

The Czech Automotive Ecosystem

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Automotive lighting, driver assistance and smart interior

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ABOUT DRIVING VISION NEWS

DVN is the vehicle lighting: ADAS; lidar, and interior world's journal or record, dedicated to keeping the community informed and communicating about the latest progress and developments. DVN's three pillars are:

- **Technological watch** on new emerging technologies, with weekly electronic newsletters bringing news, analysis, and crucial information on innovation in lighting, ADAS, lidar, and car interior; there are also monthly technical reports with sharp focus on cutting edge technologies, company profiles, regulatory matters, and other relevant content available only from DVN.
- **Networking** of high-level decisionmakers, researchers, innovators, practitioners, academics, and regulators to make new business connections with two workshops per year in rotating locations throughout America; Europe; China; Japan; India, and Korea. DVN Workshops are very popular, and routinely fill to capacity with over 350 participants.
- **Promotion of innovations** - we facilitate the promulgation of knowledge of innovation, which in turn paves the way for commercialization, enabling to build new relationships through DVN Community to forge new business worldwide, The DVN Gold membership roster includes 260 companies including automakers; lighting and ADAS tier-1 and -2 suppliers, and a wide variety of universities; research outfits, and consultants. DVN Gold members receive all publications and attendance privileges at all DVN Workshops.

The Czech Automotive Ecosystem

The Czech Republic is the traditional significant player in the automotive business in Europe. The first 4 wheel vehicles were made in Tatra Kopřivnice in 1895 (the name of the car was **President**) and in Škoda Mladá Boleslav in 1905 (the car called **Voiturette A**).



The growth of multiple producers in the market continued by the WWII, the business was reorganized and replanned in the socialist era from 1948. The major automotive business growth is noticed after the Velvet revolution in 1989, mainly accelerated after VW Group taking over Škoda Auto in 1992. The business became international, acquired the proper competencies and has built the EU and global competitiveness in design, development, production, distribution and service of the automotive products – cars, systems, components, materials etc. The state of the art R&D and manufacturing capabilities were built over the years, there are many corporate **R&D centers** built closely to the production facilities (eg. Škoda Auto, Tatra, Hella Forvia, OPmobility, Bosch, Valeo, Schaeffler, etc.) or standalone, supporting the production plants abroad (Porsche Engineering, ZKW, Magna, Lumax Industries, Marelli Automotive Lighting, Prettl, Uno Minda, Lightworks Manufaktur etc.)

The current models produced by the OEMs in Czechia by **Škoda Auto**, **Hyundai Motor Manufacturing Co**, **Toyota Motor Czech**, **Tatra Trucks** and **Iveco Buses** are at the top levels of their segments in the automotive markets. **ICE, PHEV, Hybrid, BEV and Hydrogen** driven vehicles are Made in Czechia:



The current state of the automotive business in The Czechia



Automotive industry produces
34 % of industrial production
24 % of national exports



Automotive industry employs
180 000
Direct employees



Automotive industry creates
9 % of Czech GDP



Automotive industry employs
~ 500 000
Employees in total incl. indirect jobs



Automotive industry invests
30 % of all industrial R&D investments



Automotive industry brings
~ 80 bil. CZK into the state budget

www.autosap.cz

Published July 2025 | Source: AutoSAP

The Czech automotive industry takes the prominent place in The EU as well as globally

1.

European and global
 no. 1 in buses production
 per capita.



2.

No. 2 globally
 in passenger car
 production per capita.



3.

No. 3 in the EU
 in vehicle production.



10.

No. 10 globally
 in vehicle production.

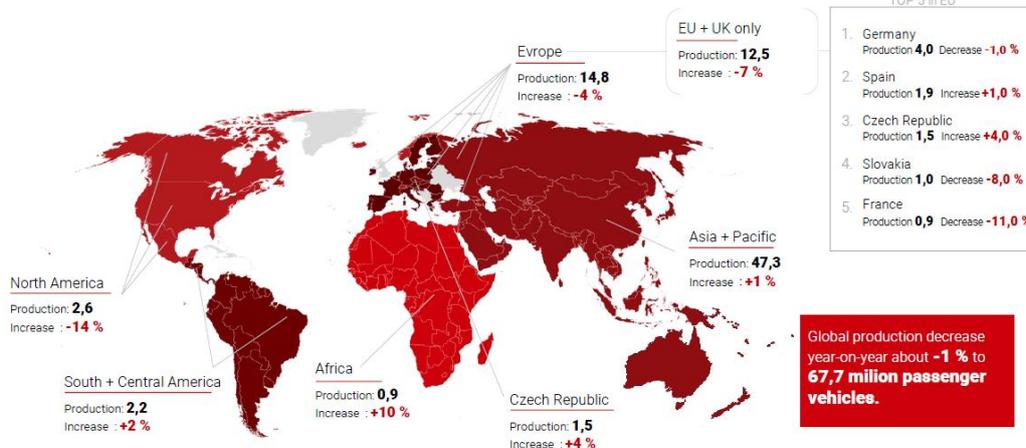


www.autosap.cz

Published July 2025 | Source: AutoSAP

The global passenger cars production in 2024:

* passenger cars in pieces, year-on-year

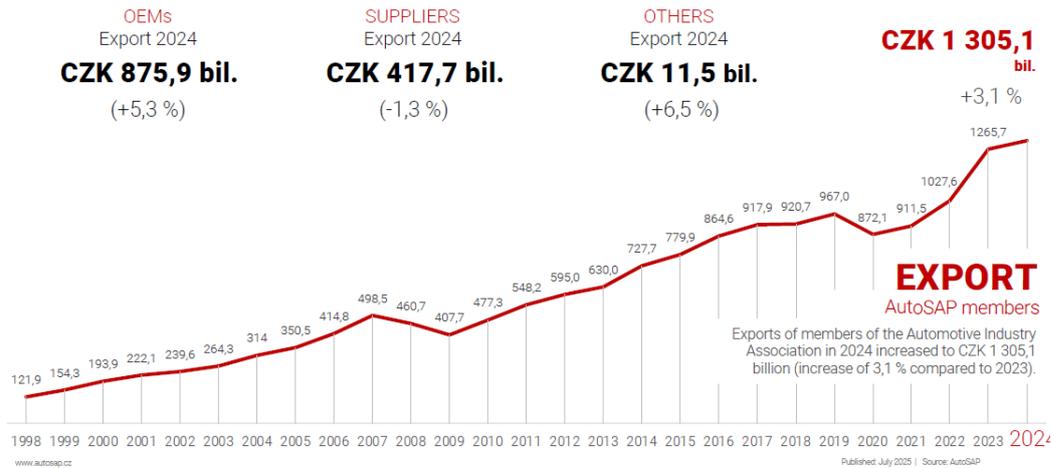


Global production decrease
 year-on-year about **-1 %** to
67,7 million passenger vehicles.

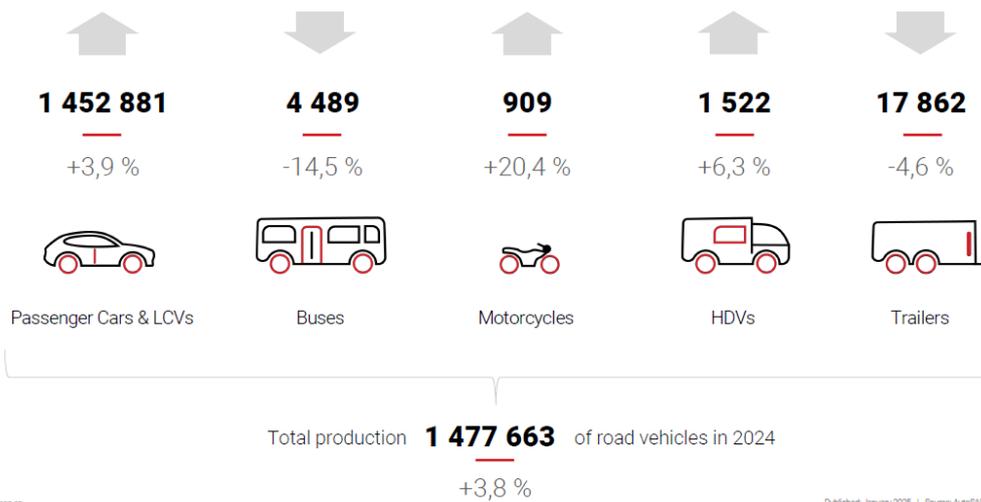
www.autosap.cz

Published July 2025 | Source: OICA ACEA

Export of the AutoSAP members:



The Annual production in Czechia in 2024:



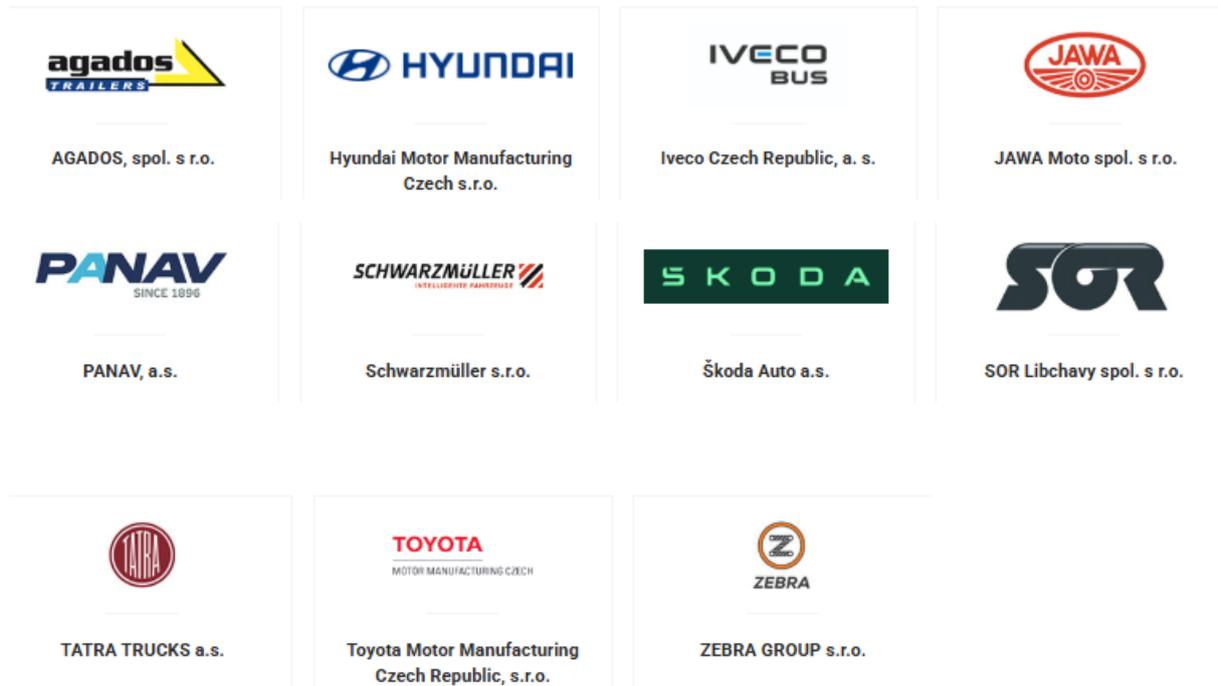
There are more than 250 companies active in the automotive business in Czechia, from OEMs to Tier 1-3 and service suppliers.

The leading Czech automotive business association is AutoSAP

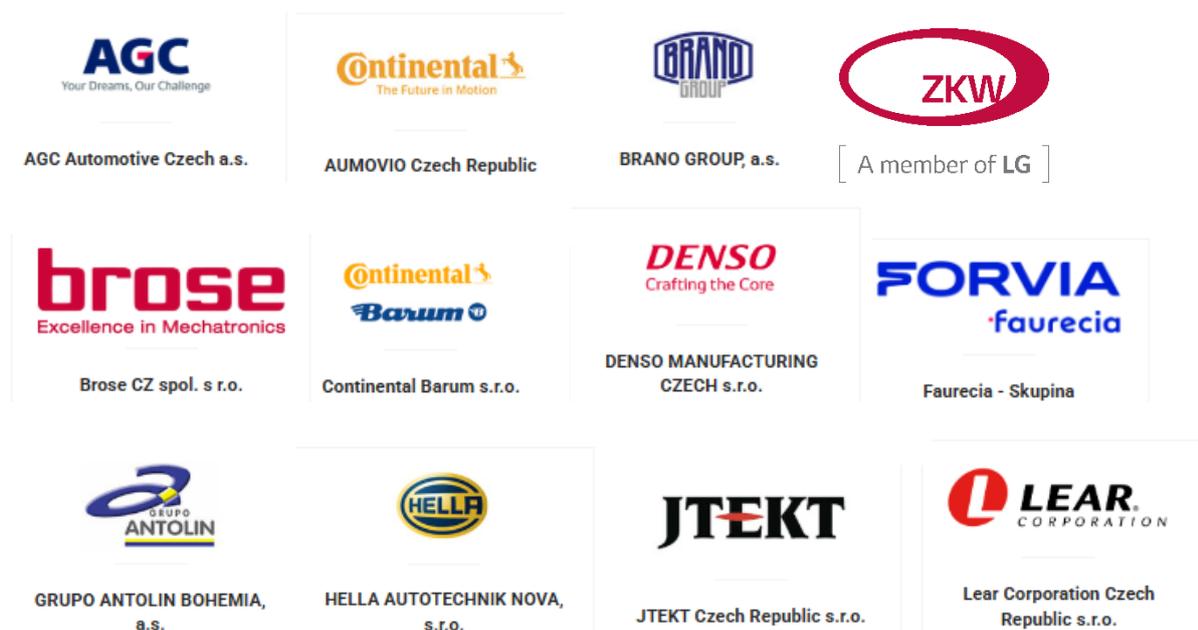


with 137 members.

All the Czech based **OEMs** are associated there.



A significant part of the automotive supply chain is represented in the Czech Republic, either through production plants or through R&D centers with European or global responsibilities. Most of them are also members of AutoSAP. Let us mention some key players operating in the country (and apologies to those not mentioned):





The integral part of the Innovation ecosystem, R&D network and **STEM education** of the new technical talents are the **technical universities** in Czechia. Beyond the education and R&D capabilities most of them have their **centers of technology transfer** to the business, **I4.0 labs**, testing facilities etc.

Similarly to the suppliers list we cannot mention all the technical universities, so let us mention eg.

VŠB-TUO Ostrava, UTB Zlín, VUT Brno, ČVUT Praha, ZČÚ Plzeň, TU Liberec, UPOL Olomouc and ŠAVŠ Mladá Boleslav.

Their curricullums and LLL (Life Long Learning) courses educate the core engineers for the automotive industry in the areas of mechatronics, mechanical engineering, electrical engineering, systems engineering, SW development, robotics, automation , microelectronics, quality management, polymers processing, nano technologies, cybersecurity, virtual testing, optics and optoelectronics, laser technologies, chemical engineering, process engineering, automotive engineering etc.

Digital technologies are the core of the new vehicles and production systems development. There are 6 EDIHs (EU **Digital Innovation Hubs**) helping the companies with their digital transformation.

IT4I (IT for Innovation) hub in Ostrava provides the computing services on their HPC (**High Performance Computer**) to the universities and business, there is newly installed the **Quantum Computer** there, which is expected to be in full service in a few years from now.

Significant role in the support of the automotive business are playing the clusters and regional Innovation centers. **Autoklastr Ostrava** with 90 members combines the large production companies expertise with the SMEs and start ups knowledge and focuses on growing competitiveness, education levels (incl. LLL), business development and testing facilities support for its members, supports the digital and green transformations. Similarly **Czech Optical cluster Olomouc** support the development of their members in the areas of optics, photonics, laser technologies, business development etc. **Plastics cluster Zlín** is focused on polymers processing and recyclability , testing of the new materials and improvement in the injection moulding process.

The companies and clusters are focused on **VET education** in the high school , especially on STEM. Therefore the new methods of education are being piloted in the **MTA (Moravian Silesian Technological Academy)**, based of gaming principles of so called Edu boxes and closely linked to the latest product and process development trends in the production companies.

Dual education is being rolled out, putting closely together the theory at school with the practice at the production companies.

In the current automotive world the capabilities of start-ups are highly appreciated, they are supported by the regional governments and the **Regional Innovation Centers**, let us mention **JIC** Brno, **MSIC** Ostrava, **ICOK** Olomouc and **TIC** Zlín.

The **international activities** of the regions and clusters promote the best practices and policies amongst the regions in the EU, Moravian Silesian Region is represented in **ARA** (Automotive Regions alliance). Autoklastr is a member of **EACN** (EU Automotive clusters Network) and very closely cooperates with **ASA** (Automotive Skills Alliance) and their Skill Path. The universities and high schools have their international partnership programs very active, supported by the national or EU funding schemes.

CZ Lighting Companies Profiles

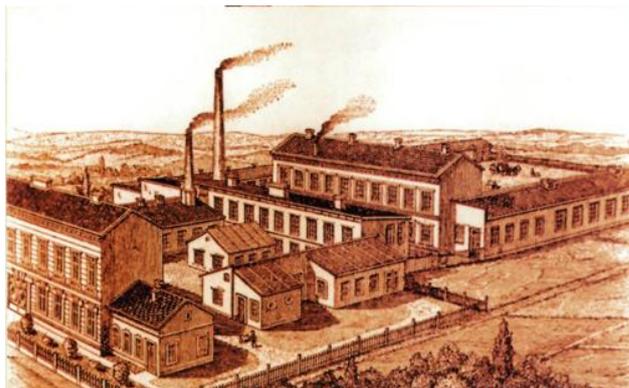
OPmobility



Illuminating the Future of Automotive Lighting in the Czech Republic

Over the past 150 years, the Automotive lighting industry in Czech Republic has demonstrated a remarkable ability to adapt to evolving technologies and market demands. This enduring tradition of innovation has helped establish the Moravian-Silesian region, in the eastern part of the country, as a key hub for the automotive supply sector in Europe. Contributing to this development is OPmobility, which operates a technology center and two production facilities in the region, serving customers around the world with advanced lighting systems that enhance vehicle safety, performance, and design.

From tin to technology – an industry in transition



It all began in 1879 in a small tin smithy in Nový Jičín. The modest facility quickly specialized in the production of carriage and wagon lamps that were soon exported across the Austro-Hungarian Empire and beyond. (Source: Muzeum of Novy Jicin)

In the 20th century, the site grew and established itself as a key center for the production and development of lighting and cooling systems. During this period, privatization of many major companies sparked a wave of investment in research, development, and modern manufacturing technologies. These advancements benefited not only Nový Jičín but the entire country. A combination of technological expertise, a highly skilled workforce, and targeted support measures attracted a growing number of automotive suppliers. As a result, the area has become one of Europe's leading hubs for automotive lighting and air conditioning technologies.

OPmobility continues the long-standing tradition



With the acquisition of Varroc Lighting Systems, OPmobility took on the responsibility of carrying forward the long-standing tradition of automotive lighting production at this historic location. Today, the company operates two of its 150 production facilities worldwide in the region, advancing both an ambitious sustainability agenda and an innovation-driven strategy. With approximately 38,900 employees across 28 countries and a global network of 40 R&D centers, OPmobility combines industrial strength with technological excellence.

Since its founding in 1946, OPmobility – formerly known as Plastic Omnium – has pursued a clear mission: to make mobility safer, more sustainable, more affordable, and more distinctive through disruptive innovation and meaningful progress. The majority family-owned company emphasizes value creation along the entire value chain and is aiming to achieve CO₂ neutrality on scope 1 and 2 in 2025.

Leading Automotive manufacturers benefit from OPmobility broad portfolio, which spans two complementary business areas and ensures a strong presence in all major mobility markets. A key driver of this success is the Exterior & Lighting business group, which develops intelligent, safe, and sustainable vehicle components – from bumpers and body panels to tailgates and advanced lighting systems. One of the standout features of OPmobility lighting solutions is their high degree of customization. The ability to personalize intelligent lighting functions and features makes OPmobility a preferred partner for car manufacturers seeking to give their vehicles a distinctive visual identity and offer their customers a safer travel experience.

Manufacturing excellence – key driver for innovative technologies

OPmobility operates two manufacturing facilities in the Czech Republic. The largest plant is located in Nový Jičín with a production area of almost 26.000 square meters and about 2.000 employees. The strategic location makes it possible to supply customers throughout Europe and offer them a wide portfolio of products in the field of head lamps, rear lamps, projector technology and light control modules. With a dedicated production area for the design and manufacture of molds for injection molding machines, a fully equipped prototype workshop, and a state-of-the-art semi-anechoic EMC chamber, the facility has strong manufacturing resources. This enables OPmobility to maintain its high standards of quality and innovation. The second smaller plant is located in Rychvald near the Polish border.

Some of the most advanced lighting technologies are produced in Nový Jičín mainly for the European market, such as Adaptive Driving Beam (ADB) technology, LED Lightguide applications, and specific production technologies like Antifog coating.

From signal lighting to brand signature



Among the company's key innovations in recent years is the Surface LED – a patented signal lighting technology that combines a highly homogenous OLED-like appearance with the advantages of classic LED light guides. The result is an ultra-thin, multi-color and 3D lighting solution that offers lower manufacturing costs and increased durability. Available in transparent, RGB, and “hidden until switched on” variants, the Surface LED also supports animations, giving automotive manufacturers new ways to personalize vehicle lighting in line with brand identity and customer preferences – enhancing both aesthetics and recognition value.

The first generation, known as S-LED, has been used by premium OEM since 2022. OPmobility is now introducing the second generation in new projects, offering even more homogeneous surfaces, striking semi-transparent and fully three-dimensional shapes, and thinner, frameless designs—opening up new possibilities in automotive lighting design.

With technologies like Surface LED and a strong foundation in manufacturing excellence, OPmobility continues to play a leading role in shaping the future of the lighting industry in the Czech Republic. The commitment to excellence and sustainability paves the way for a safer, more distinctive driving experience worldwide.

ZKW Olomouc



[A member of LG]

BRIGHT MINDS,
BRIGHT LIGHTS.

ZKW Automotive Engineering CZ s.r.o.: Lighting Technology Development Center with a Clear Vision

From Strategic Decision to Independent Development Center

Since its founding in 2021, ZKW Automotive Engineering CZ has rapidly evolved from a strategic idea into a recognized center of excellence for automotive lighting technology. The decision to establish the center in North Moravia was driven by the region's strong technical infrastructure and a deep pool of engineering talent. This foundation enabled the company to quickly assemble a team of specialists, whose expertise now shapes the future of lighting systems for vehicles worldwide.



From the outset, the center's mission has been clear: to deliver innovative, high-quality lighting solutions that set new standards in safety, efficiency, and design. The team's average of over a decade of professional experience has allowed ZKW CZ to integrate seamlessly into the global ZKW Group, taking on responsibility for key areas of development and becoming a trusted partner for leading automotive manufacturers.

Current Expertise and Technologies

The journey from concept to implementation is comprehensive. At ZKW CZ, development begins with the spark of innovation—whether it's pioneering MicroLED systems, applying artificial intelligence to lighting, or advancing projection technologies. Every stage, from initial idea and intellectual property creation to platform design, application development, and virtual validation, is managed in-house. This end-to-end capability ensures that the lighting systems developed here are not only technologically advanced but also ready for global production.

These efforts have already borne fruit. Lighting solutions from the Czech center illuminate premium vehicles such as the BMW X7, BMW i7, JLR Evoque, and Mercedes GLC. Each project is a testament to the team's commitment to excellence, delivering tangible benefits in safety, aesthetics, and energy efficiency for drivers around the world.



Integration into ZKW Group's Global Strategy

Integration within the ZKW Group's global ecosystem is a cornerstone of the center's success. Collaboration with colleagues in Austria, Slovakia, Mexico, South Korea, and China fuels a continuous exchange of knowledge and ideas. Together, these teams are driving the development of lighting systems for electric and autonomous vehicles, actively contributing to the automotive industry's transformation toward sustainable mobility.



Future Plans and Further Growth



Looking ahead, ZKW CZ is set to grow further. The opening of new, state-of-the-art premises in Olomouc in autumn 2025 marks a significant milestone, providing modern laboratories. This expansion not only enhances the working environment but also strengthens the center's capabilities in electronics, software, and AI-driven lighting solutions.

Shaping the Lighting Technology of the Future

The story of ZKW Automotive Engineering CZ is one of vision, expertise, and relentless innovation. In just four years, the center has become a vital part of the ZKW Group's strategy, ready to meet the challenges of digitalization and the integration of intelligent lighting into the autonomous vehicles of tomorrow. With a strong team, a clear direction, and a passion for progress, ZKW CZ is lighting the road ahead for the entire industry.

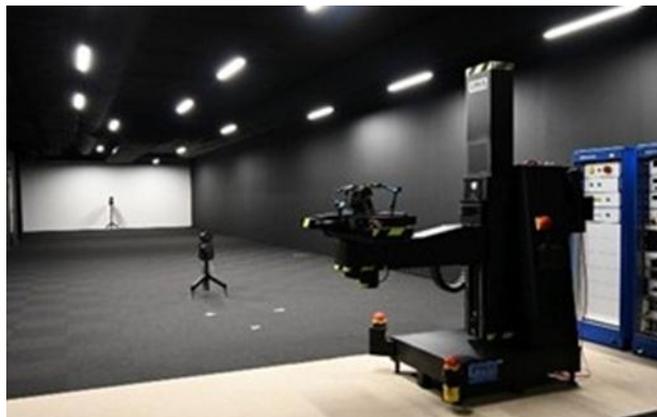
Lumax LETC Ostrava



Lumax Industries Czech s.r.o.: Lumax Europe Technical Centre with focus on Innovation for India

From Strategic Decision to Valuable Innovation Centre

In year 2021, the Lumax Industries Limited, the leading vehicle exterior lighting company in India with more than 80 years successful history, has decided to establish European development centre with clear purpose - to bring the best from European and Czech knowledge & experience from Vehicle Lighting development & technology knowledge and use it as Lumax competitive advantage for India & in India. Lumax Europe Development Centre has officially started its mission in September 29th, 2022 and was quickly recognized by Indian OEM customers as key asset for Lumax innovation & product development in field of new vehicle lighting products & technologies for Indian market.



Lumax smartly decided to establish its European Innovation centre in Moravian-Silesian region of Czech Republic, which has developed its reputation as strong and traditional 'Vehicle Lighting Corner' with strong vehicle lighting eco-system, which has been rapidly developed during last 30 years using region's strong technical history, infrastructure and presence of skilled & experienced lighting engineers. Foundation in Ostrava enabled the company to quickly build a team of vehicle lighting specialists, who immediately started to support Lumax innovations and key customer development projects in India.

After almost three years of successful operation, the Czech Development Centre of Lumax underwent a strategic transformation at the beginning of 2025. In line with the company's global growth vision, Lumax senior leadership decided to further strengthen the European Innovation & Technology Centre, re-launching its operations with a refreshed team, reinforcing its focus on innovation and technological advancement in Europe.

Based on Lumax long term strategy, the main goals for Lumax European Technical Centre are as follows:

- Advanced Technology Development based on defined Lumax Technology Roadmap
- Centre of key Lighting Competencies for Lumax
 - CoC support & development for Indian projects
 - Development of expertise, new approaches & enhanced capabilities for Lumax
- Continuous support of Lumax Self-reliance in India
- Talent development & recruitment support for Lumax worldwide
- Engagement & Development of European development partners & lighting suppliers
- Technical & Science collaboration between Lumax Group and Czech & European Technical Universities
- Support Strategic problem resolution and troubleshooting, and Business & Customer development support
- Styling & Advanced Design support, prototype development & technology support etc.

New Technology and Advanced Product Development

Product development at Lumax Europe Technology Centre (LETC) has initiated development of new technologies focusing mostly on new light modules for forward lighting, which shall be used on new Headlamps for Indian OEMs. This development of new products is dynamic and challenging, driven by the high expectations and evolving requirements of Indian automakers. These demands continuously inspire the creation of innovative ideas, advanced solutions, and ongoing enhancements to meet the latest customer needs in lighting performance, styling, and technology.

Since its re-establishment, the new Lumax LETC team has been actively engaged in developing modern, versatile slim light modules featuring BiLED and ADB functionalities, as well as designing specialized lighting concepts for distinctive and contemporary headlamp designs. In parallel, the team has been deeply involved in technology development for major headlamp and rear lamp programs for key customers in India, contributing global expertise in areas such as optical development, electronics design, virtual testing, and CAE analysis.

Responding to the growing demands of the Indian automotive market and Lumax Industries as a whole, Lumax Europe Technology Centre is set to expand its role further—strengthening its position as a hub for new technology development, enhancing core competencies in vehicle lighting innovation, and providing comprehensive support to Indian teams and projects in their continued growth.



About Lumax Industries Limited (LIL):

Founded in 1945 and headquartered in Gurugram, Lumax Industries Limited (LIL) is the flagship automotive lighting business of the Lumax Group, India. With Eight Decades of trusted supply to India's leading OEMs, LIL has grown from a trading concern into one of the largest automotive lighting manufacturers in India. Lumax Industries operates 12 strategically located manufacturing facilities near key automotive hubs, in addition to two advanced R&D and Engineering Centres in India and global design centres in Czech Republic and Taiwan.

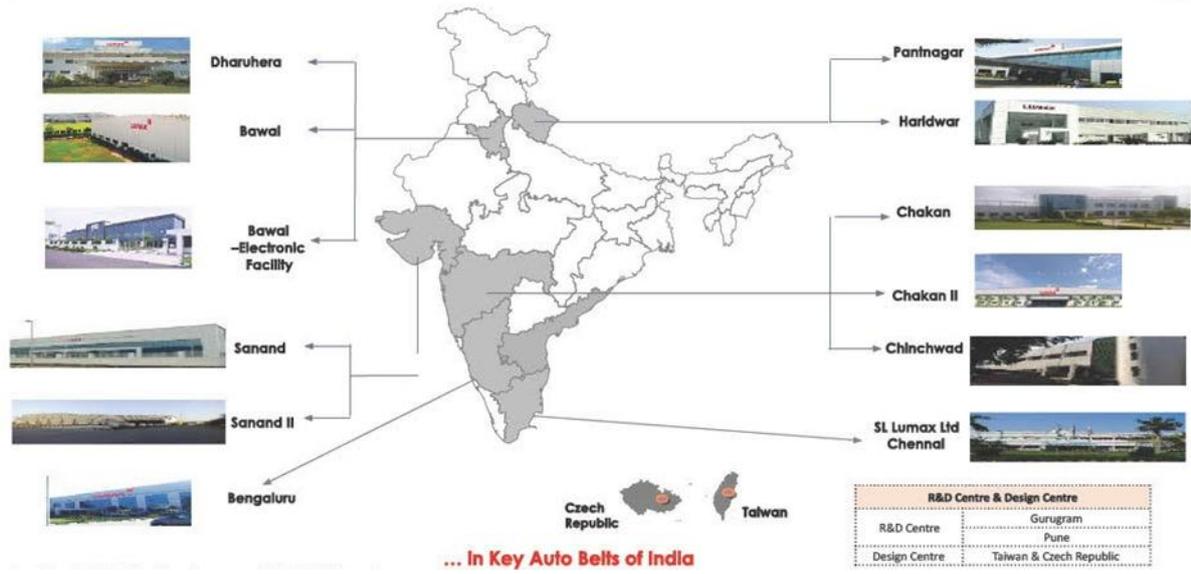
Its product portfolio spans Headlamps, Signal Lamps, Fog Lamps, Interior illumination, Sequential LED Indicators and Lighting Modules for two-wheelers, four-wheelers, commercial and off-road vehicles.

Through a long-standing partnership with Stanley Electric Co. Ltd. (Japan) and other global technology collaborators, LIL has embraced cutting-edge manufacturing, process controls, and innovation-driven design.

Committed to quality, lean manufacturing and sustainability, the company serves nearly every major Indian automotive OEM and holds a dominant market share in its segment.

With a clear focus on the future of mobility, LIL continues to invest in R&D, capacity expansion and lighting-systems integration, reinforcing its vision of being a "system integrator" in automotive lighting. Backed by values of respect, integrity, passion and excellence, Lumax Industries is lighting not only vehicles, but the path ahead for automotive innovation in India.

Strategic Manufacturing Locations in Proximity to Customers



FORVIA HELLA in the Czech Republic



Lighting technologies shaping the future of mobility

The Czech Republic has become a key hub for automotive lighting technologies, thanks to its strong industrial tradition, high-quality technical education, and innovation potential. One of the major drivers of this sector is international automotive supplier FORVIA HELLA, which has been building a network of production and development capabilities in the country with a global reach since 1992.

From the first headlamp to a technology leader



The Journey of FORVIA HELLA in Czech Republic began in 1992 – with the establishment of its first plant in Mohelnice. In 1994, the first headlamp rolled off the production line, followed by rapid manufacturing growth and major investments in R&D. Just one year later, the first technical center was opened, soon expanded to include assembly line departments and testing laboratories.

Over time, the footprint of FORVIA HELLA in Czech Republic evolved from a mere production site into a comprehensive network comprising a total of four locations with production, development, and administration facilities. Today, it develops and manufactures advanced headlamps, rear lamp systems, as well as electronic modules for various renowned international car manufacturers.

Strong foundations in the Czech Republic

FORVIA HELLA benefits from the Czech Republic's favorable environment – access to technical secondary schools and universities, a skilled workforce, and well-developed infrastructure. In addition to its main production and development hub in Mohelnice, the company operates an R&D and testing center in Ostrava. In 2022, a new production facility was opened in Olomouc to focus on post-series production.

In total, FORVIA HELLA currently employs more than 3,100 professionals in the Czech Republic, who develop and manufacture a wide range of lighting systems – with a particular focus on modern LED and adaptive headlamps.

Innovation for safety, efficiency, and personalization



FORVIA HELLA in the Czech Republic is known for developing innovative products such as intelligent lighting systems such headlamps and rear lamps and in addition to hardware, deeply engaged in the development of electronics embedded software, electronics control units, and power electronics that support modern vehicle architectures. Technologies produced locally are of the highest quality and reliability – evidenced by one-millionth intelligent headlamp in 2023 manufactured by FORVIA HELLA in the country.

Today's key trends in automotive lighting include sustainability, personalization, and safety. FORVIA HELLA responds with energy-efficient light sources, support for recycling, and modular components. Its design approach focuses on dynamic light elements and unique light signatures that help automakers differentiate their vehicles.

In 2024, following the new organizational structure, a dedicated innovation group was established in the Czech Republic under the Technical Center Product Innovation, focusing on both product and process innovations.

Partnerships, education, and long-term strategy



FORVIA HELLA maintains long-standing partnerships with technical universities in the Czech Republic. It actively participates in teaching, offers student internships and trainee programs, and supports young technical talent through initiatives such as the HELLATHON competition.

In 2024, the company received the top Industry 4.0 award, confirming its leadership in modern manufacturing and digitalization.

Towards a sustainable and smart automotive industry

FORVIA HELLA builds its future on the pillars of innovation, quality, safety, collaboration, and sustainability. Through continuous investment in R&D, modernization of production, and support for human capital, it maintains a strong position within the FORVIA Group and on the global stage.

The company not only carries forward the Czech industrial tradition but also actively shapes the future of automotive lighting and electronics for next-generation mobility.

Magna Lighting Czech



Before diving into the story of Magna Lighting Czech, we will provide a brief introduction to its parent company, Magna International Inc. Founded in 1957 in Toronto, Canada, Magna is one of the world's largest automotive suppliers and a trusted partner to automakers in the industry's most critical markets—North America, Europe, and China. The company's portfolio includes Body&Chassis, Electronics, Exteriors, Powertrain, Mechatronics, Mirrors, Lighting, Seating as well as Complete Vehicle Engineering and Manufacturing.

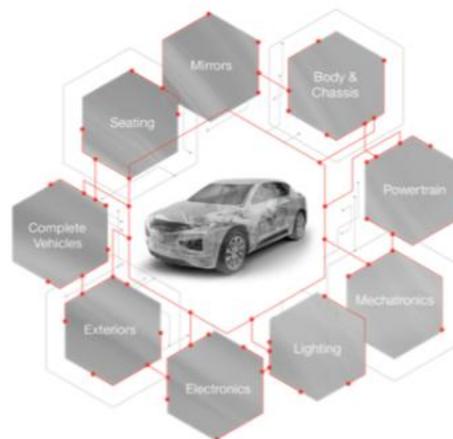
Our full-system approach is your competitive advantage in the new world of mobility.

The Power of Magna

Deep product expertise

Integrated systems level analysis and approach

Complete vehicle engineering and manufacturing



In 2019, Magna expanded its operations in automotive lighting and increased its presence in the European market. As part of this strategy, the company acquired Wipac Czech, an Ostrava-based company originally founded in 2013 as FLTC and later acquired by Wipec in 2017. Wipac Czech specialized in developing lighting products for luxury vehicle brands. Due to its technical expertise and experience with complex projects, Wipac Czech served as the basis for establishing Magna Lighting Czech s.r.o. The company continues to operate in automotive lighting while supporting Magna's broader innovation in advanced lighting systems.



Today, Magna Lighting Czech operates as a lighting engineering center with capabilities in design, optics, system, hardware, software and CAE simulations.

The center supports the lighting development process from initial design through to serial production, with a focus on quality, innovation, and technical precision. Magna Lighting Czech operates across two locations: The Orchard office complex in Ostrava, where part of the team is based since 2023, and Mošnov, home to a photometrical lab that tests lighting systems for quality, functionality, and safety. Additional environmental and electronic labs are set to open in 2026.



Lighting develops and manufactures a variety of automotive lighting systems and related components as part of its product portfolio. These include vehicle lit grilles, daytime running lights (DRL), headlights, smaller lighting elements, lights integrated into bumpers, rear lights, and central brake lights (CHMSL). The company engages in collaboration with manufacturers to pursue continuous improvement, innovation, and maintain quality standards.

Lighting Capabilities



Headlamps

- LED Reflector Systems
- LED Mono & Bi-functional Projectors
- Ultra-slim LED Projector Systems
- LED Adaptive Driving Beam



Tail Lights & Signal

- Homogeneous LED Optical Systems
- Surface Element Lighting
- FlecsForm™
- OLED
- Low Cost, High Efficiency Solutions



Grilles / Panels & Display

- Illuminated Front Grilles
- Integrated Fascia Solutions
- Communication Panels



Electronics

- LDM Controls
- AFS Headlamps
- Light Animation

Complete System Supplier and Integrator

Magna Lighting Czech currently employs approximately 65 engineers and has plans for further expansion in the near future. The majority of developed products are manufactured at Magna facilities Kostrzyn, Poland, and Moncalieri, Italy. The company is gradually expanding its teams to support growth in Europe, aiming to strengthen the Ostrava plant's role within Magna's global operations.

In the area of regional activities, Magna Lighting Czech is a member of MS Autocluster, and the Czech Optical Cluster, and collaborates with the MS Innovation Center. The company also maintains partnerships with universities and high schools, providing trainee programs that enable university students to gain practical experience through part-time work while preparing for their future careers. These initiatives are intended to support the attraction and development of young talent.

With expanding engineering teams and increased testing capabilities, we are progressing toward providing new products to customers, using engineering methods that emphasize quality, safety and sustainability.

Mobis Lighting System s.r.o

Shaping the Future of Automotive Lighting in the Czech Republic



Mobis Lighting System s.r.o. stands among the most innovative automotive enterprises in the Czech Republic, powered by a dedicated workforce of over 1,300 employees. With an unwavering commitment to technology, design and precision engineering, the company delivers cutting-edge lighting solutions to top global automakers.

Through close cooperation with the Czech authorities, regional partners and industry leaders, Mobis creates a stable environment for continuous growth and technological advancement. The company's strong focus on employee development and comprehensive training programs strengthens its teams and drives operational excellence across every production line.

Mobis Lighting System continues to push the boundaries of automotive lighting, reinforcing the Czech Republic's position as one of Europe's most important industrial and innovation hubs.



FOUNDED IN 2011



33 EMPLOYEES



HOLZKIRCHEN
OSTRAVA
INGOLSTADT

DE HEADQUARTER
CZ TECHCENTER
DE MANUFAKTUR

Lightworks Manufaktur s.r.o.

Founded in 2021, Lightworks Manufaktur s.r.o. is a subsidiary of Lightworks GmbH and specializes in advanced development services for the automotive industry, with a strong focus on lighting technologies. As an active member of Autoklastr (Moravskoslezský automobilový klastr, z.s.), we operate within a dynamic innovation ecosystem and support OEMs and suppliers in both series and pre-series projects.

Our engineering office in the Czech Republic brings extensive experience in mechanical, optical, and E/E development and has contributed to numerous demanding projects over the years, including:

- Customer support for series development of illuminated interior and exterior functions
- Concept development of ADS lighting
- Development of slim headlamp modules
- Headlamp and rear combination lamp (RCL) development using our slim module technology for multiple small-series projects currently approaching SOP

Driven by technical excellence, innovation, and close customer collaboration, Lightworks Manufaktur s.r.o. delivers modern, reliable, and production-ready lighting solutions for the mobility of tomorrow.

Introduction of Koito group

Koito Manufacturing Co., Ltd., the parent company of Koito Czech s.r.o., was founded in 1915 as a manufacturer of Fresnel lenses for railway signal lamps. Since then, Koito Group has grown with automotive industry and holds 20% of the automotive headlamp market worldwide, making us a leading company in automotive lighting industry. Our main products are lightings including electronics and light sources for automotive sector. Lighting solutions for marine vessel, aircraft, and railway transportation are within our scope as well. We have been continuously delivering innovative products and technologies such as:

- First headlamp with plastic outer lenses in the world
- First headlamp with all components made of plastic in the world
- First AFS with bending function in the world
- First LED headlamp in the world, and
- First ADB integrated with low beam in the world



(First headlamp with plastic outer lens)



(First LED headlamp)

Through the development of our global network (JAPAN, CHINA, ASIA, AMERICAS and EUROPE), we provide tailored products for each region. Global cooperation also ensures stable quality and supply systems within the Group. Innovation within the Koito Group is also aimed at energy efficiency and sustainability.



(Koito global network)

Overview of Koito Czech s.r.o.

Koito Czech s.r.o. was established in Zatec in 2001, marking the start of automotive lighting production for European and Japanese vehicle manufacturers in Czech Republic. We have expanded manufacturing plant in 2020. As a result, our production capacity has increased 50%, and has capability to further expand business with our customers. Our high quality automotive headlights delivered across Europe greatly contributes to improvement of nighttime driving safety.



(Koito Czech s.r.o.)

Development Structure

Koito Czech's development structure is operated through collaboration between technical sections located in the Czech, France, Belgium, and Japan (Koito). This framework enables the collection of technical information, the development and design of lamps for vehicle manufacturers. In addition, we are actively engaged in various development initiatives, such as promptly responding to recent design trends like slim units and stealth styling, creating new added value through the advanced combination of optics and electronics, and contributing to carbon neutrality through weight reduction and power saving.



(Slim units)



(Stealth styling)

LIST OF MAIN DVN MONTHLY REPORTS

Main reports launched in 2008-2020

Koito company profile
China lighting market
The Wonderful World of Passenger Car lighting
Tier 2 and 3 contribution on automotive lighting
ZKW company profile
Simulations in automotive lighting
Mercedes-Benz profile
LED technologies in automotive lighting
LEDs Thermo-Electrics
Interior Lighting
BMW and lighting
Lighting and ADAS
Materials in lighting
Laser Head lighting
Automotive lighting Regulations worldwide
Israeli Startups
Jaguar Land Rover and lighting
Engineering companies involved in lighting
Japanese lighting market
Status of w/w Regulations
Korea Lighting Market
SL Corp profile
ADB/Matrix Beam
India Car Industry and Lighting Market
Vision of lighting 2025-2030
Automotive lighting Regulations worldwide
Vehicle Lighting in USA
New ADB technologies
Interior Lighting
Camera technologies
Varroc profile
Volkswagen profile
US automotive lighting industry
Materials in Vehicle Lighting
The Future of Exterior Lighting
IAA Frankfurt Autoshow
DVN Munich WS
GENEVA Autoshow
US Lighting
Marelli AL Profile
50 years Light Styling
ADAS and Lighting

Main reports launched in 2021

Evolution of LEDs
New Models July-October
2020 Audi Lighting & ADAS
Lighting in development countries
ADB Update
DVN Shanghai WS
Innovations in Rear Lighting
Global Landscape of Automotive LED Suppliers

Reports launched in 2022

Technologies presented in CES 2022
Laser light automotive lighting
ISAL report
DVN US workshop
Worldwide Demographic Development
Models launched May to August
DVN Shanghai report
VISION congress
Paris Autoshow + last Vehicle models
L.A. Autoshow

Reports launched in 2023

CES Report
TU Darmstadt Lighting Institute
DVN Paris Workshop
Universities and Lighting
MLA Technology
Models launched in H1-2023
DVN Tokyo Workshop ISAL Report
DVN US Workshop
Osram Company Profile
DVN Shanghai Workshop

Reports launched in 2024

CES
New cars of the semester
DVN Munich Workshop
OLED Technology
Beijing Autoshow
Display Week
2024 DVN Detroit Workshop
ALE, June 2024
Indian vehicle lighting market
DVN Pune Workshop summary
New cars 2024
Nichia company profile
Test houses
Shanghai DVN event summary

Reports launched in 2025

CES and Bharat Mobility Global Expo
DVN Munich event summary
Dekra testhouse
SPE Plastics in Electric & Autonomous Vehicles (EAV)
Auto Show Shanghai
IAA
DVN Detroit Report
The Czech Automotive Ecosystem

DVN ecosystem and scientific community

DVN is a reference in the world of Lighting, Interior comfort and Lidar

Car Makers

Audi
Avatr Technology
Bentley
BMW
Ferrari
Ford
Ford Otosan
General Motors
Genesis
Hero MotoCorp
Honda
Hyundai
Jaguar-Land Rover
Kia
Lotus cars
Lucid Motors
Mazda
Mercedes-Benz
Mitsubishi Motors
Nio
Nissan
Renault
Rivian
Seat
Stellantis
Subaru
Toyota
TVS
SAIC Volkswagen
Volvo Cars
Zoox

System Suppliers and Tier 1s

Adient
Anruì
Appotronics
Aspöck Systems
Braslux
Cepton
Ceres Holographics
Chongqing Rebo
Continental
Creat
Diode Dynamics
Elba
F2J Industry
Feka
Fiem Industry
Flex-N-gate
FORVIA designLED
FORVIA HELLA
GHSP
Grupo Antolin
Hascovision
Hitachi
Ichikoh
J.W. Speaker
Keboda
Koito
Lightworks
Lumax
Luxit
Maier

Magna
Marelli
Marquardt
Mind
Mobileye
Mobis
Muth Mirror Systems
Nordic Lights
Odelo Farba
OPmobility
Panasonic
Polycontact
Prettl group
Rehau
SL Corporation
SMR Automotive
Stanley
The Lighting Consultants
Toyota Boshoku
Uno Minda
Valeo
Varroc
Weidplas CH
Xingyu
Zanini
ZKW
Zodiac

Light Source Suppliers

ams OSRAM
APT Electronics
Brightek
Dominant Opto Tech.
Everlight Electr.
HC Semitek
Kyocera SLD Laser
LG Innotek
Liteon Technology
Lumileds
Nichia
OLEDWorks
Refond
Samsung LED
Seoul Semiconductor

Tier 2s and service providers

A2Mac1
Ascorium
AML Systems
Ansys
ASAP
ASYST Technologies
Auer Lighting
BASF
Bluebinaries
Brightview Technologies
Capgemini
CLM Search
Coindu
Covestro
Dajac
DBM Reflex
Delo

Die haptiker GmbH
Docter Optics
Dow
Edag
Elmos
Endego
Ennostar
Euro Moulders
EV Group
Flow Dry Technology
Focuslight
Fusaware
Grewus
HJ Optics
Huawei
Idemitsu
Infineon
Inova Semiconductors
Instrument Systems
Integrity
Joysonquin
Leonhard Kurz
L.E.S.S.
LMT
Luminus
Mektec
Microvision
Maxell Frontier
MD Group
Melexis
Microchip
Microrelleus
Mitsui Chemicals
Mocom
Nalux
NBHX Trim
Oerlikon
ON Semiconductor
Pininfarina
Polyrise
Preh
Ray Group
S&P Global Mobility
Sabic
Schott
Seaborough
Seoyoneh-Ewha
Shihu
SP3
Sunny Automotive Optech
Suzhou Senbo
Synopsys
TechnoTeam
Toshiba lighting
TQ Technology
Uni Tooling
Ventura
W Research Company LLC
W.L. Gore & Associates
WLOPT
X2F
Xunchi

Universities, NGO and labs

Alliance for Automotive Innovation
ARAI
Automotive Research Association of India
BMDV
Bundesministerium für Digitales und Verkehr
CATARC
China Automotive Technology and Research Center
CEA Leti
Darmstadt university
DEKRA
Department for transport, UK
DTI
Danish Technological Institute
DVR
Deutscher Verkehrssicherheitsrat - German Road Safety Council
Estaca
École supérieure des techniques aéronautiques et de construction automobile
Fraunhofer (FEP, IAP, ILT, IMS)
Fudan university
GTB
Hannover Leibniz
Hochschule Aalen
Hochschule Magdeburg-Stendal
Icahn School of Medicine at Mount Sinai
Light and Health Research Center
ICAT
International Centre for Automotive Technology
Idiada
Institut d'Optique
JASIC
Japan Automobile Standards Internationalization Center
KBA
(Kraftfahrt-Bundesamt)
KATRI
Korea Apparel Testing & Research Institute
KIT
Karlsruhe Institute of Technology
Kotsa
Korea Transportation Safety Authority
LCOE
Laboratorio Central Oficial de Electrotecnia
L-LAB
MLIT
Ministry of Land, Infrastructure, Transport and Tourism
NHTSA
National Highway Traffic Safety Administration
OICA
International Organization of Motor Vehicle Manufacturers
Pacific Northwest National Laboratory
Phabulous
RDW
RISE Research Institutes of Sweden
Sapphire STS
SMMT
Society of Motor Manufacturers And Traders
SMVIC
Shanghai Motor Vehicle Inspection Certification
TNO
Traficom
Transport Canada
UMTRI
Université Gustave Eiffel
UTAC
VDA
Verband der Automobilindustrie
VEDECOM
Vrije Universiteit Brussel
YoungNam University