Lighting Growth Strategy

Lighting Vision 2030

Improving Lighting Culture and Contributing to the Global Environment

Connected Smart Lighting

Human Centric Lighting

Japan Lighting Manufacturers Association
--- Vision ---

**Improving Lighting Culture and Contributing to the Global Environment**

Aiming to Create New Lighting Value and Contribute to the Global Environment through Dissemination of "CSL" as an intelligent lighting that connects to a variety of things and matters, and "HCL" as a safe, comfortable and convenient lighting that is friendly to human.

--- Mission ---

We will endeavor to disseminate environment-friendly and gentle lighting for realization of a safer and more comfortable living environment and for the improvement of the global environment. As a representative of the lighting industry, we will contribute to the development of the lighting industry and to create a fair and sound lighting market through pursuing government growth strategies, disseminating information to domestic and overseas stakeholders, exchanging information, and conducting negotiations.

--- Dissemination of "CSL & HCL" ---

**Market of existing luminaires in 2030**

100% SSL rate

60% reduction in power consumption

--- Responding to Paradigm Shifts by "Connected Industries" ---

- Establishment of a business environment to promote "CSL and HCL"
- Organizational reform of the association in response to the paradigm shift

--- Improving the lighting quality and contributing to SDGs ---

- Contributing to the global environment by accelerating the change to SSL in the existing luminaire market
- Creating New Spatial Value by Improving the lighting quality

SDGs: Sustainable Development Goals

--- Dissemination of "Connected Smart Lighting & Human Centric Lighting" ---

100% SSL rate in the market of existing luminaires in 2030

--- Improving Lighting Culture and Contributing to the Global Environment ---

**Plan for 100% SSL rate of existing luminaires in the domestic market**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>2017</td>
<td>34%</td>
</tr>
<tr>
<td>2018</td>
<td>50%</td>
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<tr>
<td>2019</td>
<td>98%</td>
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The number of luminaires in the existing market is estimated to remain approximately 1.7 billion units. Accelerated dissemination of "CSL & HCL" in cooperation with related ministries and agencies is crucial for the achievement of the government target of 100% SSL rate.

--- Reduction of power consumption (simulation in the case of 100% SSL rate in the existing luminaire market) ---

- By adding effect of lighting control systems (Dissemination rate: 30%)

SDG: Sustainable Development Goals

Existing luminaire market in 2013 is estimated at 1.7 billion units.

The condition is that the number of existing luminaires remains stable from 2013 through 2030 with the SSL rate of 50% in 2020 and 100% in 2030.
Domestic and Overseas Lighting Markets and Future Issues

### 2017 Market Estimation of Existing Luminaires by Sector
(Survey by Japan Lighting Manufacturers Association)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number of Units</th>
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<tbody>
<tr>
<td>Non-residential outdoor market</td>
<td>1,729 millions</td>
</tr>
<tr>
<td>Non-residential indoor market</td>
<td>722 thousands</td>
</tr>
<tr>
<td>Residential market</td>
<td>967 millions</td>
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**Residential market (967 million units)** is the largest among the three sectors.

**SSL Rate: 34%**
- Change to LED luminaires by using LED lamps
- Non-use of conventional light sources

**LED luminaires**
- Number: 350 million units
- SSL Rate: 34%

**Conventional light sources**
- Number: 1,377 million units
- SSL Rate: 24%

**Non-LED luminaires**
- Number: 40 million units
- SSL Rate: 2%

### Scenario for 100% SSL Rate of Existing Non-residential Luminaires Markets
(Indoor and Outdoor)

- **Challenges to Achieve the Scenario**
  - In order to accelerate the renewal of small and medium-sized properties and rental facilities for which it is difficult to generate capital investment costs, it is necessary to strengthen awareness-raising activities as well as to continue government support measures such as subsidies and tax incentives. New measures are needed to accelerate the introduction of lighting control systems in order to achieve further reductions in power consumption and improvements of spatial value.

### Scenario for 100% SSL Rate of Existing Residential Luminaires Markets

- **Challenges to Achieve the Scenario**
  - It is an important issue to increase SSL rate of luminaires in facilities that require electrical work. Especially for LED luminaires, measures to promote the renewal of the luminaires are necessary instead of replacing the lamps in consideration of safety, including government support measures such as subsidies for the installation costs.
  - Consumers tend to have a nonconsciousness of "SHL usable" and "Meitaine Iwayasu", and they have little awareness of replacing luminaires other than at the time of moving or renovating the residence. Therefore, it is necessary to promote public relations activities that change consumer awareness, such as appealing for electric power saving and danger due to long-term site in cooperation between the industry and the government.

### Shipment Result and Target of Luminaires in Japan
(based on voluntary statistics of Japan Lighting Manufacturers Association)

- **From market indices such as reduction in housing starts and population transition, the shipment number of luminaires, in particular residential luminaires, is expected to decline in Japan from 2019 onwards.**
  - **Generation and promotion of high-value-added products by "CSL & HGC" in the renewal market of LED luminaires as well as creation of new business**
- **Business expansion overseas market**

### Global Market Trends and Future Issues

- **The center of the global economy will shift from Europe and the United States to China, India, and Southeast Asia, and the global lighting market will be driven and expanded by emerging countries.**
- **Accelerated support for entry into expanding emerging markets**
- **The widespread use of LED products accelerates the borderless and globalization of lighting products.**
- **Strengthening the market surveillance system to eliminate imports of poor quality**
**Road map to the year 2030**

**Connected Smart Lighting & Human Centric Lighting**

Promotion of multi-functional lighting that connects to a variety of things and matters as well as human-friendly, safe, comfortable and convenient lighting

### Priority Issues

1. **Responding to Paradigm Shifts through "Connected Industries"**
   - In order to respond to various business models by "Connected Industries" using advanced technologies and to social changes, business environments such as standardization by collaboration with other industries beyond the field will be established together with the organizational development of the association structure that adapts to them.
   - **1-1.** Establishment of a business environment to promote "CSL and HCL"
     - Promotion of standardization regarding "CSL & HCL"
     - Strengthening collaboration across industries centered on IoT, AI and big data
   - **1-2.** Organizational reform of the association in response to the paradigm shift
     - Promotion of new entrants from different industries
     - Establishment of an organizational structure for committees and secretariats in response to Connected Smart Lighting

2. **Improving the lighting quality and contributing to SDGs**
   - In order to achieve an international commitment to reduce greenhouse gas emissions by 26% (compared with 2013 levels) and to contribute to improving the global environment, the government target of 100% SSL rate in the existing luminaire market by 2030 will be pursued.
   - Create new spatial value by generating new functions and improving the lighting quality through the dissemination of "CSL & HCL" (multi-functional lighting that connects to a variety of things and matters as well as human-friendly, safe, comfortable and convenient lighting).
   - **1-1.** Contributing to the global environment by accelerating the adoption of SSL in the existing luminaire market
     - Promotion of visualization of trends in the SSL rate in the existing luminaire market
     - Promotion of replacement and renewal activities (promotional activities for renewal by market sectors)
   - **2-1.** Creating New Spatial Value by Improving the Lighting Quality
     - Promotion of high-value-added products through "CSL & HCL"
     - Promotion of Area Disaster Prevention Lighting Systems (in connection with Smart Cities, HEMS, etc.)
     - Research and study on "light influence"
     - Investigation and application of new light sources (OLED, laser illumination, etc.)

3. **Responding to Globalization and Borderless Economy**
   - The shipment volume of luminaires for domestic new constructions is expected to decline due to a reduction in the population and a decline in the number of new housing starts.
     - On the other hand, the global lighting market grows mainly due to population growth in emerging countries and the expansion of the middle class. Wide-area Asia will be the center of the global economy by 2030. With this area as a main target, environment for market entry and business expansion will be prepared, and Japanese lighting products will be promoted.
   - The widespread use of LED products accelerates the global and borderless transactions of lighting products. Market surveillance system will be strengthened to deal with the increase in imported overseas products that do not match the Japanese market.
   - **1-1.** Development of an environment for overseas market development
     - International exchange and information gathering with overseas governments and industry
     - Proper response as a lighting industry linked with intergovernmental trade and customs negotiations
   - **2-1.** Promotion of brand value of Japanese lighting products
     - Collection of information through participation in overseas exhibitions and promotion of Japanese lighting products
     - Promotion for participating in overseas events and business matching activities
   - **3-1.** Maintaining and improving sound markets for fair and proper competition
     - Strengthening market surveillance systems such as trial buying surveys

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**SSL rate target in the domestic existing luminaire market**

<table>
<thead>
<tr>
<th>2018 Estimates</th>
<th>2020</th>
<th>2025</th>
<th>2030 Government Target</th>
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<tr>
<td>40%</td>
<td>50%</td>
<td>75%</td>
<td>100%</td>
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**Vision in 2030**

- Participation in new IEC projects, cross-sectional consortiums, etc.
- Promotion of standardization in the lighting software field by participating in ISO/CIE, ISO/TC274, etc.
- Expanding alliances with other organizations
- Expanding the number of members from different industries (support members)
- SSL rate of existing luminaire market
  - 40% in 2020
  - 75% in 2025
  - 100% in 2030
- CSL & HCL conversion rate
  - 9% in 2018
  - 25% in 2025
  - 40% in 2030
- Dissemination and establishment of certification systems for residential and outdoor emergency lighting by promoting the Area Disaster Prevention Lighting Systems linked to smart cities, HEMS, etc.
- Dissemination of correct information on the effectiveness and influence of light, and promotion and enlightenment of new indicators of the quality of lighting
- Active interaction and information exchange with GLA and lighting industry associations around the world
- Strengthening cooperation with JETRO/JICA and other international organizations
- Support for overseas business expansion by PR of Japanese lighting products and business matching activities through active participation in emerging countries’ events
- Maintaining and improving safe and sound markets by preventing the inflow of poor quality products from overseas
Responding to Paradigm Shifts by "Connected Industries"

- Promotion of standardization regarding "CSL & HCL"
  - Extended systematization utilizing advanced technologies such as IoTs, AI, Cloud, etc.
  - IEC/SEG9: Smart-Home/Office-Building System
  - JEITA: Smart home subcommittee
  - Ministry of Economy, Trade and Industry: Promotion of the spread of smart houses and buildings
  - Cooperation between software and hardware

- Strengthening collaboration across industries centered on IoT, AI, and big data

- Enhance Lighting Quality and creation of spatial value through "HCL & CSL"
Improving Lighting Culture and Contributing to the Global Environment - Promoting Dissemination of "CSL & HCL" -

Responding to Globalization and Borderless Economy

- International interaction and information exchange with governments and industries of various nations of the world
  - Gathering information on market trends in each country
  - Approaching to international organizations and governments through international collaboration with industries in each country
  - Participation in IEC standardization activities (IEC/TC4)
  - Reflection of the Japanese lighting industry’s opinion in trade and tariff negotiations

- Building connection network in public and private sectors, and collecting information on policies, market, projects, etc.

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- Interaction with ASEAN countries

Promotion of brand value of Japanese lighting products and business matching activities

- Responding to intergovernmental trade and tariff negotiations as Japanese lighting industry
- Review and study of HS Code

- Incoterms
  - Proposal of clear and appropriate HS Code of lighting products
  - Proposal of clear and appropriate HS Code of lighting products

- Member companies

Maintaining sound market for fair and proper competition

- Globalization and borderless transactions of lighting products through the spread of LED products

- Production shrinkage of conventional light source products

- Increase in imported overseas products that do not match the Japanese market

- Strengthening market surveillance systems such as trial buying surveys
Profile of the Japan Lighting Manufacturers Association

The Japan Lighting Manufacturers Association (JLMA) is promoting standardization, dissemination, accreditation business and international activities to contribute to the sound development of lighting equipment (light sources, luminaires, control devices, and components) and related businesses, the development of industry, as well as the assurance of safety in people’s lives and the improvement of livelihood culture.

On April 1, 2019, the Japanese National Committee of CIE (JCIE) is merged into JLMA, and we also conduct research and study on illumination and light, thereby we aim at reinforcement of activities for “Improvement of Lighting Quality.”