Director, Deki delivered the Keynote address and highlighted the changing skill landscape and the paradigm shift in the ESDM space and what the country needs to do to address those

challenges, specially with the Chinese industry being so efficient. He spoke about the ESDM industry making convincing strides and how the digital technologies now account for over half of the industry's business and drive much of the buoyancy.

Other eminent speakers included Mr. Vipin Tyagi, Executive Director C-DOT and Mr. Anil Wali – Managing Director, FITT, IIT DELHI who talked about the issues that are plaguing India because the skill sets possessed do not match the skills needed. Higher education institutions need to form closer bonds with industries and businesses to succeed in producing the right talent for the Industry, he suggested

The Guest of Honour for the evening-Smt. Jhutika Patankar, IAS, Additional Secretary, Ministry of Skill Development and Entrepreneurship addressed the august gathering and highlighted the resolve of the government for skill development and the start-up India programme to support entrepreneurship in India. She highlighted the importance of aspirational skills to connect skills to industry demand.

ESSCI distributed certificates of appreciation

to the Subject Matter Experts to 5 awardees and gave out awards to BEL, Ericsson, AISECT for Excellence as training partners.

As ESSCI seeks to address the large demand for higher level job roles for the ESDM industry, a panel discussion on "Future skills in Industry 4.0" was held on the sideline of the Utsav and was moderated by Mr. K P Sharma, Vice-President, Schneider Electric with supporting panellists

being Dr. Hann, Master Trainer – Steinbase, Mr. Harish Nachnani, National Sales Manager – FESTO, Mr. Anup Wadhwa, Director – AIA and Mr. Preet Yadav, Analog Practice Head – Wipro

There was a panel discussion which was extremely fruitful with each panellist putting his point across and all agreeing on the great demand for the related job roles as the ESDM industry progresses and manufacturing takes over the present eco-system with being the centre point of activities.

Another Panel Discussion on "Building Global Design Capability (ER& D)" ensued with Mr. Ashok Mishra. The panel had a rich and fruitful discussion on the future of ESDM design and how the landscape is expected to be transformed and with India taking a major role in the global space in building the global design Capability.

The CEO of ESSCI Mr. N K Mohapatra offered his vote of thanks to the audience and invited them to an evening of cultural programme and dinner

AUTHOR: ELECTRONICS SECTOR SKILLS COUNCIL OF INDIA

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HARCHARAN SINGH MAMAK



He served on several Government and Industry panels relating to Lighting and energy. He served as an elected Vice-President for 8 years on the Board of Administration of The International Commission on Lighting. He was the first member from Developing Countries to be elected to the Board from which he retired in 2007. Mr. Mamak was on the Board of Lux Pacifica which represents the lighting interests of the 60% of the World's population.

Mr. Mamak was also the Chairman of the Energy Panel of CII for 2 years in 1995, Chairman of the Lighting Development Council of the Ministry of Industry for 2 years in 1996, Expert Lighting Consultant for the preparation of Energy Efficient Building Code by Bureau of Energy Efficiency (BEE) and USAID, Expert Consultant to International Resource Group (IRG) in the preparation of Energy Efficient Building Code with support from Bureau of Energy Efficiency and United States Agency for the International Development (USAID).

Above all these, Mr Mamak was thorough gentleman, a mentor and a motivator who touched the lives of

the many, many people that came in contact with him. Youngsters just embarking on a profession or seasoned lighting professionals - all benefited from his knowledge, wisdom and work ethic. He always had a kind word and a smile for all that he received and his humour and jovial nature was the bright sunshine on many a dark day.

His vision was the growth driver of the Lighting Industry and his contribution to the industry in India is unparalleled and unprecedented.

We humbly pay homage to this wonderful human being and icon of the Lighting Industry.

*“Grieve not my friends
For the friend who departs
For he has left his fragrance behind
His legacy, guidance, love and his
being kind
For he has left to join other legends
of his class
For he will come back enriched,
invigorated
To serve once again
To the society, you, me and all
So grieve not my friends
For he will come again!”*

- Shyam Sujan

Mr. H S Mamak graduated with Honours in Economics and an MBA from London. He joined Philips India as a Management trainee and retired 36 years later as a member of the Management Board and the Head of the Lighting Division. For 5 years, he was on the Philips Lighting Advisory Senate, which was a world wide policy council of Philips Holland.

Mr. Mamak was the founder member of Electric Lamp and Components Manufacturers Association of India (ELCOMA) as well as the Indian Society of Lighting Engineers (ISLE). He continued to be an Advisor to both these Associations.



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ISA INTERNATIONAL LIGHTING AWARDS 2020 GOES TO BOGIBEEL BRIDGE, ASSAM BY BAJAJ ELECTRICALS



Dear Mr. Shakti Leekha,

As the President of International Solid State Lighting Alliance (ISA), it is my great pleasure to announce that the outcome of the annually appraisal on the ISA "Global SSL Showcase Top100" has been raised. And the 2019 winners go to:

**"Bogibeel Bridge in Assam gets theme based architectural
Illumination from Bajaj Electricals"**

(Lighting products supplier and Lighting installer: Bajaj Electricals Limited
Designer: Saptak Bhattacharya)

and the other 14 SSL showcase projects, to honor their outstanding demonstration on the SSL technology innovation and combination of the distinguished design, lighting product, installation, etc., which increased the influence and visibility of the SSL applications and public awareness efficiently.

Your designated representatives are formally invited to receive this Award in the Award Ceremony at the ISA 2019 General Assembly, in Rose Hall 3 (玫瑰厅 3), Shenzhen Exhibition Center, Shenzhen, China, 09:00 - 12:00, on Nov. 25th, 2019.

Please contact Ms. Zhao Jin (jinzhao@isa-world.org) at the ISA Secretariat to confirm your representative(s) who will attend the award ceremony **before Oct. 17th, 2019**.

I sincerely congratulate you and your organization to win this award and I am looking forward to seeing you in this coming November.

Yours Sincerely,

Jianlin Cao
President of ISA

Bajaj Electricals, was recently awarded by ISA for the turnkey project of Lighting the Bogibeel Bridge in Assam. The Bogibeel bridge is India's longest & Asia's 2nd longest rail-cum-road bridge spanning over 4.94 km length over the mighty river Brahmaputra. The bridge is of strategic significance to India due to its connectivity to the north-eastern border.

The architectural illumination done by Bajaj Electricals, was designed to enhance the visual appeal of the bridge and also symbolize the cultural roots of the nation. The North-East Frontier Railway was the owner of this project and were extremely satisfied with the distinctive use of tuneable RGB LED luminaires that led to the possibility of creating multiple scenes and themes. Controlled by state-of-the-art intelligent control system, the entire architectural lighting system runs on universal DMX 512 protocol. Approximately 1100 nos compact-sized outdoor grade LED luminaires were used for this project. The system used only a single type of LED luminaire which maintains consistency in the appearance across the whole bridge façade. The low wattage (48 watt) LED luminaires minimize power consumption, thus making the whole lighting scheme energy-efficient and eco-friendly. The SSL devices were chosen to suit the extreme outdoor environment of the riverbed and the compact-sized outdoor grade LED luminaires which have been used are optically supported with precise beam angles, ensuring minimum spray of light to the surroundings and effectively controlling light pollution.

International Solid State Alliance under its annual "Global SSL Showcase Top 100 Awards" through its high profile judges located at different organizations around the world have selected this project as the award winning entry of year 2019.

Our heartiest congratulation to M/s Bajaj Electricals Limited on this achievement.

"We wish to put on record our appreciation for the design concepts and project management capabilities displayed by M/s. Bajaj Electricals Limited in executing this prestigious project. We wish M/s. Bajaj Electricals Limited success in all their future endeavors."

Northeast Frontier Railway



FLICKER IN LED LIGHTS IS NOT VISIBLE. BUT IT AFFECTS EYE HEALTH.

Orient EyeLuv LED lights come with Flicker-Control Technology that reduces the impact of LED flicker and its effects, like eye strain and eye fatigue, making them better and safer for overall eye health.

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Flicker nahin, toh aankhein sahi

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ISA INTERNATIONAL LIGHTING AWARDS 2020 GOES TO JAWDUT PROJECT AT RIYADH BY JAQUAR LIGHTING PRIVATE LIMITED



Dear Mr. Mohit Sharma,

As the President of International Solid State Lighting Alliance (ISA), it is my great pleasure to announce that the outcome of the annually appraisal on the ISA "Global SSL Showcase Top100" has been raised. And the 2019 winners go to:

"Jawdut Project - Riyadh"

(Jaquar & Company Pvt. Ltd.
Designer: Jaquar Lighting Design Team)

and the other 14 SSL showcase projects, to honor their outstanding demonstration on the SSL technology innovation and combination of the distinguished design, lighting product, installation, etc., which increased the influence and visibility of the SSL applications and public awareness efficiently.

Your designated representatives are formally invited to receive this Award in the Award Ceremony at the ISA 2019 General Assembly, in Rose Hall 3 (玫瑰厅 3), Shenzhen Exhibition Center, Shenzhen, China, 09:00 - 12:00, on Nov. 25th, 2019.

Please contact Ms. Zhao Jin (jinzhao@isa-world.org) at the ISA Secretariat to confirm your representative(s) who will attend the award ceremony before Oct. 17th, 2019.

I sincerely congratulate you and your organization to win this award and I am looking forward to seeing you in this coming November.

Yours Sincerely,

Jianlin Cao
President of ISA

Jaquar Lighting had undertaken a Street Lighting Project called "Jawdut Project" in Riyadh, Saudi Arabia. This was a turnkey basis installation which was very successfully commissioned by Jaquar in record time.

Jaquar used NEMA compliant connectors for the entire project and also relied extensively on Indian BIS Standards like IS-10322 (Part 5, Part 2, Part 4, Part 3) to ensure that the project complied with the highest standards of requirements.

Streetlights that comply with NEMA Connectors provide the necessary features which are a must have in today's world for making road lighting more efficient. The photo sensors that were deployed with these streetlights can sense the ambient light and can automatically perform ON/OFF and dimming functions. Jaquar also provided multiple communication options (LoRaWAN, NB-IoT, GRRS, LTE CatM1, BLE Mesh) to ensure that the lights are able to communicate with each other at any time and under any circumstances.

A total of 69000 units of Street lights were deployed as a replacement of existing infrastructure. After partial project deployment, user measured a reduction of power consumption by 61.54% as compared to normal LED products. This complete project is expected to lead to a potential saving of US\$ 3630889 per year for the customer.

This project was adjudged as one of the best installations in Street Light category under "ISA Global SSL Showcase Top 100 Award" for the year 2019.

Our heartiest congratulation to Jaquar Lighting for winning this prestigious award.



ISA INTERNATIONAL LIGHTING AWARDS 2020 GOES TO LIGHTING OF GOLDEN TEMPLE BY OSRAM LIGHTING PRIVATE LIMITED



Dear CEO OSRAM India,

As the President of International Solid State Lighting Alliance (ISA), it is my great pleasure to announce that the outcome of the annually appraisal on the ISA "Global SSL Showcase Top100" has been raised. And the 2019 winners go to:

"The Golden Temple"

(Osram Lighting Pvt Ltd., India
Lucent Worldwide, India)

and the other 14 SSL showcase projects, to honor their outstanding demonstration on the SSL technology innovation and combination of the distinguished design, lighting product, installation, etc., which increased the influence and visibility of the SSL applications and public awareness efficiently.

Your designated representatives are formally invited to receive this Award in the Award Ceremony at the ISA 2019 General Assembly, in Rose Hall 3, Shenzhen Exhibition Center, Shenzhen, China, 09:00 - 12:00, on Nov. 25th, 2019.

Please contact Ms. Zhao Jin (jinzhao@isa-world.org) at the ISA Secretariat to confirm your representative(s) who will attend the award ceremony **before Oct. 24th, 2019**.

I sincerely congratulate you and your organization to win this award and I am looking forward to seeing you in this coming November.

Yours Sincerely,

Jianlin Cao
President of ISA

Harmandir Sahib, also called Sri Darbar Sahib and informally referred to as the "Golden Temple", is located in the city of Amritsar, Punjab, India and was designed by the fifth Sikh Guru, Guru Arjan. The temple's architecture is an artistic structure that represents a unique coevolution of different architectural styles.

The entire Golden Temple site which is a 400 years old architectural marvel was completely lit up by using approximately 6000 numbers of LED Light fixtures, comprising spot lights, high wattage flood lights, wide range of linear fixtures and lot of customized (RGBW) fixtures. This installation has minimum spill over light to ensure least light pollution. The concept of design was to highlight the arches and different layers of the building. To make the installation aesthetical, proper customization was done even on the luminaire body. For example, to camouflage with gold, linear fixtures at Shri Harminder Sahib were made with gold finish.

From a control point of view, the project included DMX, 0-10V dimming, Phase cut dimming and on/off control also. To bring synergy, the above said protocols were brought under single platform and controlled through PC from central control room thus enabling to create various desired scenes for different festivals and day to day activities as well.

This project used high-output and energy-efficient dynamic LED light sources with superior performance on energy saving. The lighting solution in this project is expected to achieve an energy saving of at least 55% when compared to existing solutions.

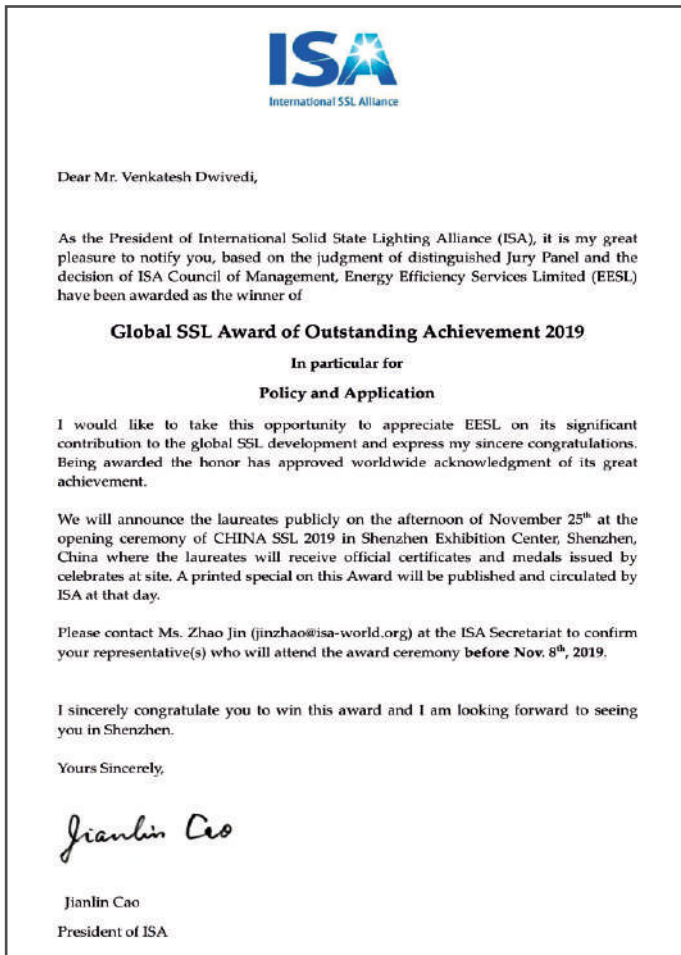
This Golden Temple illumination project by OSRAM Lighting Private Limited was adjudged as one of the best installation for LED Lighting Projects this year by ISA.

Our heartiest congratulations to OSRAM for the award.



EESL WINS INTERNATIONAL AWARD FOR OUTSTANDING ACHIEVEMENT IN LED PENETRATION IN INDIA

International Solid State Alliance selects EESL for Highly respected Global Awards



EESL has reduced India's carbon footprint, peak energy demand, and electricity bills through energy efficiency intervention projects in domestic lighting, that are worth 630 million USD. With an unprecedented growth, EESL's flagship initiative, Unnat Jyoti by Affordable LEDs for All (UJALA), has revolutionised India's access to energy efficient LED bulbs and reduced annual carbon emissions by up to 37.57 million tonnes.

Unnat Jyoti by Affordable LEDs for All (UJALA) has transformed the market for domestic lighting. Under UJALA programme, more than 350 million LED bulbs have been distributed in the Country across all the States. It has been successful in bringing down the retail price of the LED bulbs from 4-5 USD per LED bulb in the year 2014 to 1 USD per bulb. In a short span of three years, UJALA has emerged as the world's largest zero subsidy domestic lighting programme, developed to address India's high cost of electrification and high emissions from inefficient lighting. UJALA programme has resulted in an estimated energy saving of 46.38 billion kWh per year with avoided peak demand of 9287 MW, estimated GHG emission reduction of 37.57 million tonnes of CO2 and monetary savings of 2623 million USD.

The UJALA programme was designed and implemented with the suggestion and support from Electric Lamp and Component Manufacture Association (ELCOMA). EESL has been successful in implementation of such a large programme in very short span of time because of the co-operation from ELCOMA. Under Vision 2020 plan of ELCOMA if 1.2 billion LED Lamps and 30 million streetlights were to be replaced by 2020, about 27000 MW power-saving in peak demand was estimated, whereas in actual 1.17 billion lamps and 9 million streetlights have been replaced and have saved more than 32500 MW peak power demand by end of 2018. With continued efforts, by 2020 EESL estimates that they will be able to ensure more than 40000 MW saving.

For these extraordinary initiatives and other programmes EESL has been selected for Global SSL Award of outstanding Achievement 2019.

Our heartiest Congratulation to EESL.



UJALA programme has been successful in achieving the following objective:

- Reduced energy consumption in lighting which helps DISCOMs to manage peak demand.
- Promoted the use of the most efficient lighting technology at affordable rates to domestic consumers which benefited them by way of reduced energy bill.
- Enhanced the awareness of consumers about the efficacy of using efficient appliances which in turn changed their buying preferences from low first cost-based purchases to lifecycle cost.
- Increased the demand of LED lights by aggregating requirements across the country and provided impetus to domestic lighting industry through economies of size.



LIGHT INDIA AND LED EXPO TO MERGE

light + LED expo
INDIA



Messe Frankfurt India, the organisers of LED Expo and Light India (which is organised in association with ELCOMA, the apex body of the lighting industry in India) have mutually decided to merge the Delhi editions of the two biggest lighting trade shows. This strategic move will create the biggest platform for the business of lighting in the country, titled "Light + LED Expo India 2020".

Smart lighting technologies are the future. But the integration of LEDs with smart lighting, automation and networked building-systems are changing businesses as people know it. Representing the lighting and building technology sector's growth markets worldwide through Messe Frankfurt's global Light + Building brand, the German exhibition company stands as one of the leading exhibition organisers for the sector. India's biggest lighting shows - LED Expo and Light India (in association with ELCOMA) are part of the group's global building technology portfolio.

For the domestic industry, Light India has rightfully gained recognition as one of the most promising and important trade fairs in the country. While LED Expo takes place twice a year in Mumbai and Delhi and showcases advancements in LED technology and its applications, Light India takes place biennially and represents the future of what smart and connected lighting will look like. "As organisers of the two leading shows, we are preparing for a dynamic future for the Indian lighting industry and envision bringing sector players together at a focused platform that represents everything under 'smart lighting technologies'. The strategic merger is a

confident step towards creating what will become the biggest platform for the business of lighting in the country." Mr. Michael Dehn, General Manager - Sales & Marketing, Messe Frankfurt Trade Fairs India said at the opening of LED Expo in New Delhi. "For the Messe Frankfurt Group, this will also be its biggest exhibition in India in its portfolio of 20 trade fairs and 30+ conferences." Dehn added.

The announcement of the merger was made at the opening of LED Expo in New Delhi today where the organisers also unveiled the new brand "Light + LED Expo India" retaining the identity of both the successful tradeshow brands. Talking about the strategic move, ELCOMA President Mr. Raju Bista said "India has been the fastest country in the world to adopt and accept LED Lighting. Experts predict that India will convert entire lighting to LED in another two to three years, while there are so many other countries which are probably going to take another six to eight years for the same. With this background, we are preparing for a forward-looking and progressive lighting industry in India. Under ELCOMA's Vision 2022, our goal is to ensure all LED products are made in India. We also aim to project India as an export hub in the lighting segment. In the midst of this positive scenario, it is very important for us to look at the next Light + LED Expo India 2020, which is a 100% merger of Light India and LED Expo organised by Mess Frankfurt. This merger will deliver all inputs for fulfilling our Vision 2022."

In India, LED now dominates the lighting market with an 80% share. According to report published by Electric Lamp and Component Manufacturers Association (ELCOMA), the Indian LED market is expected to grow to INR

261 billion by 2020, which is approximately 80 per cent of the total lighting industry. The Industry is maturing in its technology adoption and scalability. Mr. Shyam Sujan, Secretary General, ELCOMA shared, "The year 2020 will see a well matured lighting industry in India as we will be celebrating 50 years of ELCOMA in India. The merger of Light India and LED Expo exhibitions will provide a dynamic platform for a celebration with an ambition to look at ELCOMA's future plans to make India a manufacturing and export hub for the lighting industry. We are glad that Messe Frankfurt has laid down meaningful programs for the first unified edition of Light + LED Expo India in December 2020."

With LED advancements growing rapidly, Messe Frankfurt will continue to host LED Expo twice a year (Mumbai & Delhi editions) in the odd years. However, in the even years, the Indian subsidiary will come together with ELCOMA to host Light + LED Expo India in Delhi. LED Expo Mumbai remains a standalone annual edition. As per this new format, 2020 will see LED Expo Mumbai edition followed by the first unified edition of Light + LED Expo India in the last quarter.

"Light + LED Expo India 2020 will play a key role in enabling building technology players' access to the Indian market and expand business collaboration power for the sector. On the domestic front, the unified exhibition platform will combine industry efforts to help improve LED adoption, technological exchange and competitiveness of domestic players." explained Mr. Raj Manek, Managing Director, Messe Frankfurt Trade Fairs India Pvt. Ltd.

Meeting of the National Committee of International Electro-technical Commission (INC-IEC)

The 17th meeting of the National Committee of International Electro Technical Commission (INC-IEC) was held on 10th Oct 2019 and chaired by DG Mr. Rohit Kumar Parmar. Mr Parmar opined that there must be a dedicated group to brainstorm on adoption of new and emerging technologies for India. Mr. J. Roy Chowdhary, Head (IR & TISD) BIS was appointed as Member Secretary.

There was a detailed discussion on a 5 year IEC Master Plan Implementation Plan under which a strategic document has been prepared to provide guidance to the management bodies National Committees the standards and conformity community and to central office regarding the future priorities and directions IEC activities.

Few of the deliverables under the plan are

- Develop & Execute a specific

strategy to attract regulators

- Develop and execute a specific strategy to attract user groups beyond vendors, e.g. Solution integrators, consultants, energy performance contractors
- Reach out to relevant stakeholders
- Enhance the global application of IEC work, by for e.g. Promoting use of the global relevance toolbox to ensure IEC work is relevant for all countries in the IEC community
- Include high level participants from market stakeholders in NC governance
- Establish National YP programs
- Gather and share feedback and issues related to the development

and dissemination of IEC publications, from users implementing standards and CA

Mr. Shyam Sujana, Secretary General of ELCOMA raised issues faced by the Industry, especially lack of R&D centers for development of Lighting products based on new technology. He also suggested that IEC should prepare India Centric Standards as Indian conditions are different from rest of the world – for example the country has very hot & humid conditions, excessive dust, voltage fluctuation etc.

The next meeting of 83rd IEC-GM would be held from 21-25 Oct 2019 at Shanghai, China and would be hosted by the Chinese National Committee of IEC.

Bureau of Indian Standards celebrates World Standards Day 2019

Bureau of Indian Standards (BIS) organised a national level seminar on “Video Standards Create a Global Stage” in New Delhi to celebrate the occasion of 50th World Standards Day 2019.

The event was inaugurated by the Hon'ble Minister of Consumer Affairs, Food and Public Distribution, Shri Ram Vilas Paswan who highlighted the importance of standards in facilitating technological growth and advancement of industries. He said, India is keen on adopting Digital technologies to promote government initiatives like Digital India, to transform India into a digitally empowered economy. He informed the gathering about several initiatives taken by BIS in standardization activities of emerging technologies through various technical committees that have been created for Artificial Intelligence, IoT, Block chain, Smart Cities and Smart Manufacturing.

Speaking on the occasion, Shri Avinash Kumar Srivastava, Secretary, Department of Consumer Affairs said that video is the modern medium of expression and BIS is actively involved in the international Standardization work in the area of Video Standards through the technical committee “ISO/IEC JTC 1/SC 29 Coding of audio, picture, multimedia and hypermedia information” which is responsible for developing Standards for video compression.

Shri Rohit Kumar Parmar, DG, BIS in his inaugural address said that the advancements in electronics and information technology in the second half of 20th century boosted video production and technological developments in the last couple of decades has made producing and storing videos more portable. He explained, standardization plays a crucial role in this area where Video standards enables different manufacturers to work together across a range of applications.

Three Indian experts Surendra Jhalora, Bapu Gawade and Rajeev Sharma, Head (Electrotechnical Department), BIS were felicitated with the IEC 1906 award which were presented by the Honorable Minister of Consumer Affairs, Food and Public Distribution, Shri Ram Vilas Paswan.

The technical sessions and panel discussions were an enriching experience for audiences that were delivered by eminent speakers including Dr. Scott Steedman, Director of Standards, British Standards Institution, Dr. Ujwal Nirgudkar, Chairman, Society of Motion Pictures & Television Engineers (SMPTE) India Section, Dr. Shashi Bhusan Gogia, President SATHI, Dr. Dinesh M. S., Senior Research Scientist, Philips India and Shri Murali Babu Muthukrishnan, Director, Ittiam Systems (P) Ltd. Shri Mahesh D Kulkarni, Senior Director, CDAC, Chaired the technical sessions.

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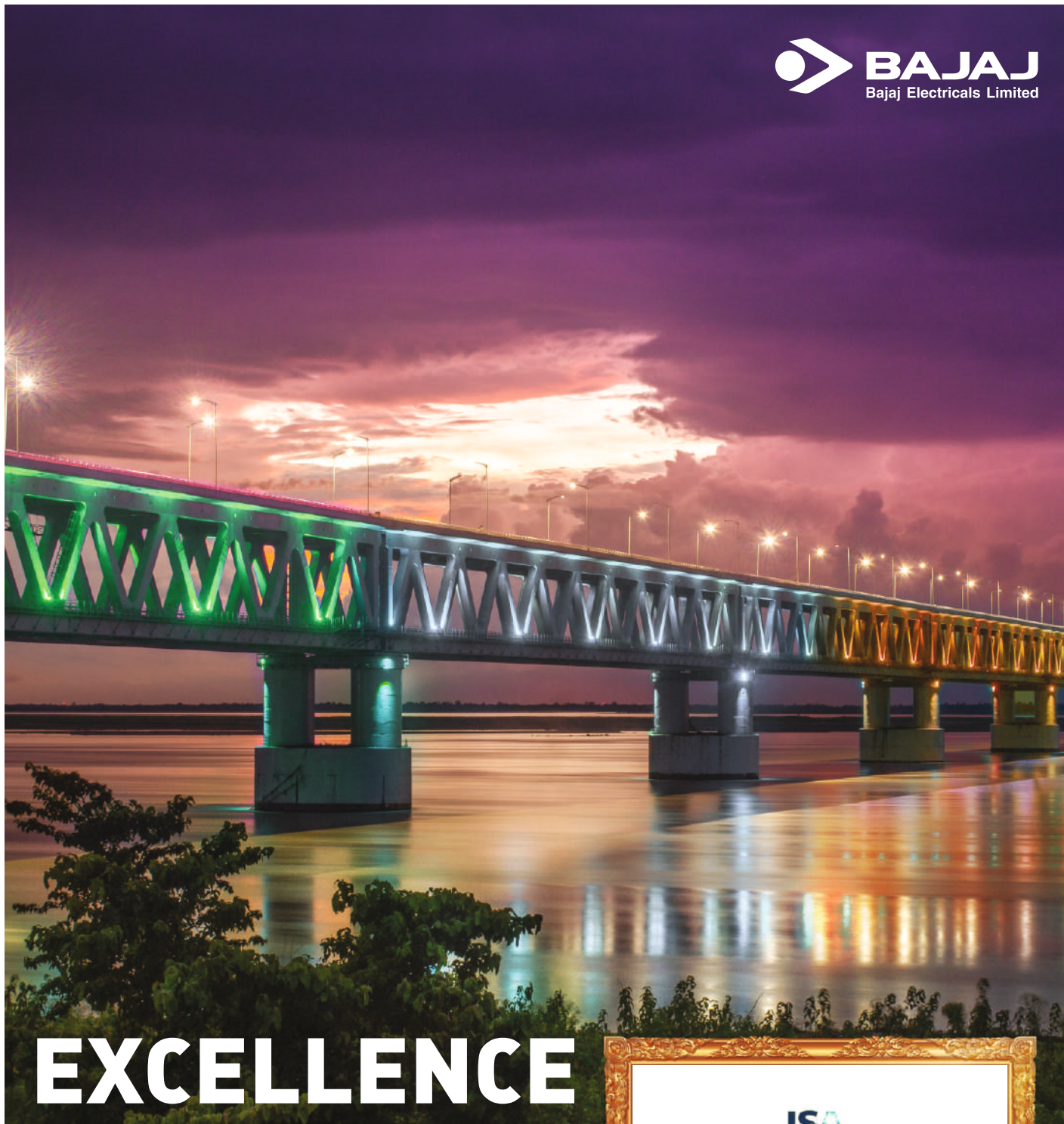
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EXCELLENCE IS TRULY REWARDING

Bajaj Electricals has been conferred by the ISA with "The Global SSL Showcase Top 100 Award 2019" for illuminating the Bogibeel Rail-cum-Road Bridge in Dibrugarh, Assam, India.





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