VOL.8 Issue 2

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IllumiNation

APRIL - JULY 2026

THE LIGHTING MAGAZINE BY ELCOMA

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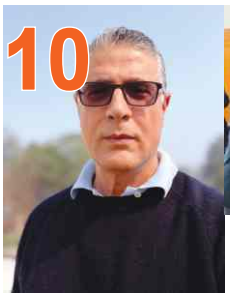

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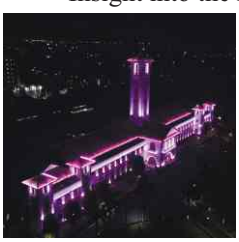

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Navigating the Storm, Lighting the Future

As we step into the new financial year, I find myself reflecting on the dual nature of the world we currently inhabit. On one hand, the lighting industry is standing on the precipice of a high-growth era, ready to illuminate India's path to becoming the world's third-largest economy. On the other, we are navigating a global landscape that feels increasingly like an obstacle course.

The Global Balancing Act – There is no ignoring the elephant in the room: the escalating Gulf conflict. The persistence of this crisis has sent ripples through the global economy, manifesting in ways that hit our industry directly. We are currently grappling with:

- **Surging Commodity & Energy Prices:** The "energy crisis" is no longer a distant headline; it is a daily operational reality affecting our production floors.
- **Logistics Volatility:** Increased transportation costs and stubborn supply chain disruptions are testing our agility and lean manufacturing models.

Yet, amidst this turbulence, India remains a beacon of resilience. With a projected **real GDP growth of 6.4% for FY27**, we are set to be the fastest-growing G-20 economy. Our industry is not just a passenger on this journey; we are a vital contributor to the "Viksit Bharat" 2047 vision. We are supporting BEE's efforts to lower the emission intensity of our economy by working to improve LED lamp efficiency and add more LED luminaire categories to BEE's S&L program. These steps will help offset the impact of rising energy prices by ensuring similar illumination with less power consumption.

The 'Mother of All Deals' & Global Outreach – If the global situation is a challenge, our trade diplomacy is the solution. The India-EU Free Trade Agreement—rightly called the 'mother of all deals'—opens doors to a quarter of the global economy. Similarly, our burgeoning partnership with **Canada** aims for a staggering **₹4.65 lakh crore** in bilateral trade by 2030.

Perhaps most exciting for our exporters is the **India-US Trade Deal**, which has slashed tariffs on Indian exports from **50% to a much more manageable 18%.** For our members looking West, the door isn't just open; it's inviting you in.

Building an Ecosystem from Within – ELCOMA has always championed the Make-In-India spirit. The Government's recent budget announcement to hike the **Electronics Component Manufacturing Scheme (ECMS)** outlay to ₹40,000 crore is a gamechanger. This isn't just a subsidy; it is the foundation of the local sourcing ecosystem we have long advocated for. It's time we leverage this to build a supply chain that is insulated from global shocks.

Intelligence, Innovation, and Integrity – Technology and quality remain our North Star. **The India AI Impact Summit 2026** recently underscored how AI is no longer a "future" concept—it is currently transforming various facets of our daily life and in the coming times we will see its applications in the smart and connected lighting.

Simultaneously, we are doubling down on quality. The **revised BIS standards** for LED products are a testament to our commitment to the consumer, addressing vital issues like product lifespan and light flickering. Our recent workshop series in Delhi, Mumbai, Bangalore, Kolkata and Chennai proved one thing: there is an immense appetite for excellence across our industry. The industry is preparing to meet the compliance requirements to the recently updated lighting standards, with BIS offering support to ensure a smooth transition.

A Call to Action – Our magazine, Illumination, continues to be the voice of this vibrant sector. I urge you to share your insights, your "light-bulb moments," and your success stories. In a world of economic shifts, knowledge dissemination is our greatest tool for innovation.

Despite the headwinds, the outlook for **FY 2026-27** is bright. Let's continue to innovate, comply, and lead.

Wishing you a resilient and successful year ahead.

Warm regards,

AMAL SENGUPTA
Secretary General, ELCOMA

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Indian Lighting Outlook FY 2026–27: Growth Driven by Innovation & Efficiency

Dear Members and Industry Colleagues,

As we step into the new financial year, it is my pleasure to highlight the key developments that unfolded in the lighting industry during the last fiscal year. The industry has navigated a difficult period, yet it is important to recognize the resilience of industry leaders who continued to invest in manufacturing, innovation, and capability building. Encouragingly, we are now seeing positive signals of market recovery and growth. As we move into FY 2026–27, we remain optimistic about stronger momentum in the sector and anticipate further investments that will strengthen the industry's long-term growth trajectory.

India's economic outlook remains robust with real GDP projected to grow at 6.4 percent in fiscal 2027. The lighting industry is well positioned to contribute to this resilient growth story through continued innovation, efficiency, and the delivery of high-quality lighting solutions that support infrastructure and development across sectors.

The recent Free Trade Agreement between India and the European Union can create new opportunities for industry collaboration, technology exchange, and market expansion.

The recent AI Summit Impact held in New Delhi brought together policymakers, industry experts, academicians, technology innovators, and civil society from across the world to advance global discussions on artificial intelligence. One area with significant potential is the integration of Artificial Intelligence (AI) in lighting systems. AI-enabled lighting solutions can enhance efficiency, enable intelligent control, and support the development of smarter buildings and cities, thereby reshaping the lighting industry in the years ahead.

The India- US trade deal with recent significant reduction in tariffs on Indian exports to the United States- from 50 percent to 18 percent will be relief to our members who export to the US and will help improve the global competitiveness of Indian lighting products.

The ELCOMA Board remains focused on supporting industry growth while strengthening regulatory compliance and quality standards. This aligns closely with India's broader vision of becoming a global manufacturing hub. Our products have consistently evolved to meet global benchmarks, ensuring that consumers receive world-class lighting solutions. ELCOMA continues to work closely with BIS, BEE, and other government departments to upgrade technical specifications and raise the threshold of regulatory compliance across the industry.

The BIS-ELCOMA training programs conducted in Delhi, Mumbai, Bengaluru, Kolkata, and Chennai in Phase I have been highly successful. We were encouraged by the enthusiastic participation from professionals across the ecosystem, including manufacturers, consultants, designers, architects, representatives from government organizations, laboratories, and other stakeholders. Hosting these programs at iconic institutions further enriched the learning environment and reinforced the industry's commitment to capacity building.

I am also pleased to acknowledge the growing importance and impact of our in-house magazine, IllumiNation, which continues to enrich our fraternity with insightful and relevant content. I encourage all members to contribute actively by sharing articles on illumination projects, Tech Corner innovations, CSR initiatives, and other industry developments.

I wish all our members great success in the year 2026–27.

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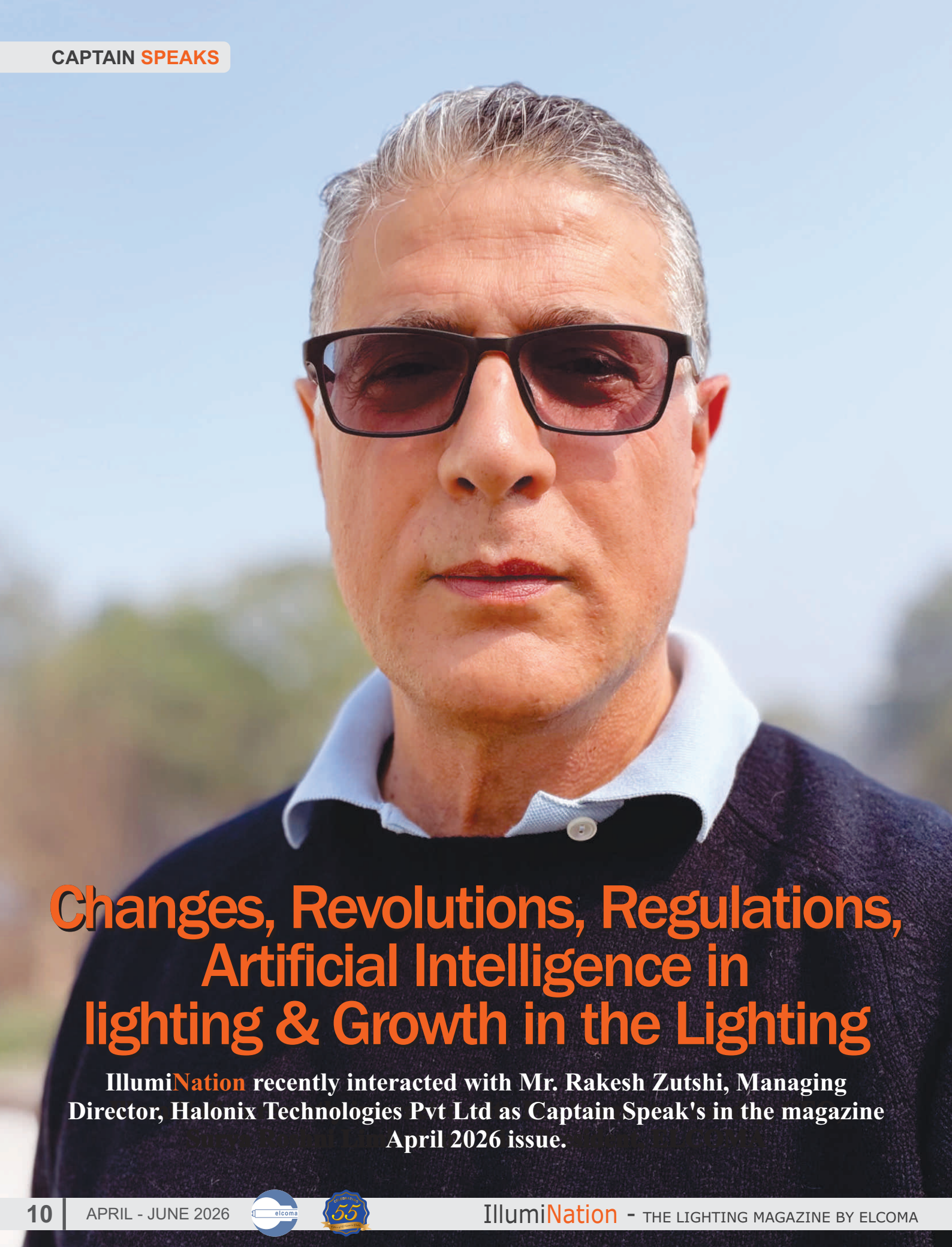

Changes, Revolutions, Regulations, Artificial Intelligence in lighting & Growth in the Lighting

IllumiNation recently interacted with Mr. Rakesh Zutshi, Managing Director, Halonix Technologies Pvt Ltd as Captain Speak's in the magazine April 2026 issue.

Major changes observed in Halonix over the years

My journey with Halonix has been both rewarding and transformative. When I look back, the most significant change has been the shift from conventional lighting technologies — incandescent and CFL to the LED era. This transition was a significant disruption, both technological as well as commercial. Move to LEDs opened up a new frontier in lighting as a semi-conductor instead of electrical and what all could be achieved in this space through innovation and differentiation. Halonix evolved from being a product-centric company to a solutions-driven brand. We scaled our manufacturing capabilities, built stronger distribution networks, and invested heavily in R&D. The culture of innovation became deeply embedded in how we operate. The customer at the centre of everything we do is perhaps the biggest and most welcome change I have witnessed.

How Halonix spearheads technical revolution to meet new-age consumer expectations

Today's consumers are well-informed, demanding, and environmentally conscious. And LED lends itself to be modulated and controlled. This opens up a completely different universe of customised and smart solutions. At Halonix, we continuously invest in understanding evolving consumer needs and translating those insights into meaningful product innovation. We have expanded our portfolio to include smart lighting, energy-efficient solutions, and aesthetically superior products that serve both residential and commercial segments. Our focus on quality, backed by rigorous testing and compliance with national and international standards, ensures that consumers get reliable, long-lasting products. We also collaborate with design and technology experts to stay ahead of market trends, making sure Halonix remains not just relevant but aspirational.

The role of Artificial Intelligence in reshaping the lighting industry

AI is undoubtedly a game-changer for humanity and in the future will be for the lighting industry as well. Its immediate impact will be on the Professional lighting business which will ultimately percolate down to the Consumer lighting in the long run. AI enables lighting systems to learn from user behaviour, adapt to environmental conditions, and optimize energy consumption in real time. From smart homes where lights adjust automatically based on occupancy and mood, to intelligent street lighting systems that respond to traffic and weather — the possibilities are enormous. For the industry, AI also enables predictive maintenance, reducing downtime and operational costs. At Halonix, we see AI not as a distant concept but as an active direction we are moving toward, and it will fundamentally redefine how people interact with light.

Lighting industry's contribution to India's economic growth

Where there is light , there is growth. Human evolution has been closely aligned with the ability of humans to prolong the working hours and not be dependent on natural lighting only. India's growth story reflects the same. With rural electrification as a focus area , India has been able to light up remote areas too. This has translated into new Tier2 and Tier 3 towns now competing with metros for Industrial clusters as well as knowledge Industries. This has reduced pressure on metros and the lighting industry is a proud contributor to it. The infrastructure growth has re-inforced the Indian success story. The spread across the nation of smart cities, affordable housing, commercial real estate, highways has led to the demand for quality lighting solutions in parallel. The industry directly generates employment across manufacturing, logistics, retail, and services. It also contributes to energy savings at a national scale, which has a measurable impact on the broader economy. With India aiming to be the third largest economy by 2027, the lighting sector's role in supporting urbanization, industrial growth, and the Make in India vision cannot be overstated. We are not just illuminating spaces — we are enabling growth.

Addressing challenges in consumer sales

Consumer sales challenges in the lighting industry largely stem from price sensitivity, proliferation of substandard products, and lack of consumer awareness about quality and energy efficiency. The solution lies in a multi-pronged approach. As of now the majority of the lighting products are low consumer involvement products and the Industry has to be supported by the government through education and enforcement in educating consumers — helping them understand the value of BIS-certified, energy-efficient products over cheap alternatives. As the lighting industry moves up the value chain , through differentiation and innovation , there will be appreciation of brands and good products. For that the channel partners too need to be trained and motivated to recommend the right products. Additionally, the industry must work together to curb the circulation of non-compliant products, which not only harm consumers but also undermine fair

competition. At Halonix, we work closely with our distribution partners to ensure the right product reaches the right consumer at the right price point.

Halonix's plans in Connected and Intelligent Lighting

Connected and intelligent lighting is the future, and Halonix is actively positioning itself to be a meaningful player in this space. We are developing and expanding our range of smart lighting products that can be controlled via apps, voice assistants, and automation systems. Beyond the consumer segment, we see significant opportunity in commercial, industrial, and infrastructure projects where intelligent lighting can deliver substantial energy savings and operational efficiencies. Our strategy involves building interoperable, scalable solutions that are accessible — not just for premium consumers but across a broad market. We believe connected lighting should not be a luxury; it should be democratized.

Message to ELCOMA on Ease of Doing Business and regulatory compliance

ELCOMA has been doing a fantastic job of representing the industry in various stake-holders forums including Government. The association must carry on being strong and constructive voice in advocating for a simplified regulatory environment. While compliance is necessary and non-negotiable for quality and safety, the processes around it must be streamlined. Duplication of requirements, lengthy certification timelines, and excessive documentation burden businesses. ELCOMA should work with government bodies to digitize processes, reduce redundancies, and create a more predictable regulatory framework. At the same time, the association should ensure that ease of doing business does not come at the cost of lowering quality standards — the two must go hand in hand.

Challenges with PLI Scheme implementation and suggestions to the Government

The PLI Scheme is a commendable initiative that has given the lighting industry a much-needed boost in domestic manufacturing. We should have consistency in policy and implementation. Individual industries cannot drive manufacturing. Creating an eco-system takes time and policy consistency. As such the scheme needs to more explicitly incentivize the development of backward linkages — particularly in the manufacturing of components and raw materials domestically. My suggestion to the Government would be to engage more actively with industry stakeholders for periodic reviews and recalibrate the scheme to ensure it benefits a wider base of manufacturers, not just large enterprises.

Areas for ELCOMA's working group to drive industry growth

For ELCOMA's vision of industry growth and compliance to be realized, the working group should focus on a few critical areas. First, market development — actively promoting the benefits of quality lighting to consumers, builders, and government procurement bodies. Second, skilling and capacity building — supporting the industry workforce to upgrade technical knowledge in line with evolving technologies. Third, policy advocacy — building a robust mechanism to engage with regulators and policymakers proactively. Fourth, fighting the menace of substandard and non-BIS-compliant products, which remains one of the biggest threats to genuine industry growth. A healthy industry is one where quality is rewarded and non-compliance is penalized effectively.

Enhancing Indian Standards and increasing compliance thresholds

Absolutely, I strongly support the need to enhance the specifications of Indian Standards on lighting products. But it cannot be done in isolation. Specifications on paper only , where the organised industry is going to fight with poor /substandard quality in the market place will lead to losses all around. Enhanced specifications with robust mechanism for implementation and market checks with effective penalization have to go hand in hand. It will ensure that only genuinely capable and responsible manufacturers remain in the market, which ultimately benefits consumers. However, this must be done with adequate notice and transition periods so that smaller manufacturers are not caught off-guard. Continuous engagement between the Bureau of Indian Standards, industry bodies like ELCOMA, and manufacturers is essential to ensure that standards evolve in a practical, forward-looking, and inclusive manner.

Leveraging ECMS to build a domestic component ecosystem for lighting

The enhancement of the Electronics Component Manufacturing Scheme outlay is a very significant development for the lighting industry. Currently, a large proportion of components — drivers, chips, phosphors — are imported, primarily from China, which creates supply chain vulnerabilities and cost pressures. The ECMS provides a real opportunity to change this. The lighting industry should work collectively through ELCOMA to

engage with the scheme's framework and identify specific components where domestic manufacturing is viable and impactful. Building clusters of component manufacturers with shared infrastructure can reduce costs. This is critical as the biggest driver for cost competency in components is scale. Any sub-scale initiative will end up being costly and will negatively impact India as a emerging lighting hub globally and we will never be able to compete with countries which almost enjoy monopoly in this segment.

Three pieces of advice to ELCOMA from a past President

Drawing from my experience as a leader in the industry and past President of ELCOMA, I would offer three pieces of advice.

First, **be proactive, not reactive** — ELCOMA must anticipate industry challenges and policy changes rather than responding after the fact. Engage continuously with government, regulators, and global bodies.

Second, **strengthen enforcement advocacy** — the biggest threat to the industry's integrity is the flood of substandard products. ELCOMA must relentlessly push for stronger enforcement of BIS standards at the market level.

Third, **invest in the industry's future** — support research, innovation, and skilling. The lighting industry of tomorrow will be built on technology and talent, and ELCOMA has a role to play in nurturing the evolving lighting Industry.

IN A LIGHTER VEIN

How do you unwind after a hectic day or week at work?
I find walks very soothing. It is a me-time and gives you time to assimilate and articulate your thoughts.

What is/are your favourite holiday destination/s?
I am a traveholic. I find every new place interesting and something to look forward to. Though personally my favourite has to be Italy for the sheer varied experiences from history, food, the mountains in the north and surrounded by some of the most beautiful beaches in the world. Add the laconic, unhurried lifestyle and you have it all.

What kind of food/cuisine do you like?
All. I have never found any food which I don't like. Though we are mutton eaters as a community, so I am slightly partial towards that.

Which is/are your favourite restaurant/s?
I have had some of the best food in shepherd huts where the ingredients are as fresh as you can get, while some highly rated restaurants have been disappointing. While eating out I don't like the same food time and again and do end up experimenting with mixed results.

What is your inspiration in life?
Live today, tomorrow is another day.

INTERVIEWED BY ILLUMINATION EDITORIAL TEAM

Roadmap, Connected Lighting and Challenges in Lighting

ILLUMINATION Editorial Team Interview: Mr. Niraj Tiwari, Sr.Vice President - Sales & Marketing Consumer Division, HPL Electric & Power Ltd.

You're coming back to HPL after a brief period outside is a welcome move. With a wealth of experience behind how would you like to make use of experience in taking HPL to greater heights?

It is a privilege to lead the Consumer Division at a time when it is emerging as a core growth engine for HPL. My 26+ years of experience across multifaceted organizations like Philips, Orient, and Johnson C Johnson has taught me that sustainable growth comes from a blend of distribution depth and brand-led pull. I intend to leverage our established pan-India network of 85,000+ retailers to further deepen market penetration. By focusing on our "Two Engines" strategy, we can ensure the Consumer segment complements our Smart Metering business to drive higher overall ROCE and cash generation.

What is the future roadmap for HPL in the lighting space?

Our lighting segment has clearly revived, delivering 1G.5% YoY growth in the latest quarter. The roadmap is focused on a transition toward premium and value-added ranges, moving away from the industry-wide pricing pressures of the past. We are also aggressively expanding into solar lighting solutions, including integrated and standalone solar street lights, to align with India's green energy transition.

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

Connected lighting is a natural adjacency for HPL, given our leadership in Smart Metering and RGD. The ongoing 5G transformation in India is a crucial enabler here. We are investing in RCD to integrate 5G technology with lighting to enable optimized resource utilization and efficient energy management across diverse industries.

As per feedback from our members, we get to learn on the challenges faced in the consumer sales. What is your opinion on how such challenges can be mitigated?

The primary challenges are often long working capital cycles and channel acceptance of new technology. We mitigate this through a three-pronged approach: continuous product innovation, aggressive brand building,

and enhancing distribution relations. Our consumer business is specifically designed with a shorter working capital cycle of ~3 months, which helps us stay agile and generate free cash flow even in competitive markets.

You have multifaceted experience in consumer divisions in different organizations. How would you like to best utilize these experiences to take lighting industry to greater heights?

I believe in integrated manufacturing combined with strong RGD. Having seen the global standards at organizations like Philips and JCJ, I want to ensure HPL continues to meet all pre-qualification credentials for technical requirements, quality, and price competitiveness. We aren't just selling products; we are providing a "one-stop shop" for electrical solutions across residential and industrial segments.

With nation's GDP forecast as 6.5%, economists are optimistic of an expected recovery in industrial activity and robust household consumption. What are your views on the same and how lighting industry can leverage on it?

The optimism is well-founded. We are seeing this reflected in our Consumer G Industrial (CGI) segment, which grew 3G% YoY in Q3 FY26. As household consumption rises, there is a direct demand for our wires, cables, and switchgear, which grew 58% and 33% respectively. The lighting industry can leverage this by focusing on infrastructure and development-led momentum, which is currently driving our switchgear sales.

With a positive outlook in the economic growth what is the kind of growth are you looking at and where do you think the lighting industry will reach in terms of CAGR in the next 5 years?

While the broader wires and cables market is expected to grow at a 14.5% CAGR through 2032, we aim to outpace general market trends. In our latest quarter, our CCI revenue reached ₹186.4 crore, and we expect to sustain this trajectory by scaling our distribution and capitalizing on smart city and water infrastructure upgrades.

The new ELCOMA Board in its vision 2024-26 has the priority to focus on industry Growth Compliance. Please let us know your thoughts on areas that the working group need to work to achieve the growth as mentioned by you in the previous question?

The focus must be on standardization and RGD. HPL already invests heavily in in-house RCD with two dedicated centers and 100+ experts. The industry needs to collectively work on creating high benchmarks for quality and safety compliance, which helps established players maintain strong pre-qualification credentials.

Do you support the need to enhance the specifications of Indian Standards on lighting products and the need to increase threshold limits of Compliance requirements?

Absolutely. HPL is already a leader in quality, holding certifications like ISO-G001 and CE. Enhancing standards is vital to ensuring that Indian-made products are globally competitive and that consumers receive energy-efficient, long-life performance solutions.

It is estimated that many products being sold in India are non-compliant (non- BIS certified) products. How does this impact HPL and what kind of advocacy would you recommend going forward?

Non-compliant products create an uneven playing field. At HPL, we pride ourselves on being fully compliant and meeting all contractual pre-qualification requirements. I recommend strong advocacy for stricter BIS enforcement and consumer awareness campaigns on the long-term safety and cost-saving benefits of using certified products like our 'Rakshak' MCBs.

ELCOMA supports Government's initiative on Make-In-India... How would the lighting industry leverage on this so that an ecosystem of local sourcing of components can be established?

HPL is a testament to the "Make in India" spirit, with 7 state-of-the-art manufacturing facilities across India. By leveraging schemes like ECMS, the industry can reduce dependence on imports. We have already expanded our component manufacturing, for instance, our new Gurugram facility for smart water meters, and similar integration in lighting components will drive down costs and improve resilience.

What are the three things you would like to advise ELCOMA to do by which it will serve the industry and the consumers?

First, continue to push for smart infrastructure adoption (like intelligent street lighting). Second, strengthen the "Make in India" component ecosystem. Third, advocate for standardization to ensure only high-quality, compliant products reach the consumer.

IN A LIGHTER VEIN

How do you pass your free time in weekends?
I truly cherish spending quality time with my family—it's a wonderful way to relax and create meaningful memories amidst my busy schedule. Those moments together feel incredibly special and help me reconnect with what matters most.

What are your hobbies?
I enjoy reading books to gain knowledge, watching cricket for excitement, and traveling to new places to explore different cultures and create lasting memories.

What is your favourite movie?
My favorite movie is 3 Idiots. It's a perfect mix of humor, emotions, and life lessons, showing the value of friendship, following your passion, and thinking differently instead of just chasing success.

What is your favourite Holiday Destination?
Rishikesh, my favorite holiday destination, is a beautiful city by the Ganges in the Himalayas, known for yoga, meditation, and adventure activities like rafting and trekking. It's perfect for both relaxation and excitement.

INTERVIEWED BY ILLUMINATION EDITORIAL TEAM

Illuminating Heritage with Intelligence: A Detailed Insight into the Façade Lighting of IIT Kharagpur

The campus of Indian Institute of Technology Kharagpur is not just an academic institution—it is a historic landmark that reflects India's journey in engineering and innovation. The architectural character of its iconic buildings, defined by symmetry, arches, and a commanding central tower, carries both heritage value and visual identity.

Designing a façade lighting solution for such a structure is not merely about illumination—it is about storytelling. The façade lighting project executed by Signify (formerly Philips Lighting) demonstrates how technology, design sensitivity, and precision engineering can converge to create a transformative visual experience.

Project Vision: Respecting Heritage, Enabling Dynamism

The fundamental design intent was to enhance architectural expression without altering its essence. The building's colonial architectural vocabulary—characterized by repetitive arches, strong horizontal bands, and a visually dominant tower—required a lighting approach that would:

- Respect the original materiality and color tones
- Emphasize architectural rhythm and symmetry
- Introduce controlled dynamism without visual clutter
- Provide flexibility for events and institutional identity

Initially conceived with tunable white lighting, the project evolved to incorporate RGBW technology, significantly expanding the creative possibilities while maintaining design discipline.

Understanding the Architecture: A Lighting-Led Interpretation

A comprehensive study of the architecture formed the foundation of the lighting design, allowing the façade to be interpreted not just as a structure, but as a layered visual narrative. At the ground level, the interface between landscape and built form is treated with a gentle touch—soft, low-level illumination and subtle green accents seamlessly connect pathways and surroundings to the building, avoiding harsh contrasts at the pedestrian scale. As the eye moves upward, the mid façade emerges as a rhythmic composition of arches and fenestration, where carefully focused luminaires highlight each arch, creating a rich interplay of light and shadow, while linear wall washing unifies the expanse and ensures visual continuity across repetitive bays. Above this, the crown and roofline define the building's silhouette against the night sky, traced with continuous lines of light that enhance long-distance visibility and lend a sense of completeness, often rendered in warm tones to create a refined visual cap. Anchoring the entire composition is the central tower, treated as a focal beacon—its verticality emphasized through controlled uplighting and distinguished with warm amber hues, subtly elevated in intensity so it commands attention without overwhelming the rest of the façade. Together, these layers orchestrate a cohesive and engaging nighttime identity, where each architectural element is revealed with clarity, depth, and purpose.

Lighting Design Techniques: Precision and Discipline

Achieving visual uniformity across an expansive façade like IIT Kharagpur is not simply a matter of placing fixtures—it is an exercise in precision, restraint, and layered composition. The design thoughtfully uses grazing and wall washing techniques to gently reveal the inherent texture of the building surfaces, allowing light to skim across the façade and create a soft yet consistent luminance over long architectural stretches.

This base layer is complemented by carefully positioned accent lighting, which draws attention to defining elements such as arches, pilasters, and recessed openings. These highlights introduce depth and a play of light and

shadow, ensuring the architecture feels alive rather than flat. Equally critical is the control of light itself—through the use of narrow and medium beam optics, illumination is directed exactly where it is needed, avoiding unnecessary spill and minimizing glare, thereby maintaining visual comfort.

What ultimately brings the entire composition together is a layered lighting approach. By seamlessly integrating ambient illumination with accents and feature highlights, the façade achieves a balanced visual hierarchy. This ensures that the building reads coherently at multiple scales—whether experienced up close in detail or viewed from a distance as a unified architectural statement.

Fixture Integration & Installation Challenges

Executing the façade lighting on a live institutional campus like IIT Kharagpur required a careful balance between technical precision and on-ground practicality. One of the foremost considerations was the seamless integration of luminaires into the architecture—fixtures had to remain visually unobtrusive during the day while delivering impactful results at night. This meant thoughtful concealment within architectural recesses and edges, ensuring that the heritage character of the building remained untouched.

Equally challenging was the routing of cabling across the structure without interfering with the existing building fabric. The team had to adopt discreet pathways and meticulous planning to maintain both aesthetics and structural sensitivity. At the same time, practical aspects such as ease of maintenance were built into the design, ensuring that access to fixtures would not become a constraint in the long term.

Another critical aspect was achieving uniformity across the façade's highly repetitive architectural modules. Even minor deviations in fixture aiming could disrupt the overall visual consistency. To address this, extensive mock-ups and on-site trials were carried out, allowing the team to fine-tune fixture positions, beam angles, and intensities. This iterative process ensured that the final installation not only met the design intent but delivered a cohesive and refined visual outcome across the entire façade.

Smart Controls, Efficiency & Sustainability

At the heart of the façade lighting system lies an intelligent control framework that transforms the installation from a static setup into a responsive and adaptive visual experience. Advanced control solutions enable seamless scene-based programming for different occasions, along with time-based automation that ensures effortless day-to-day operation. The ability to centrally monitor and control the system, combined with smooth dimming and fluid color transitions, allows the façade to evolve dynamically while remaining simple and intuitive for facility teams to manage. Complementing this flexibility is a strong focus on energy efficiency and sustainability. The use of high-performance LED luminaires, optimized through precise optics and strategic placement, ensures minimal energy consumption without compromising visual impact. Scheduled dimming further reduces operational load, while the long lifecycle of the system minimizes maintenance requirements. Together, these elements demonstrate how intelligent controls and sustainable design can work in harmony, delivering both operational efficiency and compelling architectural illumination.

Visual Impact & Conclusion: Transforming Nighttime Identity

Post-implementation, the transformation of the building is both immediate and profound, redefining its presence within the campus as a striking nighttime landmark. The façade now plays an active role in enhancing wayfinding and spatial orientation, while also evolving into a dynamic visual canvas capable of responding to events, celebrations, and institutional moments. Beyond functionality, the lighting fosters a deeper sense of identity and pride, reinforcing the institution's stature through a compelling visual language. The nuanced interplay of light and shadow, combined with carefully curated color and form, creates an immersive and memorable experience for students, faculty, and visitors alike. In essence, the IIT Kharagpur façade lighting project by Signify stands as a benchmark in institutional lighting, demonstrating how heritage architecture can be elevated through a thoughtful blend of design sensitivity, advanced RGBW technology, precision engineering, and intelligent controls. More than just illumination, it is a powerful expression of how light can bring architecture to life after dark—bridging tradition with innovation and redefining identity through experience.

AUTHOR: SIGNIFY INNOVATIONS INDIA LIMITED

HPL

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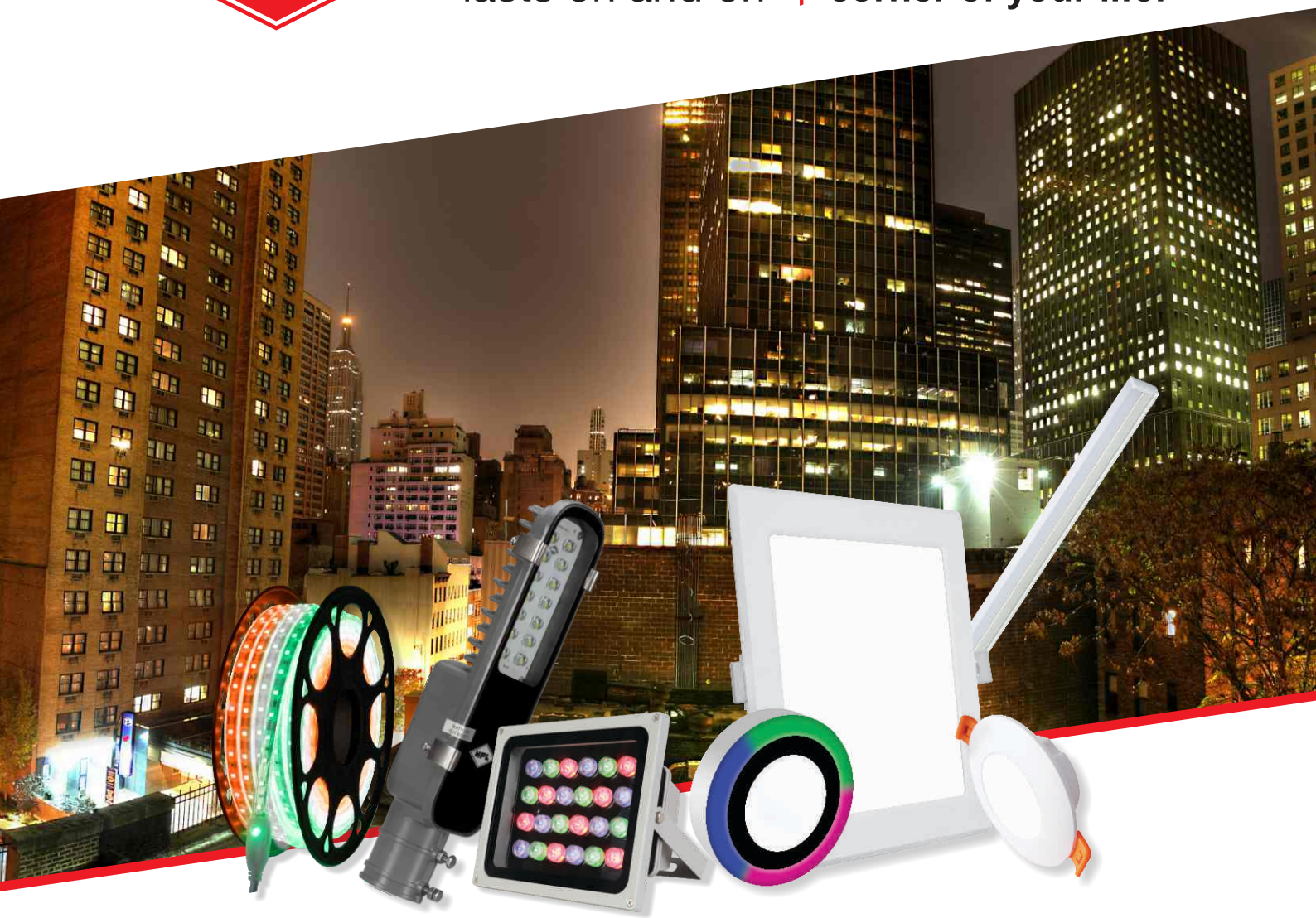

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Strategy, R&D focus and Future plans in Lighting

Chat time Article for ELCOMA Magazine –
Mr. Anirban Banerjee, CEO, Eveready Industries India Ltd.

Formally established in 1934, Eveready Industries India Ltd. has today become an indispensable part of every Indian household. It stands as one of the country's most trusted brands, delivering reliable batteries, trustworthy flashlights, as well as innovative lighting solutions that power millions of households.

How did lighting business become a part of growth strategy?

Lighting forms the core of our growth strategy and is not just a mere extension of our business. Since assuming the role of CEO at Eveready Industries India Ltd. in May 2025, one of my major focus areas has been to harness our heritage in portable power in order to brighten India's path with smarter, safer and more sustainable lighting.

What is the future roadmap for Eveready in the lighting space?

At Eveready, we have always stood for reliable power when it matters most, from batteries and flashlights to a comprehensive lighting portfolio. Today, lighting and electrical products contribute to over one-fifth of our revenues, and this share is steadily rising as we deepen our presence across both consumer and professional segments. Our approach is built on a dual engine. On the consumer side, our LED range spans bulbs, battens, downlights, panels, decorative luminaires and outdoor offerings that blend efficiency with aesthetic comfort for Indian homes. On the professional side, our luminaires for industrial, commercial, street and outdoor applications are engineered for high efficacy, durability, modern design and low maintenance, delivering “brilliant efficiency” in demanding environments.

Eveready have been focusing on emergency lights to meet power outages in the country. What is the strategy behind this decision?

India's power story has made enormous strides, yet millions of homes and institutions still face frequent and unanticipated outages. For us, this reality is not a challenge alone; it is a responsibility. We see emergency lighting as a strategic pillar that connects Eveready's heritage in backup power with the country's need for resilience. Our emergency LED solutions are designed to switch on automatically during power cuts, charge quickly, and provide long, stable backup using modern lithium-ion technology and robust protection features. In addition, Eveready's range of emergency lighting products is built with superior technology that delivers adequate output and ensures there isn't a drastic drop in brightness during power cuts. The superior performance of our products promises consistent illumination during a power outage, allowing consumers to continue performing tasks with minimal disruption. As a result, in the recent quarters, emergency products have grown to form a meaningful share of our lighting revenues, reflecting the trust consumers and institutions place in Eveready when the grid goes dark. Looking ahead, we are working on energy-efficient, voltage-stable emergency bulbs and fans tailored to India's voltage fluctuations and usage patterns so that Eveready emergency solutions remain synonymous with continuity and safety.

What is Eveready's plan on strengthening the R&D in Lighting?

Innovation has been at the helm of all business operations at Eveready and this will play a crucial role in driving growth while moving up the value chain in a competitive market. The company has already unveiled innovations in the flashlight category like the Siren Torch, with a safety alarm, and the Hybrid Torch (India's First Hybrid Torch) with a dual-battery system, for which a patent has been applied. We aim to replicate this success through innovation in the lighting portfolio as well.

We got number of articles from Eveready for our ILLUMINATION magazine on professional lighting project showcases. Please let us know your thoughts on moving up the value chain from consumer to professional lighting.

Over the last few years, we have deliberately moved up the value chain in lighting, that is, from selling products to delivering complete solutions for marquee projects. Our work at the Maha Kumbh Mela 2025 is a proud example; we installed over twelve thousand advanced LED streetlights and floodlights, combining high efficacy with IP66 and IK07 protection to ensure reliable illumination for hundreds of millions of devotees across vast, challenging terrains. Equally special is our contribution to heritage and façade lighting in Odisha, where we have illuminated iconic temples such as the Jagannath Temple in Puri and prominent shrines in Angul and Nayagarh with dynamic RGBW solutions. These projects demanded not only technical excellence but also sensitivity to culture, architecture and community pride, a

balance we are committed to in every professional engagement. Beyond these, we are steadily expanding our institutional footprint through highway projects, public sector installations and corporate, healthcare and educational campuses, supported by a growing portfolio of professional luminaires and panels. The message to the trade and specifier community is that Eveready is ready to be a long-term partner in complex, high-visibility lighting projects across India.

How is Indian lighting industry poised for growth and how will Eveready expected to contribute in this growth path?

The Indian lighting industry is poised for healthy growth over this decade, with LEDs already accounting for a majority of market value and emergency lighting emerging as one of the fastest-growing sub-segments. Within this landscape, we are seeing encouraging traction: in Q2 FY26, our lighting revenues grew in double digits year on year, with luminaires registering particularly strong growth on the back of both volume and mix improvement. We are consciously investing for the future through smarter solutions such as motion sensor battens and advanced controls, a deeper luminaire portfolio, a stronger emergency and backup range, and adjacencies in electricals, such as wires, MCBs, insulation tapes and accessories, that leverage our brand and shared channels. All of this is enabled by our DSIR-recognized R&D, six manufacturing facilities and a companywide commitment to energy efficiency and sustainability, supported by a 4.5 million outlet general trade network and a rapidly strengthening presence in modern trade, e-commerce and quick commerce. Eveready's robust presence in retail channels like general trade, modern trade and e-commerce has ensured that our consumer lighting products are also available in relevant markets. As a result, today, our focus Stock-Keeping Units (SKUs) are present in over 50,000 outlets, registering strong volume growth.

Please let us know your thoughts on how closely Eveready plans to work with ELCOMA?

At Eveready, we are committed to working closely with ELCOMA and the wider lighting ecosystem to raise the bar on quality, safety, energy efficiency and design across India. We see a future where our batteries, flashlights and lighting solutions together account for a significantly larger share of Eveready's portfolio, and where our emergency and professional lighting offerings play a central role in powering India's growth story. As we pursue that ambition, our promise remains unchanged: we will continue to “light India's every need” in homes and on highways, in moments of celebration and in moments of crisis, with the reliability, innovation and responsibility that the Eveready name stands for.

IN A LIGHTER VEIN

How do you spend your personal time?
I gravitate towards reading, particularly contemporary fiction, science fiction, as well as mythology and history—they offer both perspective and imagination in equal measure. Weekends often find me on the court, playing racket sports, which help me unwind while staying active. A significant part of my personal time is reserved for family, especially my twin boys. Whether it's playing, swimming, or reading together, those moments are both grounding and energising in their own way.

What are your primary hobbies and interests?
I enjoy wildlife jaunts across national parks—there's something deeply humbling about being in the midst of nature in its most unfiltered form. It offers a sense of perspective that's hard to replicate elsewhere. Alongside that, I closely follow developments in technology and innovation, given their transformative impact on industry. More recently, I've developed a strong interest in sustainability and how it will reshape businesses and value chains, including our own.

What is your favourite holiday destination?
Mostly Beaches. Having stayed in Mumbai for over 2 decades, Goa remains a favourite family destination for its easy charm and familiarity. We particularly enjoyed Bali while staying in Indonesia—it combined natural beauty with a certain calm that made it an ideal getaway.

What is your favourite food?
Having been born and brought up in Delhi, my palate still carries a strong North Indian imprint—thin, crispy aloo and gobi parathas, and the occasional indulgence of butter chicken with naan, enjoyed without much restraint. At the same time, the Bengali in me quietly asserts itself, bringing me back to the simple, enduring comfort of steamed rice paired with mustard Hilsa fish (ilish). In many ways, it's a blend of two culinary worlds——and I find myself equally at home in both.

INTERVIEWED BY ILLUMINATION EDITORIAL TEAM

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Strengthening the Foundation: National Program on Indian Standards, Codes, and Regulations in Lighting 2026

The **Bureau of Indian Standards (BIS) and the Electric Lamp and Component Manufacturers' Association of India (ELCOMA)** successfully concluded Phase I of the National Program on Indian Standards, Codes, and Regulations in Lighting 2026. Between January and March 2026, this strategic workshops across five major hubs—**Delhi, Mumbai, Bangalore, Kolkata, and Chennai**—to synchronize the industry with India's rapidly evolving regulatory landscape.

A Strategic Partnership for Energy Efficient Sustainable Lighting

This landmark collaboration was designed to bridge the gap between regulatory bodies and a diverse stakeholder ecosystem, including manufacturers, specifiers, testing laboratories, and government procurement agencies.

The primary objective was to provide a deep dive into the National Lighting Code of India (NLC) 2025. As a comprehensive reference handbook for designers, the revised NLC offers clear guidance on modern applications, ensuring that the Indian lighting industry moves toward safer, higher-quality, and more energy-efficient solutions.

Comprehensive Regulatory Coverage:

The workshops went beyond technical metrics, offering a holistic view of the compliance requirements currently shaping the market:

- Performance & Safety: Updated standards for LED lamps, modules, luminaires, and drivers.
- Application Standards: Revised codes for Indoor Lighting (IS 3646) and Public Road & Tunnel Lighting (IS 1944).
- Mandatory Frameworks: Deep dives into the BIS Compulsory Registration Scheme (CRS) and the BEE Star Labelling program.
- Sustainability: Updates on RoHS provisions under E-Waste Management Rules and regional deployment policies.

Phase I: Journey Across Leading Academic Institutions

To foster an environment of learning and innovation, the programs were hosted at prestigious technical universities, drawing over 800 registrations and an average of 130 participants per session. Each session commenced with a traditional lamp-lighting ceremony, followed by technical addresses from distinguished dignitaries representing academia, BIS, and ELCOMA leadership and Insights from Industry Experts

1. **8th January 2026 at Netaji Subhas University of Technology (NSUT), New Delhi**

The Lighting of the traditional lamp and inaugural session was attended by Prof. Anand Srivastava, Vice Chancellor of NSUT, Mr. Parag K Bhatnagar, President of ELCOMA, Mr. Asit Kumar Maharana, Head-ETD of BIS, Smt. Reena Gard, DDG (Standardization I) of BIS, and Mr. Amal Sengupta, Secretary General of ELCOMA.

Thank you Surya Roshni, Havells India and Bajaj Electricals for sponsoring the BIS-ELCOMA training program for Delhi edition

2. 30th January 2026 at Veermata Jijabai Technological Institute (VJTI), Mumbai

The Lighting of the traditional lamp and inaugural session was attended by Dr. Sachin D Kore, Director of VJTI, Ms. Sudeshna Mukhopadhyay Vice President of Havells, Mr. Asit Kumar Maharana, Head-ETD of BIS, Mr. V Gopinath, DDG-W (of BIS, and Mr. Amal Sengupta, Secretary General of ELCOMA.

Thank you Surya Roshni, Havells India, Bajaj Electricals and Polycab India for sponsoring the BIS-ELCOMA training program for Mumbai edition

3. 16th February 2026 at BMS College of Engineering, Bangalore

The Lighting of the traditional lamp and inaugural session was attended by Dr. Nethravathi S, Associate Professor, BMS Collage of Engineering, Ms. Nagamani T, Scientist-E & Head, BIS, Mr. Sriram Iyer, Senior Vice President, Wipro Enterprises and GB Member of ELCOMA, and Mr. Amal Sengupta, Secretary General, ELCOMA.

Thank you Surya Roshni, Havells India, Polycab India, Wipro Enterprises and Sturlite Electric for sponsoring the BIS-ELCOMA training program for Bangalore edition

4. 9th March 2026 at Jadavpur University, Kolkata

The Lighting of the traditional lamp and inaugural session was attended by Prof. Amitava Datta Pro-Vice-Chancellor, Jadavpur University, Mr. Asit Kumar Maharana, Head-ETD, BIS, Mr. Anirudh Kajaria, Business Head- Century LED, Mr. Mohit Sharma, Senior Vice President, Eveready Industries and GB Members of ELCOMA, Dr. Meenakshi Ganesan, DDG, ER Region BIS, Prof. Chiranjib Bhattacharjee, Vice-Chancellor Jadavpur University, Dr. Saswati Majumdar, Jadavpur University, Dr. Swarnendu Sen, Jadavpur University, Prof. Madhubanti Maitra, Head, Electrical Engineering Department , Jadavpur University, Ms. Sudeshna Mukhopadhyay, Havells, Ms. Neha Agarwal, BIS and, Mr. Amal Sengupta, Secretary General, ELCOMA.

Thank you Surya Roshni, Havells India, Polycab India, Eveready Industries and Century LED for sponsoring the BIS-ELCOMA training program for Kolkata edition

5. 27th March 2026 at Sri Sairam Engineering College, Chennai

The Lighting of the traditional lamp and inaugural session was attended by Dr. A. Rajendra Prasad, Dean (Student Affairs)- Sri Sai Ram Engineering, Mr. Asit Kumar Maharana, Head-ETD, BIS, Ms. Sudeshna Mukhopadhyay, Vice President, Havells India, Dr. J. Raja, Principal- Sri Sai Ram Engineering College and, Mr. Amal Sengupta, Secretary General, ELCOMA

Thank you Surya Roshni, Havells India, Polycab India, Eveready Industries and Luker Electric for sponsoring the BIS-ELCOMA training program for Chennai edition

The sessions were enriched by a faculty of subject matter experts who provided practical insights into implementation:

1. BIS - Ms. Neha Agarwal (Scientist D), Shri Avik Datta and Shri Neeraj Kushwaha
2. Industry Standards: Expert contributions from:

- Signify Innovations India Ltd (Mr. Nitish Poonia and Mr. Shreekant Phanse),
- Havells India Ltd (Ms. Sudeshna Mukhopadhyay, Mr. Soumo Ghosal and Mr. Pankaj Mittal),
- Orient Electric Ltd (Mr. Santosh Agnihotri),
- Bajaj Electricals Ltd (Mr. Hrishikesh Ta).

7. Policy & Academia:

- CLASP Team- Mr. Yatharth Kumar Sharma
- Jadavpur University- Dr. Suddhasatwa Chakraborty.
- ELCOMA -Mr Amal Sengupta

The seamless execution of the workshops was supported by the dedicated efforts of Mr. Rajesh Kachwaya and Mr. Deepak Kumar from ELCOMA, who efficiently managed the registration process and overall program coordination.

Looking Ahead: Towards Global Benchmarks

The update to India's lighting standards is a pivotal move toward improving product longevity and performance. By addressing critical modern challenges—such as flicker mitigation and the health and wellbeing aspects of light—BIS and ELCOMA are ensuring that the domestic industry is prepared to meet and exceed global benchmarks.

Phase I has established a robust foundation. As we look toward future phases, the focus will remain on expanding this awareness to larger audience and locations, fostering a culture of innovation and unwavering compliance.

ILLUMINATION EDITORIAL TEAM

Smart Lighting Transformation at MES Chandimandir, Punjab

In a significant step towards modern infrastructure and smart city integration, MES Chandimandir, Punjab has successfully implemented an advanced IoT-based street lighting solution. Polycab proudly delivers a next-generation **IoT-based street lighting solution** at MES Chandimandir, Punjab

This initiative reflects a strong commitment to enhancing **security, safety, and energy efficiency** through intelligent technology. This landmark project is not just about illumination—it is about **empowering infrastructure with intelligence**, ensuring **unmatched safety, superior energy efficiency, and seamless digital control.**

Intelligent Lighting for Enhanced Security & Safety

The deployment of Polycab's smart street lighting system ensures well-lit surroundings across the MES Chandimandir area, contributing to improved visibility during night hours. This plays a crucial role in:

- Strengthening perimeter and internal security
- Reducing accident risks for pedestrians and vehicles
- Creating a safer environment for residents and personnel

The system's ability to automatically adjust lighting levels based on real-time conditions ensures consistent illumination where and when it is needed most.

Individual Smart Controller – Precision at Every Point

Each street light is equipped with an individual smart controller, enabling:

- Remote ON/OFF control of every light point
- Dimming capabilities for optimized energy usage
- Fault detection and instant alerts

This granular control allows authorities to manage lighting infrastructure efficiently and respond proactively to maintenance needs.

App-Based Smart Management

The entire lighting network is integrated with a **user-friendly mobile and web-based application,** offering seamless control at the fingertips. Key features include:

- Real-time monitoring and control
- Scheduling and automation of lighting operations
- Instant notifications for faults or irregularities

This digital interface simplifies operations and eliminates the need for manual intervention.

Data-Driven Dashboard Insights

A centralized dashboard provides comprehensive visibility into system performance, including:

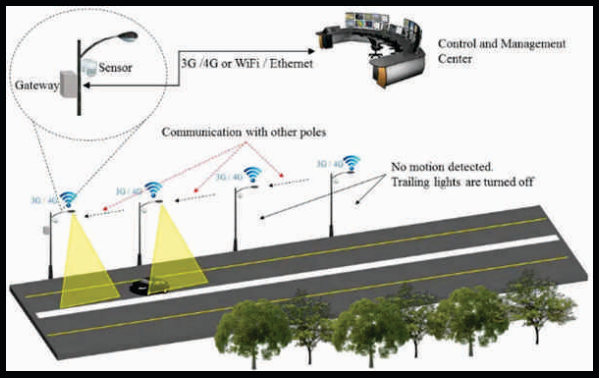
- Energy consumption analytics
- Operational status of each light
- Maintenance and fault reports
- Historical performance data

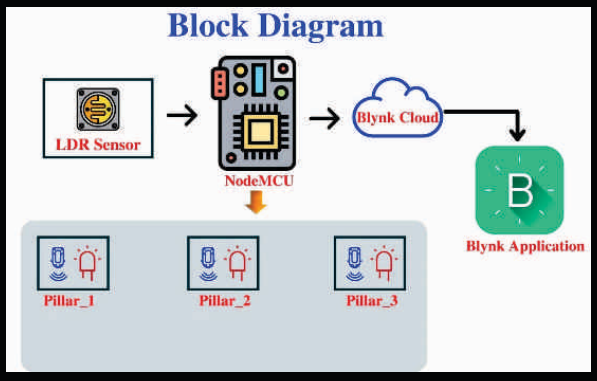
These insights empower decision-makers to optimize energy usage, reduce operational costs, and improve system reliability.

Driving Energy Conservation & Sustainability

One of the key benefits of this IoT-enabled solution is its contribution to **energy conservation**. Through intelligent dimming, scheduling, and real-time monitoring, the system significantly reduces power consumption and carbon footprint.

IoT-Based Street Light Concept & Field View





AUTHOR: POLYCAB INDIA LIMITED

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Surya Roshni delivers Precision-Crafted Lighting Solutions for Indhana Bhavan

In the evolving urban fabric of Bengaluru, **Indhana Bhavan,** the headquarters of the Karnataka Power Transmission Corporation Limited (KPTCL), distinguishes itself as far more than an administrative building. It stands as an emblem of Karnataka's leadership in power transmission—an institution built on reliability, continuity, and technological advancement. As the command centre of the state's expansive transmission network, its purpose is both functional and symbolic. This duality is powerfully articulated through its architecture and its thoughtfully crafted nocturnal presence.

Designed by **Sundaram Architects** and executed by **Kalpataru Projects International Ltd,** the building's architectural framework achieves a commanding institutional identity. Its structured geometry, disciplined lines, and robust material palette express authority and precision—values intrinsic to the power sector. Enhancing this presence, the professional façade lighting conceived and delivered by **Surya Roshni Limited** elevates Indhana Bhavan from a daytime landmark to a luminous night-time symbol of the energy that sustains Karnataka.

Lighting Concept: Expressing Energy Through Illumination:

For an institution responsible for transmitting power across the state, lighting naturally becomes a narrative medium. The design intent extends beyond surface illumination; it aims to depict the very idea of **energy flow.** This conceptual foundation guides a lighting scheme that is measured, dignified, and architecturally aligned.

The strategy adopts a **restrained yet impactful approach,** using linear architectural luminaires to trace key vertical and horizontal elements. These lighting strokes strengthen the building's structural rhythm, reinforcing its geometry without introducing visual noise. The façade reads clearly from

near and far, maintaining the disciplined aesthetic of an institution entrusted with critical infrastructure.

Rather than overwhelming the architecture, the lighting employs **precision optics** and **controlled beam angles** to sculpt the building's surfaces. Subtle interplay of light and shadow accentuates recesses, edges, and planes, adding depth and dimensional richness after dusk. This creates a visual identity that is not ostentatious but assured—befitting a public utility headquarters.

Technical Precision and Seamless Integration:

Professional integration sits at the heart of the project's execution. Fixtures are discreetly embedded within the architectural envelope, ensuring they remain unobtrusive during the day. Careful coordination of mounting details avoids glare and spill light while supporting long-term maintenance—a critical consideration for infrastructure of this scale.

Luminance levels are calibrated to achieve prominence in the urban setting without excessive brightness, reflecting both environmental responsibility and institutional ethos. Uniform illumination across elevations ensures consistency, while deliberate contrasts emphasize key architectural bands. The result is a coherent lighting composition that communicates technological sophistication and organizational integrity.

A Luminous Institutional Landmark:

By day, Indhana Bhavan projects stability and administrative authority. By night, its illuminated façade transforms it into a composed, glowing landmark—symbolizing the seamless transmission of energy across Karnataka. The project stands as evidence of **Surya Roshni Limited's** capability in delivering integrated, context-sensitive lighting solutions for major institutional infrastructure.

Today, Indhana Bhavan shines not only as a civic structure but as a **beacon of progress,** its luminous façade reflecting the very function it embodies: the steady, dependable flow of energy powering Karnataka's future.

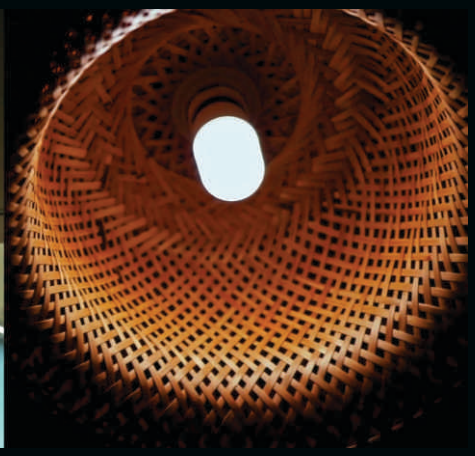
AUTHOR: SURYA ROSHNI LTD

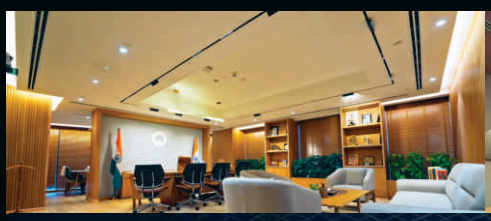
Lighting the Future: Jaquar Lights Illuminates QCI with Innovation and Elegance

Jaquar Lights has successfully transformed the office space of the Quality Council of India (QCI) into a dynamic and sophisticated environment, setting a new benchmark for lighting in government infrastructure. The project stands as a testament to how thoughtful lighting design can elevate functionality while embodying premiumness and modern aesthetics.

Designing lighting for a government premises posed unique challenges, particularly within the constraints of conventional systems. However, through close collaboration with the client and architects, Jaquar delivered an innovative solution that balanced creativity with practicality. The brief called for a vibrant, energy-filled workspace, and Jaquar achieved this through a seamless integration of advanced lighting technologies.

A standout aspect of the project was the use of multiple lighting models, carefully camouflaged and controlled to adapt to varying spatial requirements. This approach ensured optimal luminosity across different zones while maintaining visual harmony. Key installations included profile lights, magnetic track lights, and ring profile lights, complemented by decorative yet minimal chandeliers and pendant lights that added a refined character to the interiors.





Special attention was given to critical areas such as the boardroom, CM lounge, and annex spaces, where Jaquar successfully merged modern lighting systems with existing conventional setups. The inclusion of stretch ceilings and strategically placed strip lights further enhanced depth and highlighted architectural features.

Beyond aesthetics and performance, sustainability was a core focus. The project achieved an effective balance between energy efficiency and lighting quality, earning appreciation from end users. This emphasis on sustainable design reinforces Jaquar's commitment to responsible innovation.

The QCI project is not just a successful execution but a reference point for future government sector developments. It reflects the power of collaboration, technical expertise, and design vision-hallmarks of Jaquar's approach to lighting excellence.

AUTHOR: JAQUAR LIGHTING

HPL implements Smart Street Lighting Project in Dharamshala

HPL Electric & Power Limited has established itself as a market leader in India's smart city transformation, with its smart lighting solutions showing how urban infrastructure can deliver value far beyond basic illumination. Through projects such as its landmark smart street lighting execution in Dharamshala, the Company has helped create safer, more efficient and more liveable public spaces all across Dharamshala City, improving road visibility, pedestrian safety and the overall usability of cities after dark. Supported by strong manufacturing capabilities, in-house R&D and a diversified lighting and electrical portfolio, HPL brings proven execution, quality and reliability to prestigious public infrastructure projects, strengthening its role in India's urban modernisation. The wider impact of such projects is equally important: smart lighting can support local economic activity, improve confidence in civic infrastructure, help municipalities reduce energy consumption and enhance everyday quality of life. HPL's contribution to Dharamshala has also been recognised through Certificates of Appreciation from both the Dharamshala Municipal Corporation and Dharamshala Smart City Limited, reflecting the Company's strong execution track record and leadership in delivering future-ready infrastructure solutions.

AUTHOR: HPL ELECTRIC & POWER LTD

Lighting – An Integral Part of Good Public Infrastructure

It is an incontrovertible fact that lighting forms an integral part of civil infrastructure. Well-designed public lighting solutions provide essential safety, enabling people to enjoy the cityscape while also deterring crime and vandalism. Lighting creates ambience and fosters social interaction, shaping atmospheres and impressions that alter perceptions of urban settings and encourage community engagement. A locality with well-lit roads is perceived to be safer compared to areas where roads are not properly maintained. Well-lit parks, gardens, squares, and play areas make neighbourhoods more vibrant, cheerful, and lively for residents. This is the kind of psychological effect lighting can have on people's minds. Individuals are drawn to places that feel safe and where they can move freely at any time. All these points emphasise the importance of road lighting in the daily lives of people.

The development of a well-lit network of roads in the country is quintessential in this regard. Such a network assists in the safe movement of road traffic, provides a sense of security to millions coming to the state, brings light into towns and cities, enhances lives, and helps remove crime from streets, thereby supporting the government's agenda of good governance.

ROAD LIGHTING

Road lighting is a challenging task that involves providing a cohesive lighting scheme across diverse landscapes, while responsibly minimising lighting pollution and maintaining lighting levels sufficient for functional purposes. Lighting is a subtle yet effective way to create identity and pride in a locality.

The National Highways that connect various cities and states are the lifeline of the country. Therefore, it is of utmost importance that these highways are well maintained and well-lit, providing an assuring, soothing, and safe environment to all citizens.

The standard used for road lighting over many years provides guidance on factors such as “average lighting level” and “uniformity”, which must be maintained according to the classification of the road.

EFFECTIVE ROAD LIGHTING

The parameters that distinguish a good road lighting installation from others are mainly 'Lighting Level' and 'Longitudinal and Overall Uniformity'. Often, road lighting is not evaluated for its effectiveness as seriously as it should be. In general, stakeholders involved in such projects strives to provide the most efficient road lighting, thereby controlling two main aspects:

a) Capital Expenditure (Capex) and

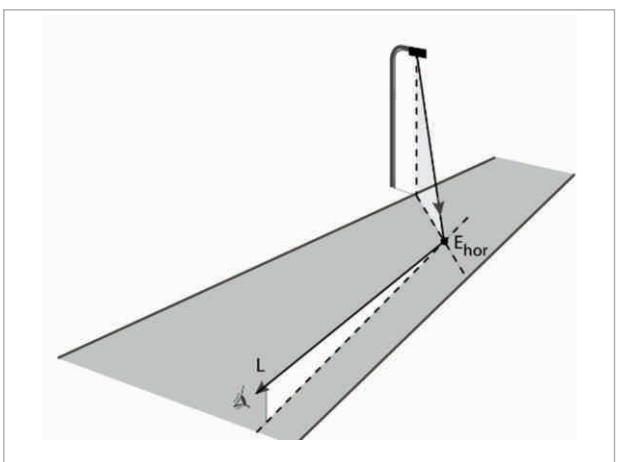
b) Operating Expenditure (Opex).

However, what matters most to the average road user is good quality of light . Users look for the 'Effectiveness' of the installation, not merely its 'Efficiency'. It is possible to achieve the desired average illumination, but if the installation creates a pronounced zebra effect, with distinct bright and dark areas, it falls short on quality aspect of road lighting. The adoption of LED luminaires has significantly impacted road lighting on this aspect due to crisp and sharp beams offered by the lens optics used in these luminaires, often resulting in particularly obvious bright spots on the road surface.

It is time to improve and look beyond just energy efficiency or luminous efficacy (lumen/Watt) and additionally focus on effective road lighting that addresses quality of road illumination. Thus, understanding the impact of light on the road is more crucial than simply considering the quantity of light. The effect of the equipment illuminating the road is more important than just its efficiency.

LUMINANCE IN ROAD LIGHTING

First and foremost, we must determine the lighting parameters that positively influence visual performance and



Light incident on the road results in horizontal illuminance, Ehor, on the road, while the light reflected from the road surface results in road-surface luminance, L.

comfort for users in road lighting. A surface becomes visible when light reflects off it and enters the observer's eye; the more light that enters the eye, the stronger the visual sensation. The key parameter in the visual process for motorised traffic is luminance. Illuminance, or the amount of light falling on the road surface, does not indicate how powerful the visual sensation will be – in other words, how bright the surface appears. Luminance, however, is the amount of light reflected from the road surface that reaches the human eye, creating a visual sensation. In essence, illuminance is the 'cause' and luminance is the 'effect'.

Since brightness is determined not by illuminance but by luminance, the visual performance and comfort of a road user are directly influenced by the complex pattern of luminance in their view of the road ahead. The reflection properties of cars, bicycles, pedestrians, obstacles, and other objects in the field of view vary widely. Dry road surfaces, however, have relatively consistent reflection properties for the typical viewing directions of motorists towards the road area 50–150 metres ahead. The road-surface luminance achieved from a specific road-lighting installation can therefore be accurately predicted. The road surface often forms the background for objects on or near the road, which is why the concept of road-surface luminance is generally better suited than horizontal illuminance for defining visual performance and comfort for motorised road users. Hence, most global standards are based on this concept, specifying target average luminance values. The more appropriate parameters that differentiate good road lighting installations from others are mainly 'Luminance Level' and 'Longitudinal and Overall Uniformity of Luminance'.

While we highlight the importance of the luminance concept for motorised traffic, illuminance is equally important for pedestrians, cyclists, and residents. Compared to motorists, walkers and cyclists have a wide variety of viewing directions. The pavement, facades, and faces of other people on the street are all surfaces of interest to them, in addition to the road itself. These factors make it impossible to employ standard reflection qualities for this group of road users. Therefore, illuminance is relied upon as the fundamental lighting characteristic for road lighting designed especially for non-motorised users.

Road lighting is a vast subject, making it difficult to discuss every aspect in a single article. In this topic, I have touched upon the basic requirements of good road lighting parameters. We will cover more aspects on road lighting in the coming issues of the magazine this year.

AUTHOR: MR. SHREEKANT PHANSE, NATIONAL APPLICATION SPECIALIST, SIGNIFY INNOVATIONS INDIA LTD

OLED Technology: General Illumination Challenges and Mitigation

I. INTRODUCTION

This article is a continuation of the earlier technical discussion on the future of LED lighting published in ELCOMA Magazine (Jan–Mar 2026) and focuses on Organic Light Emitting Diodes (OLEDs) as an emerging lighting technology. OLEDs are large-area, thin-film light sources based on organic semiconductor materials that emit uniform, glare-free light when electrically driven. Unlike LEDs and fluorescent lamps, which are point or line sources, OLEDs enable planar illumination and offer unique attributes such as flexibility, transparency, color tunability, and soft diffused light that closely resembles natural illumination. This article introduces OLED working principles and major technology variants, followed by an assessment of the current state of OLED lighting and its future expansion. Key emphasis is placed on general lighting applications, driver topology requirements, and market outlook. The article concludes by outlining practical applications alongside the key technical and commercial challenges facing OLED lighting today

II. OLEDS WORKING PRINCIPLE

An OLED is made by placing a series of organic thin films between two conductors. When electrical current is applied, a bright light is emitted. OLEDs are "organic" because they are made from carbon and hydrogen. Although OLEDs are very efficient and do not contain any bad metals, and are light and thin, it is rather environmental friendly. There is no connection to organic food or farming.

It is actually the dominant smartphone display technology, laptops, tablets, monitors, wearables, TVs and many more. Almost a billion Active-Matrix OLED (AMOLED) screens are produced each year, by Samsung Display, LG Display, BOE, and others. The OLED industry and market are growing as more and more devices choose OLEDs over LCD displays.

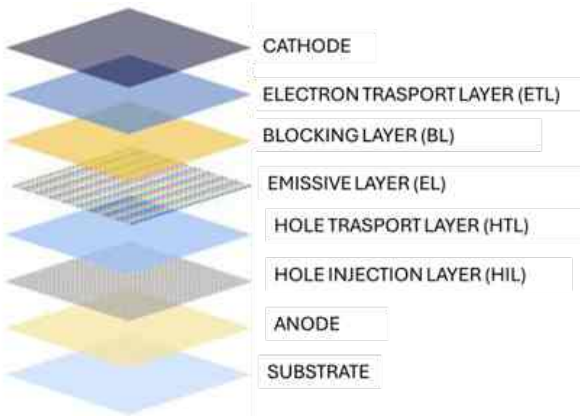


Fig.1 OLED device structure

The main component in an OLED display is the OLED emitter, an organic carbon-based material that emits light when electricity is applied. The basic structure of an OLED is an emissive layer sandwiched between a cathode which injects electrons and an anode which removes electrons. Modern OLED devices use many more layers in order to make them more efficient and durable, but the basic functionality remains the same as shown in Fig.1.

An OLED panel itself is made from a substrate, backplane electronics - the driver, frontplane the organic materials and electrodes as explained above Fig.1 and an encapsulation layer. OLEDs are very sensitive to oxygen and moisture and so the encapsulation layer is critical.

The substrate and backplane of an OLED display are similar to those of an LCD display, but the front plane deposition is unique to OLEDs. There are several ways to deposit and pattern the organic layers. Currently most OLED displays are made using vacuum evaporation, using a Fine Metal Mask (FMM), to pattern. This is a relatively simple method but it is inefficient a lot of material is wasted and very difficult to scale up to large substrates.

Some OLED materials are soluble, and these can be deposited using printing methods mostly ink-jet printing. OLED makers hope that ink-jet printing may be a scalable, efficient and cheap way to deposit OLEDs. There is a next-generation OLED deposition technology referred to as maskless-production usually based on photolithography that seems to be of high interest.

A passive-matrix OLED (PMOLED) is limited in size and resolution (usually maximum resolution is around 128x128), but is cheaper and easier to make compared to an AMOLED. An AMOLED uses an active-matrix TFT array and storage capacitors. While these displays are more efficient and can be made large, they are also more complicated to make. PMOLED displays are used in small devices or secondary displays while AMOLEDs are used in smartphones, smartwatches, tablets, laptops and Tvs.

III. OLED TECHNOLOGY TODAY

Fig.2 shows the OLED display. Based on technological focus below are the

types of OLED displays and lighting :

A. Transparent OLED displays

Several companies develop transparent

Fig.2 OLED Display

OLED also referred to as T-OLED technologies. While there is no inherent technology barrier towards transparent OLED displays, finding actual applications for such displays is not easy. Today, LG Display is producing large-area transparent OLEDs in sizes ranging from 30-inch to 77-inch. These are mostly used in signage and commercial settings. Some PMOLED producers are offering small around 1-2 inch in size transparent OLEDs.

B. Transparent OLED Lighting

OLED technology can also be used to make lighting panels, these are thin, area-lit and efficient lighting panels, that can be made transparent. Unlike displays, transparent OLED lighting panels have more immediate applications embedded in windows. Unfortunately OLED lighting has been a challenging market and currently there is not much R&D for transparent OLED lighting.

C. Flexible OLEDs

A flexible OLED is based on a flexible substrate usually polyimide. Fig.3 shows the flexible OLED display. The first generation of OLEDs produced on these were not really flexible from the user perspective. The device maker bends the displays, or curves it but the final user is not able to actually bend the device. These first generation flexible OLEDs are adopted many premium smartphones, for example the Samsung edge-type Galaxy phones or Apple's latest iPhones. A plastic-based OLED has several advantages especially in mobile devices. The displays are lighter, thinner and more durable compared to glass based displays.

Second generation flexible OLED displays can be bent by the user, these can be used to create foldable smartphones. The first range of which started shipping in 2019 and today these are quite popular. Rollable OLEDs are likely to enter the market soon, offering the ability to create scrollable devices. In 2019, LG launched the world's first rollable OLED device - the 65" Signature OLED TV R but in 2024 it discontinued this device as its price was too high for consumers. A new wave of rollable OLEDs are on the way, for automotive, laptop and may also smartphones soon. While several companies, including Samsung, LG, BOE and others are producing OLED displays, it is not straightforward to find a good and reliable supply of these displays.

Fig.3 Flexible OLED Display

IV. THE OLED LIGHTING

It is an amazing technology for lighting. It creates beautiful, efficient and healthy light sources. OLED lighting has great promise but unfortunately the high price of production is a challenge that no one has managed to overcome and OLED lighting remains a small niche industry.

In the early years, several large lighting makers including GE, Philips, OSRAM, LG, Konica Minolta, Panasonic, NEC and others had active OLED lighting programs, but slowly almost all of these companies dropped out of the market for various reasons, but the main one being that the large investments in large scale production are not certified to lead to market adoption.

Currently, LEDs dominate general lighting due to higher efficiency and lower cost and the competition with LED lighting is extremely difficult. OLED is not yet a mass market replacement for LED in general illumination, but it is highly promising

Table 1. Comparison matrix OLED vs LED

Parameter	OLED	LED
Light Type	Surface	Point
Efficacy	60–90 lm/W	120–200 lm/W
Lifetime	20K–40K hrs	50K+ hrs
Glare	Very low	Needs diffuser
Thermal Management	Simple	Requires heat sink
Cost	High	Low

for premium architectural lighting, decorative lighting and human centric environments. It is soft, uniform luminance, no harsh shadows, ideal for human-centric lighting. Thickness < 2 mm, can be flexible or transparent, Enables architectural integration. Very little IR/UV radiation, comfortable for indoor use. Table 1 summarizes the comparison of OLED lighting versus LED lighting.

Major OLED lighting application areas are as follows:

A. Premium Indoor Lighting

- Offices
- Hotels
- Luxury homes
- Decorative ceiling panels

B. Automotive Interiors

- Used by brands like: Audi, BMW

C. Architectural Lighting

- Wall panels
- Transparent partitions
- Ambient lighting systems
- Technical Challenges
- Lower luminous efficacy compared to LED
- Higher cost per lumen
- Moisture sensitivity
- Limited lifetime blue emitter degradation

D. Future Scope

- Human-centric lighting systems
- Flexible ceiling panels
- Transparent lighting windows

V. OLED DRIVER CIRCUIT TOPOLOGY

OLED panels are current-driven, low-voltage, large-area loads, the driver must provide, precise constant current, very low ripple (flicker-free, IEEE 1789 compliant), high efficiency at low output voltage (typically 6–24V), smooth dimming analog preferred over PWM for OLED. Important design considerations for OLED are rippling current limit. OLED lifetime reduces with ripples. The target ripple is <5%. For the dimming strategy, preference is analog dimming. It avoids high-frequency PWM ripple stress, soft start, prevent inrush degradation. Better thermal management, even though heat is low, but junction uniformity matters. Major LED Driver ICs & power solutions are from Texas Instruments, Infineon Technologies, STMicroelectronics, ON Semiconductor. The major panel suppliers are LG and OSRAM. Table2 is a structured OLED driver topology comparison useful for product design and development.;

Table 2: OLED Driver Topology Comparison

Topology	Efficiency	Ripple	Isolated	Cost	Complex
Linear	Low	Lowest	No	Low	Lowest
Buck	High	Higher	No	Higher	Medium
Flyback	Medium	Higher	Yes	Higher	Medium
LLC	Highest	Low	Yes	Higher	Highest
2-Stage PFC +Buck	Higher	Lowest	Optional	Higher	Higher

VI. GLOBAL OLED LIGHTING MARKET FORECAST

The overall OLED market including displays and lighting is expected to grow strongly through the next decade from about USD 68 billion in 2025 to USD 385 billion by 2035 at a 19 % CAGR, showing broad expansion in OLED applications overall. OLED lighting remains a growth market with strong niche expansion, particularly where design and quality matter most. Its overall share of the broad lighting industry will stay smaller than LEDs, but premium and specialized adoption is expected to expand steadily through 2030 and beyond.

Current market outlook of OLED Konica Minolta is now mass producing OLED lighting panels and OLEDWorks, which took over Philips OLED lighting fab in Germany is making excellent progress with automotive OLED lighting. China-based Yeolight is building $100 million OLED lighting fab, and Germany's Inuru is targeting niche markets with its printed OLEDs

VII. CONCLUSION

OLEDs can be used to create excellent light source. OLED lighting panels offer highly uniform area lighting and can be flexible, efficient, light, thin, transparent, color-tunable and more. OLEDs enable new designs and these devices emit healthier light compared to CFLs and LED lighting devices. There are still many challenges facing the OLED industry. Here is a list of some of the major challenges are :

- Material lifetime and efficiency especially of the blue material.
- Soluble OLED material performance and production processes.
- Better materials for flexible OLED and foldable ones.

AUTHOR: DR. AMAN JHA, SENIOR MEMBER, IEEE , PHD (IIT DELHI), MTECH (IIT BOMBAY); GENERAL MANAGER, CRI HAVELLS

Seminar on Revised Lighting Standards Implementation

Joint Initiative by BIS and ELCOMA at Manak Bhawan

BIS and ELCOMA came together to host a meaningful seminar at Manak Bhawan, aiming to facilitate the smoother implementation of newly revised lighting standards. The event brought together senior BIS officials, including DDG LRMD, Head LRMD, Head ETD, and Head BIS Registration (CRS), as well as representatives from all major BIS-recognized laboratories. ELCOMA's delegation featured technical experts from prominent lighting brands, reflecting the industry's commitment to collaborative progress.

Throughout the seminar, participants engaged in open and constructive discussions on key topics: implementation guidelines, industry perspectives on testing requirements for existing licenses, and the readiness of laboratories to meet new demands. Notably, industry leaders Mr. Santosh Agnihotri (Orient electric) and Ms. Shilpi (Signify) shared the compliance approach for LED lamp and LED luminaire products already registered under CRS. Industry technical experts emphasized that the updated standards have introduced incremental changes. They suggested that any new testing requirements could be addressed through targeted or partial testing, rather than requiring complete retesting of products for clauses where compliance has already been established in previously submitted test reports.

The BIS officials expressed genuine appreciation for the industry's clarity and thoughtful approach. They assured participants that BIS would offer comprehensive support to ensure a seamless transition, emphasizing the importance of ease of doing business while maintaining strict compliance for all products. The collaborative spirit and mutual understanding displayed during the seminar underscored a shared commitment to advancing lighting standards in India and further improve the quality of lighting products.

The seminar was conducted in a hybrid format, enabling concerned stakeholders from all over the country to participate virtually as well as in person, ensuring broad and inclusive engagement.

PRESENTED BY: ELCOMA EDITORIAL BOARD

Update on Standards and regulations

BIS has published below given standards and these are going to replace the old version by 02.08.2026. We have already discussed in our technical committee meetings for the significant changes, for refreshing the discussions, below are significant changes highlighted considering that safety part is mandatory under CRS. Summarised list of standards is as below:

S. No.	Product Category	Product Name	Current IS	Revised IS	Last date of Concurrent Running
1	Fixed General Purpose LED Luminaires	Fixed General Purpose LED Luminaires	IS 10322 (Part 5/Sec 1) : 2012	IS 10322 (Part 5/Sec 1) : 2026	02 August 2026
		Fancy Lights		IEC 60598-2-1: 2020	
2	Recessed LED Luminaires	Recessed LED Luminaires	IS 10322 (Part 5/Sec 3) : 2012	IS 10322 (Part 5/Sec 3) : 2026 IEC 60598-2-3: 2002 + Amd 1: 2011 (CSV)	02 August 2026
3	LED Luminaires for Road and Street Lighting	LED Luminaires for Road and Street Lighting	IS 10322 (Part 5/Sec 3) : 2012	IS 10322 (Part 5/Sec 3) : 2026 IEC 60598-2-3 : 2002 + Amd 1: 2011 (CSV)	02 August 2026
4	LED Flood Lights	LED Flood Lights	IS 10322 (Part 5/Sec 5) : 2013	IS 10322 (Part 5/Sec 5) : 2026 IEC 60598-2-5: 2015	02 August 2026
5	LED Hand Lamps	LED Hand Lamps	IS 10322 (Part 5/Sec 6) : 2013	IS 10322 (Part 5/Sec 6) : 2026 IEC 60598-2-8: 2013	02 August 2026
6	LED Lighting Chains	LED Lighting Chains	IS 10322 (Part 5/Sec 7) : 2017	IS 10322 (Part 5/Sec 7) : 2026 IEC 60598-2-20: 2022	02 August 2026
7	LED Luminaires for Emergency Lighting	LED Luminaires for Emergency Lighting	IS 10322 (Part 5/Sec 8) : 2013	IS 10322 (Part 5/Sec 8) : 2026 IEC 60598-2-22: 2022	02 August 2026

Significant Changes in IS 16102 (Part 1): 2026

i) Rated input power of lamps has been covered up to 60W.

ii) Test requirements for photo biological safety have been added.

iii) LED lamps with non-removable rechargeable batteries have been covered.

iv) Test requirements of abnormal operating conditions have been added.

v) Test requirements for ingress protection have been added.

vi) Additional marking requirement for lamps with bulbs not suitable for water contact.

vii) Marking requirement for photo biological safety marking.

viii) Test requirements for axial strength of Edison caps have been added.

ix) Test requirements for fault conditions have been modified.

Significant Technical changes in IS 10322 (Part 1): 2026

a) Introduction of IPX9

b) Inclusion of EMF safety requirements

c) Modification in the marking requirements

d) Addition of a new sub clause for marking of mains socket outlet moved from information requirements

e) Addition of new clause on protection against fast rotating parts (moving fan blades);

f) Introduction of PELV (Protective Extra-Low-Voltage) system

g) Additional requirements for luminaires using controllable control gear providing SELV output(s);

h) Modification in test to establish whether a conductive part can cause an electric shock (addition of touch voltage limits, touch current limits);

i) Addition of Informative annexure regarding power sourcing equipment powering class III luminaires via information technology communication cabling

j) Addition of informative annexure on additional requirements for luminaires where a higher degree of availability (impulse withstand overvoltage category III) may be requested; and

k) Addition of normative annexure on battery/EDLC-operated luminaires

l) Photo Biological requirements extended

Additional Technical changes in IS 10322 (Part 5 /Sec 1): 2026

a) References to IS 10322 (Part 1) have been updated

b) The scope has been modified to be in line with IS 10322 (Part 1) to include all electric light Sources

Additional Technical changes in IS 10322 (Part 5 /Sec 2): 2026

a) The requirements specific to recessed luminaries given in IS 10322 (Part 1) are now incorporated in this IS 10322 (Part 5/Sec 2)

b) The introduction of requirements for air-handling luminaires

c) Additional Marking requirements for recessed luminaires

d) References to IS 10322 (Part 1) have been updated

Additional Technical changes in IS 10322 (Part 5 /Sec 3): 2026

a) References to IS 10322 (Part 1) have been updated

b) Additional Marking requirements.

Additional Technical changes in IS 10322 (Part 5 /Sec 5): 2026

a) References to IS 10322 (Part 1) have been updated

b) Introduction of the requirements for the glass breaking test; and

c) Additional Marking requirement.

Additional Technical changes in IS 10322 (Part 5 /Sec 6): 2026

a) References to IS 10322 (Part 1) have been updated

Additional Technical changes in IS 10322 (Part 5 /Sec 7): 2026

a) Specific provisions for Temporarily Installed Protected Lighting (TPL) chains

b) New terms and definitions have been added; and

c) References to IS 10322 (Part 1) have been updated

Additional Technical changes in IS 10322 (Part 5 /Sec 8): 2026

a) Update of requirements for rest mode and inhibiting mode

b) Clarification of high temperature operation tests

c) Introduction of new requirements for lithium batteries

d) Introduction of new requirements for Electric Double Layer Capacitors (EDLCs)

e) Clarification of resistance to heat, fire and tracking

f) Clarification of test facilities for self-contained luminaires; and

g) Clarification of the test method for contrast measurements of exit signs.

h) References to IS 10322 (Part 1) have been updated

(For More details, please refer to relevant standard)

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(GENERAL MANAGER- QUALITY & TECHNICAL)
CHAIRPERSON, ELCOMA TECHNICAL COMMITTEE

Hon'ble Union Home Minister Shri Amit Shah inaugurates Signify's Har Gaon Roshan CSR initiative in Chhattisgarh

Raipur, 16 December 2025: In line with its #BrighterLivesBetterWorld vision, Signify (Euronext: LIGHT), the world leader in lighting, announced the launch of its flagship Har Gaon Roshan CSR initiative in Chhattisgarh. The momentous inauguration was graced by the Hon'ble Union Home Minister of India, Shri Amit Shah, marking a powerful new chapter in rural transformation. Implemented in partnership with the Government of Chhattisgarh and Bharat Cares, this initiative will bring the glow of modern, energy-efficient LED streetlights to 70 villages across the Indravati Tiger Reserve area, paving the way for safer, more vibrant communities.

Guided by the vision of the Hon'ble Prime Minister Shri Narendra Modi, this milestone mirrors India's ambition of **Viksit Bharat**, a developed, empowered nation. Har Gaon Roshan initiative aids in strengthening rural infrastructure, enhances community safety, and stimulates local economic growth. Signify's expertise in sustainable lighting innovation, the Government of Chhattisgarh's rural development priorities, and Bharat Cares' deep community engagement form the foundation of this powerful collaboration, blending technology, governance, and grassroots action.

Nikhil Gupta, Head of Marketing, Strategy, Government Affairs & CSR, Signify, Greater India, said, "Light is more than just illumination, it's an enabler of safety, opportunity, and social connection. Har Gaon Roshan in Chhattisgarh demonstrates how government, industry, and community can unite to drive inclusive progress. At Signify, we are committed to using the power of light to support inclusive development and contribute meaningfully to India's journey towards a Viksit Bharat, ensuring every village shines brighter. This partnership reflects the power of collective action in creating sustainable, long-term impact."

Built on a **community-first model** and implemented with support from district administrations and village representatives, ensuring that every installation meets local needs and achieves maximum impact. The new LED streetlights will boost public safety, unlock extended hours for commerce and community activities using energy-efficient technology. By enhancing accessibility after dark, the initiative enables more inclusive participation in social, educational, and economic life.

Across multiple states, Har Gaon Roshan has already illuminated numerous villages, underscoring Signify's unwavering dedication to rural advancement. With each installation, the company reaffirms its mission: to transform lives, one village at a time, through sustainable lighting solutions that empower communities and inspire progress.

AUTHOR: SIGNIFY INNOVATIONS INDIA LIMITED

Jaquar introduces Thalia Bollard: Sculpting Light for Contemporary Landscapes

As outdoor spaces become integral to architectural design, lighting plays a vital role in shaping their experience after sunset. Responding to this evolving need, Jaquar Lighting introduces Thalia Bollard, a refined outdoor luminaire designed by Claudia Danelon and Federico Meroni of DanelonMeroni, London. Recognized internationally for its design excellence, Thalia has been honoured with the prestigious iF Design Award and the LIT Lighting Design Award.

Minimal Design, Maximum Impact

The Thalia bollard embodies a philosophy of minimalism with purpose. Its slender cylindrical column and distinctive angled luminaire head create a sculptural presence while directing light precisely onto pathways and landscaped areas. The result is a design that integrates effortlessly with modern architecture while maintaining visual comfort.

Available in two heights—600 mm and 900 mm, Thalia offers flexibility for designers to adapt lighting layouts across various outdoor settings.

Efficient and Comfortable Illumination

Engineered for pathway and landscape lighting, Thalia delivers 800 lumens from a 10 W LED source, achieving an efficacy of 80 lm/W. A 3000K warm white colour temperature, 120° beam angle, and CRI above 80 ensure soft, evenly distributed illumination that enhances visibility while preserving the natural appearance of surrounding materials and vegetation.

Built for Outdoor Performance

Thalia is designed to withstand

demanding outdoor conditions. The luminaire features a die-cast aluminium housing with a powder-coated finish and a milky polycarbonate diffuser for soft light distribution. With an IP66 protection rating, along with 4 kV surge protection and over-voltage tolerance up to 440 VAC, it offers dependable performance in exposed environments.

Durable and Sustainable

With an LED lifespan exceeding 50,000 hours, Thalia ensures long-term reliability while reducing maintenance and energy consumption. Its efficient optical design and durable construction make it suitable for gardens, pathways, courtyards, parks, and hospitality landscapes.

Lighting with Architectural Character

More than a functional luminaire, Thalia Bollard is a statement of thoughtful design and technical precision. By combining contemporary aesthetics with dependable performance, it enhances outdoor spaces with subtle, elegant illumination—bringing both character and clarity to the nighttime landscape.

Signify introduces Philips UltraShine range with an industry leading efficiency of 150 lumens per watt for the cool daylight variant

Designed to deliver powerful illumination with significantly lower energy consumption

Delivers uniform illumination and durability, available in **10W, 15W and 22W** across round and square formats and **Warm White, Natural White and Cool Day Light** variants

As lighting expectations evolve across homes, retail, and commercial spaces, consumers are increasingly seeking brighter illumination without higher energy consumption. Philips UltraShine range addresses this need by combining powerful luminous performance with exceptional efficiency and brightness. This makes it an ideal solution for environments that demand both high-performance illumination and energy efficiency.

Engineered with advanced optical performance and external driver technology for improved heat management and longer product life, Philips UltraShine range delivers even and uniform illumination across wider areas. The range offers **150 lumens per watt** across multiple wattages including **10W, 15W, and 22W**, providing flexibility across diverse lighting requirements. There is also a 5W variant available which offers 120 lumens/watt.

Designed for seamless integration into modern interiors, Philips UltraShine range is available in **round** and **square formats** and in **Warm White, Natural White, and Cool Day Light** options. The range also comes with a **2-year standard warranty,** along with 2-year additional warranty through Signify DigiShield app registration.

We take the pleasure to inform you that the following companies have become ELCOMA members during FY 2025-26.

M/s. Blisstering Electronics Pvt. Ltd
C-18, Sector-80, Gautam Budh Nagar
Noida-201306, Uttar Pradesh
Contact Person: Mr. Ravi Bothra, Director

M/s. Goldmedal Electricals Pvt. Ltd
Kemp Plaza, A/ 502, Chincholi Bunder Rd, off Link Road,
Malad, Mindspace, Malad West,
Mumbai, Maharashtra 400064
Contact Person: Mr. Vikas Kansal, Business Head- Lighting

M/s. SVN Opto Electronics Pvt. Ltd
Survey No. 143/E, 143/E, 143/F, 143/H, 143/G, Dabhel
Nani Daman, Daman, Dadra & Nagar Haveli and Daman and Diu-396210
Contact Person: Mr. Nikit Saraf, Director

It is with deep sadness and heavy hearts that we inform you of the sudden demise of our colleague and friend, Ponkumaresh Muthaiah.

It is with deep sadness that we share the news of the sudden demise of our colleague and dear friend, Ponkumaresh Muthaiah.Ponkumaresh was Head – Lighting Design & Applications at Bajaj Electricals and a widely respected professional in the lighting fraternity. He represented the organization across several industry forums, notably the Bureau of Indian Standards (BIS), and was among the key contributors to the development of the National Lighting Code of India. His technical depth, clarity of thought, and commitment to advancing lighting standards in the country earned him the respect of peers across the industry.Beyond his professional achievements, Ponkumaresh was known for his gentle presence. He did not need many words to make an impression—a warm smile in passing, a soft-spoken greeting, his ever-graceful demeanour, and a pleasant personality that made every interaction memorable.His untimely passing has left colleagues, associates, and friends in shock. The lighting community has lost not only a knowledgeable expert but also a kind-hearted human being and a trusted friend.Ponkumaresh will be deeply missed by all who had the privilege of knowing and working with him.We extend our heartfelt condolences to his family, friends, and the entire lighting fraternity during this difficult time.

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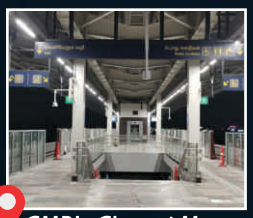
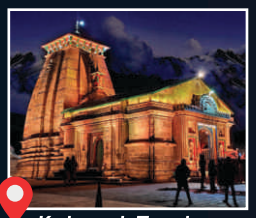
Atal Setu

Paga Auditorium, Guwahati

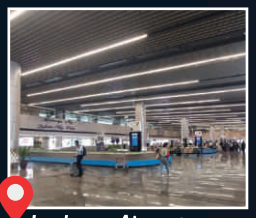


CMRL, Chennai Metro



Kedarnath Temple, Uttarakhand

Railway Station, Ananadpur Sahib



Lucknow Airport

Alpha Street Light

Magna Plus Sports Flood Light

Linear Facade Light

Aurora III Indoor Commercial Light

Vega Landscape Light

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