Tue, 17 June 2025
Weekly Newsletter

DVN Lighting

NEWSLETTER #909

Editorial

Challenging Times For The Automotive World

Everybody in the automotive industry feels what is happening: this industry, started more than a century ago, was the primary main driver for optimization. Optimization of performance, of design, of real and perceived quality, of footprint. Everybody was benchmarking to analyze in detail what their competitors were doing—the competition and the technology were well and perfectly known. What was called 'R&D' was in fact more *development* than *research*. Purchasing (i.e., cost) was king at the automakers, and innovators were sometimes neglected.

That was then; this is now: we are in a new world where innovation, partnership, and money are essential to survive. New competitors from the Silicon Valley tech industry and Chinese giant consumer and manufacturing concerns, felt by legacy automakers as threats, are generating a revolution in their organisation if they want to survive.

Technological shifts are afoot with EVs and AVs, driver assistance and infotainment defining new customer needs and wants while facilitating whole new design concepts. In addition, after COVID, semiconductor shortage and now geopolitical tensions are creating new turbulence: tariffs, rare earths availability, and more. It is becoming complex to have clear guidelines from automakers, and it is impacting the entire supply chain, including our lighting ecosystem.

What was taken for granted 10 years ago has now curdled to doubts and threats. Our business is evolving faster than any other time during the last 40 years, at least. In the same day, you can see the Renault CEO speak at Le Mans about that company's future, and one hour later announce he is resigning to go join a totally separate business. At the same time, Marelli, one of the world's biggest vehicle lighting suppliers, initiated chapter 11 bankruptcy in USA to restructure debt.

Whoever wants to thrive in this new reality must react thoughtfully, with the likes of:
• Closer relationships among automakers, tier-1 and -2 suppliers, regulators, and researchers. The Tokyo DVN Workshop last week was a marvellous opportunity for productive networking.
• Building trust and respect to avoid misunderstandings or conflicts. The DVN weekly newsletters and monthly reports facilitate cross-cultural understanding and appreciation in this direction.
• Flexibility, agility and positivity, considering the main needs of automakers: faster development, lower cost, and constant innovations.

There is always the sun after the storm…assuming you brought your umbrella!
Take care in this turbulent period, especially for my friends at Renault and Marelli.

Paul-Henri Matha
DVN Chief Executive Officer and Lighting General Editor

In Depth Lighting Technology

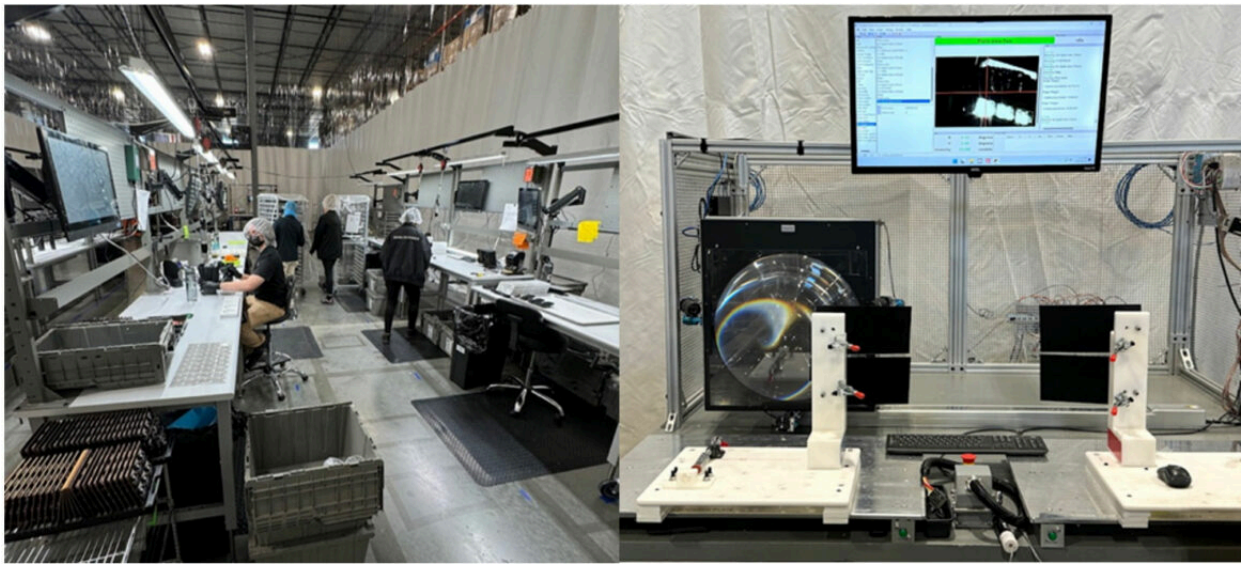
DVN Field Trip: Diode Dynamics

By Felipe Melhado

In preparation for the DVN Workshop in September, DVN visited Diode Dynamics, DVN members since 2018. We met with CEO Paul McCain.

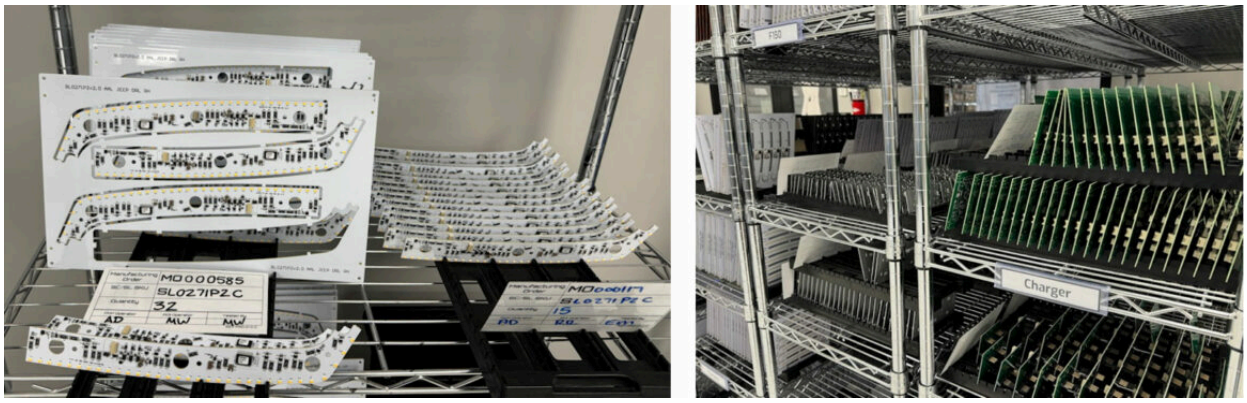
Tucked just outside of St. Louis in St. Charles, Missouri, Diode Dynamics have carefully and deliberately cultivated a fine reputation — and built an impressive 6,500-m^2 facility. Stepping through the doors makes it instantly clear: this is nothing like the numerous sketchy aftermarket lighting outfits.

The plant was built in 2021 with a clean, modern aesthetic. Inside, there are pristine production floors, climate-controlled assembly spaces, and state-of-the-art testing labs backing the company's commitment to quality and design validation.



The facility includes SMT circuit board assembly and ultrasonic welding stations, a photometric testing lab, and a full environmental validation chamber. CEO McCain says, "It's all about doing it right the first time".

Originally known for premium LED bulb replacements and enthusiast lighting kits, Diode Dynamics have gained traction with specialty OEM clients like Ford-Roush Performance, delivering complex, high-content, complete lamp assemblies and off-road packages in less than a year from concept to production.



Complex PCBs made in-house (above, DVN images)
Circuit board production room (below, DVN image)

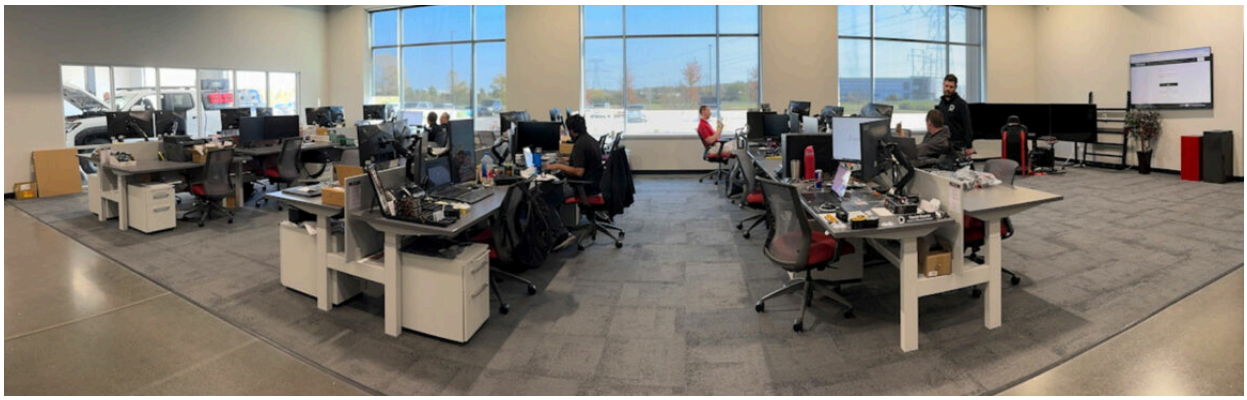
This move into OEM signals DD's strategic diversification. “We're still proudly aftermarket, but with our in-house capabilities and agile development process, we're able to [serve] tier-1 programs at lower volumes with greater flexibility,” McCain says.

One of the standout aspects of Diode Dynamics is their direct connection to the end customer. McCain says, "We get constant feedback, because we're also the seller. That means we see product issues, requests, and patterns right away — then feed that data back into our design process".

Unlike many lighting suppliers reliant on external validation, DD's vertically-integrated model allows them to develop and make LED drivers, mechanical housings, optics, PCBs, and firmware in-house. This optimizes quality while reducing friction, cost, and time to market.

Diode Dynamics' unusual speed and adaptability are quite remarkable. Whether it's developing swappable-lens rock lights or integrating advanced LINbus vehicle communication for animated welcome lights, they embrace technical challenges most suppliers avoid — and they have the expertise and capability to deliver on their promises, without the long lead times typical of larger firms.

In a lighting industry largely dominated by giants or local representatives for overseas factories with more marking skill than technical expertise, Diode Dynamics stand out as an agile, highly competent American manufacturer who can serve car enthusiasts and automakers alike.



Design studio with garage just steps away, and readily visible. A close connection between the hatching of an idea and its realization as a part on a vehicle! (DVN image)

Lighting News

Audi New Q3 reveal

LIGHTING NEWS

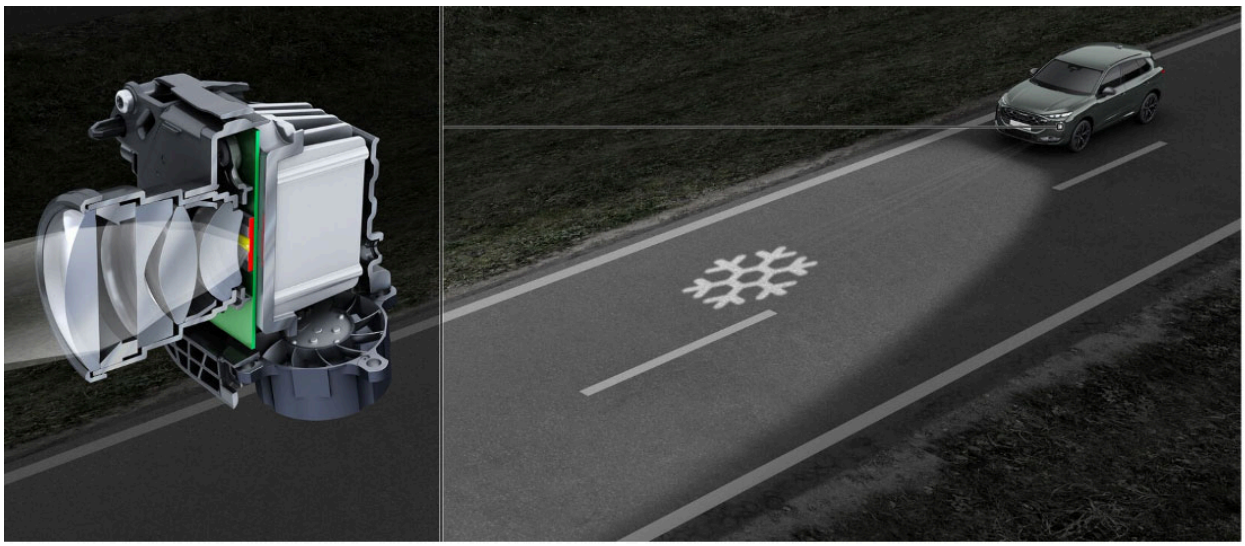
By Paul-Henri Matha

A few days ago, Audi communication team shared some first pictures of new Audi Q3. What did we saw? lamps and nothing else! as lamp engineer, and as part of the lighting community, I really like such a teaser.

The Audi Q3 has been a permanent fixture in the premium compact segment as a bestseller for more than ten years. Now time for the third generation.

At the front of the compact SUV are the digital matrix LED headlights, which use the micro LED module for the first time in an Audi vehicle, and also this is the first time to have a HD technology in the Audi compact segment, the micro-LED module replacing the DMD module.

The module, which is around 13 millimeters wide, contains 25,600 micro-LEDs. Each individual micro-LED is around 40 micrometers in size, about half as thick as a human hair.



The use of this micro-LED technology generates significantly improved illumination and thus ensures a very clear contrast on the road surface – particularly advantageous in weather-related difficult visibility conditions.

The light guidance functions, known as lane and orientation lights, are now much more closely linked to the driving assistance functions. By displaying important information from the assistance systems in the driver's direct field of vision in front of the vehicle and with a direct visual reference to the infrastructure, the lighting functions contribute to a further increase in driving safety.

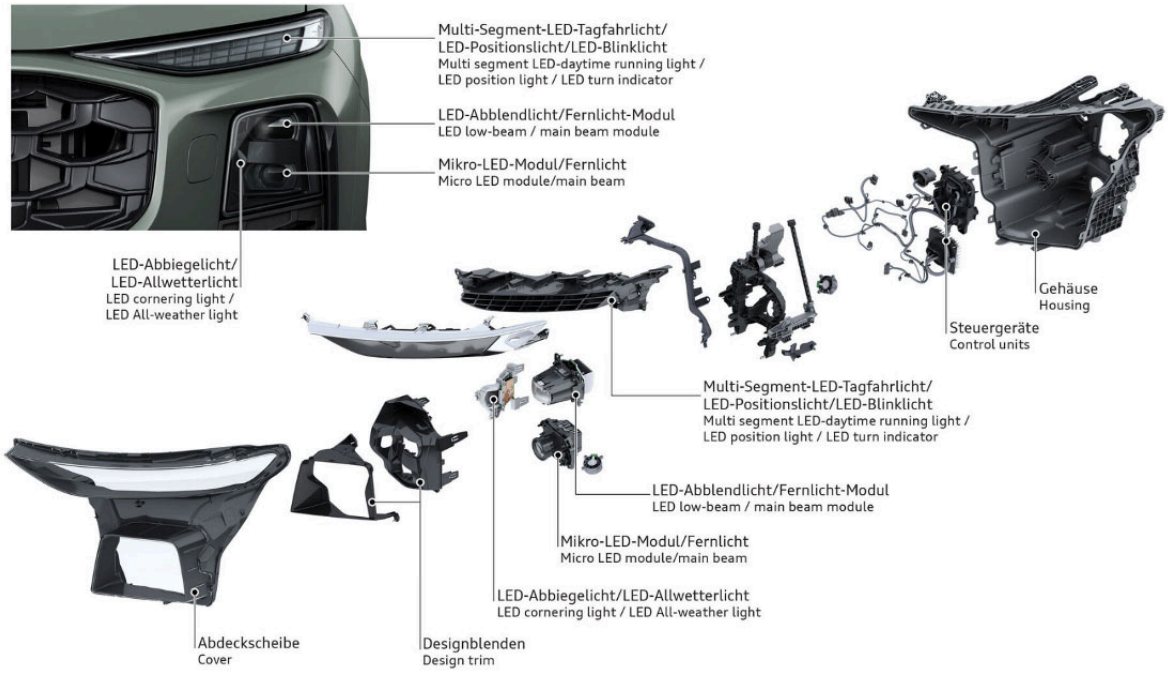
On the one hand, the active warning of the Lane Change Assistant in lane lights on highways is reflected if the driver of the Audi Q3 wants to change lanes while a vehicle is in the blind spot. In addition, the lane departure warning display in the orientation light on country roads and motorways supports the driver. It is activated in the same way as the familiar display in the instrument cluster as soon as the lane boundary is unintentionally crossed. In addition, due to the extended traffic information, an ice crystal is projected onto the road as a warning symbol from around 70 km/h onwards in the event of possible icy conditions.

Another example of the further development in light guidance: Since there is usually a lack of visibility on construction sites, the digital Matrix LED headlight automatically adjusts the light guidance and fades out the lane light in favor of the orientation light in order to significantly simplify lane keeping in narrow construction site situations.

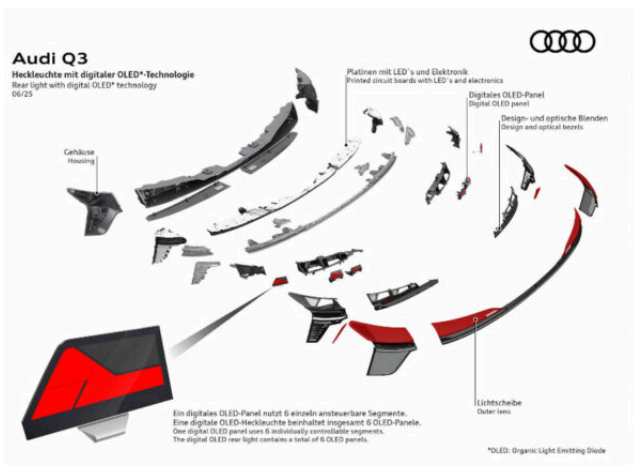
For the first time, customers can deactivate individual functions of the digital Matrix LED headlights, such as the track light, via the MMI. Also selectable via the MMI are three different designs of the extended dynamic coming-home and leaving-home lighting show when the engine is entered or switched off. This means that the digital Matrix LED technology is also presented in a particularly impressive way when stationary. In conjunction with the micro-LED light source, the digital Matrix LED

headlights ensure very precise light distribution of the high beam and even better suppression of other road users to increase road safety.

In addition to the digital matrix LED modules, the digital daytime running lights with LED technology, consisting of 23 segments per side, ensure a high recognition value at the front. Depending on the equipment, up to four different digital light signatures with suitably designed coming- and leaving-home stagings for the front and rear can be selected via the MMI.



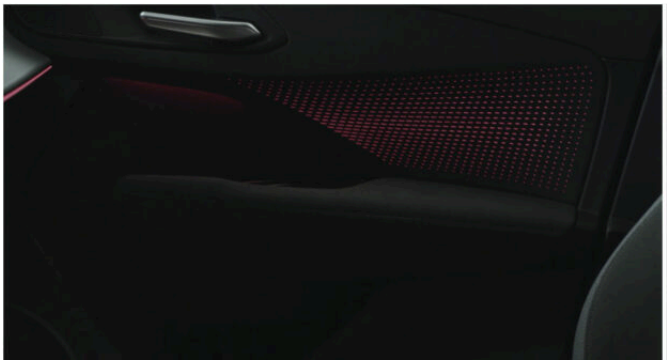
The rear section is optionally adorned with digital OLED rear lights, which are complemented by a continuous LED light strip. A total of 36 different segments are divided into six digital OLED panels, which enable digital tail light signatures in the rear. A special eye-catcher are the illuminated rings at the rear, which become active as soon as the low beam is switched on.

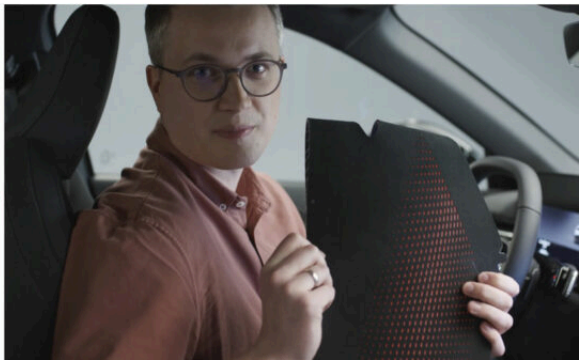


This level of lighting technology in the new Audi Q3 is available for the first time in the Audi compact segment.

In the dark, various light packages (ambient light package plus or pro) set the scene for the ambience of the interior. Marker lights in the dashboard and centre console emphasise the clear lines of the interior. Indirect ambient lights below the MMI panoramic display or in the doors underline the architecture in the interior.

As a new design element, the front doors are now optionally illuminated over a large area. For this purpose, the fabric field was lasered 300 times. A light source in the door trim backlights five segments, which show a dynamic course due to their different sizes – even when the vehicle is unlocked and locked. The illuminated fabric field thus combines functionality with an emotional design experience. 30 different colours are available in the MMI and increase the possibilities for individualisation.





'25 Geely E8 Loses Lit Bumper

LIGHTING NEWS

Geely have simplified the lighting on their E8 for the 2025 model year; they've deleted the lit bumper option. The car's price starts at C¥153,800 (€18,500, $21,400), and customers generally didn't go for the option while it was available, apparently considering it too expensive.

Find details about the E8 lit bumper in DVN coverage from last year **here**.

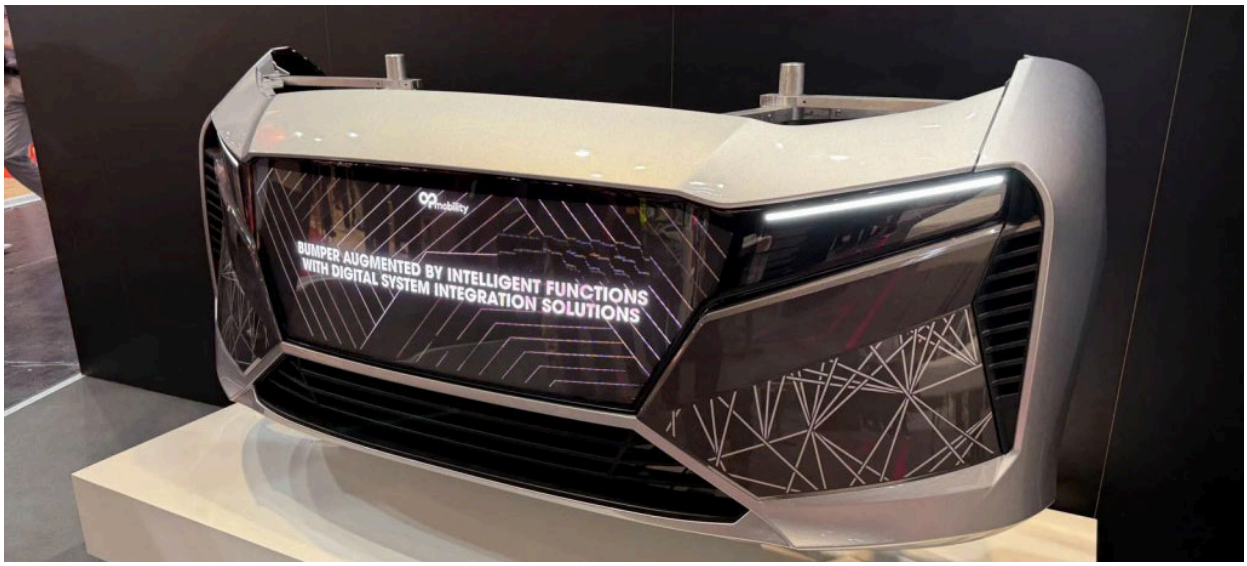
OPmobility at VivaTech: Innovations for Road Safety

LIGHTING NEWS

At VivaTech, OPmobility's showcase at the IMPACT stand included OPM's Digital Front Fascia, integrating a curved miniLED display which turns the bumper into a visual and audio communication tool for improved road safety. The Digital Front Fascia can signal its presence and communicate with other road users by emitting audible messages or displaying safety messages on the front of the vehicle.

Safety is at the heart of all the solutions developed by OPmobility, whether in exterior body parts, with bumpers that deform and absorb impact to protect pedestrians, lighting, with ADB headlamps that illuminate the road without dazzling other road users, or energy storage, with hydrogen systems designed to withstand high pressures. At VivaTech, OPM signed the Association Antoine Alléno's Charter commitment to violence-free road mobility.

Founded in July 2022, the Association Antoine Alléno's mission is to protect people under 25 years old from all forms of road violence. The association intend to act in three areas of general interest: supporting victims and families bereaved by road violence, raising public awareness and mobilizing to change laws and regulations, and ensuring that they are enforced.



Forvia Hella News From India

LIGHTING NEWS

Forvia Hella have opened a new office space in Coimbatore, India.This marks a significant expansion; the new facility is designed to foster collaboration, creativity, and a dynamic work environment for the growing team there.

The supplier also announced the appointment of Mr. Subramanian Narayanan as Head of Global Development Centre India. Mr. Narayanan spoke at the DVN Pune event last year. After starting his career as a Lead Design Engineer, he handled diverse roles across various domains within Hella, consistently delivering excellence and driving innovation.

Marelli Enter Bankruptcy; Aim to Bolster Finances

LIGHTING NEWS

Marelli Holdings have commenced voluntary chapter 11 bankruptcy, with the aim of comprehensively restructuring their long-term debt obligations. about 80 per cent of the company's lenders have signed an agreement to support the restructuring, which will de-leverage Marelli's balance sheet and strengthen their liquidity.

Marelli don't expect any operational impact from the bankruptcy process, and will continue to work closely with customers, suppliers, and partners to innovate and invest in their technology portfolio.

CEO David Slump says, "We have been proactive in making necessary adjustments to stabilize our financial position so that we can continue to deliver long-term benefits for our valued customers, partners and employees. While we are pleased with our recent progress and profitability, industry-wide market pressures have created a gap in working capital that must be addressed. After careful review of the Company's strategic alternatives, we have determined that entering the chapter 11 process is the best path to strengthen Marelli's balance sheet by converting debt to equity, while ensuring we continue operating as usual. Taking this action now provides access to new liquidity to fund our long-term growth and innovation pipeline, and ensures our customers and partners all over the world can continue to rely on Marelli (…) we will continue to serve our customers and work with our suppliers and partners as they have come to expect."

To support the company during this process, Marelli have received a commitment for $1.1bn in debtor-in-possession financing from their lenders. Upon court approval, the financing, along with cash generated from the company's ongoing operations, is expected to provide sufficient liquidity to support the company through the bankruptcy process. The restructuring support agreement provides for a comprehensive de-leveraging transaction through which the lenders will take ownership of the business upon its emergence from bankruptcy.

Marelli filed a number of customary first-day motions seeking court approval to continue operations throughout the bankruptcy process, including uninterrupted payment of employee wages and benefits and continuation of programs integral to customer relationships. Marelli will be working with their suppliers to reach agreements on payment terms for obligations which arose before the bankruptcy filing.

General News

Renault CEO Luca de Meo Abruptly Resigns

GENERAL NEWS

Renault CEO Luca de Meo, the architect of a turnaround strategy which turned billions in losses into record profits, is stepping down on 15 July after five years to "pursue new challenges outside the automotive sector", according to the automaker. De Meo says he is leaving "a transformed company" and will "apply my experience to other sectors and embark on new adventures".

Specifically, he will become CEO of French luxury-goods company Kering, after French billionaire Francois-Henri Pinault, whose family holding Artemis controls Kering, decided to split the chairman and CEO roles. Kering's brands include Gucci, Saint Laurent, and Balenciaga.

The Renault board of directors have started the process of appointing a new CEO, the automaker said in a news release on 15 June, "based on the already-defined succession plan", without more details. Renault Group Chairman Jean-Dominique Senard said in the release that under de Meo's leadership, the company "has returned to a healthy foundation, boasts an impressive range of products, and has resumed growth".

De Meo, an Italian national, was hired in January 2020 in the wake of two tumultuous years at Renault following the arrest of CEO Carlos Ghosn in Tokyo in November 2018, on charges of fiscal impropriety. Ghosn's departure exposed tensions that nearly tore the Renault-Nissan alliance apart, while weakening demand in key markets had hurt sales and earnings.

De Meo was CEO of Volkswagen Group's SEAT brand for five years until he stepped down to accept the Renault CEO post, which he started in July 2020, succeeding

interim CEO Clotilde Delbos, who held the position following the ouster of CEO Thierry Bollore in autumn 2019. At SEAT, he led the Spanish brand to record sales and gave it a sportier image, creating the Cupra subbrand aimed at youthful buyers.

De Meo's appointment as Renault CEO was a return to the company where he started his career in 1992 in product marketing. After five years at Renault, he moved to Toyota Europe as a product manager for the Yaris car and the Lexus brand. In 2002, he moved to Fiat Group, where he led the Alfa Romeo, Abarth, and eventually the Fiat brands. In 2009 he moved to the VW Group, working first on marketing for the VW brand and then leading marketing and sales at Audi.

A native of Milan, he studied business administration at the city's Bocconi University. He started his tenure at Renault as the automaker was posting a loss of €7.3bn in the first half of 2020; in interviews hesaid his first task was to overhaul the group's future product pipeline. In a six-week blitz, several models were killed, and he fast-tracked the Renault 5, a retro-inspired full-electric small car that became one of the first inexpensive European-made EVs.

As part of his 'Renaulution' turnaround plan, de Meo vowed to cut development time and cost by 40 per cent, an initiative driven by Gilles Le Borgne, a former PSA Group chief engineer. De Meo then pushed to cut development times even further, to just two years for the coming next-generation Twingo electric minicar, in an effort to match the speed of Chinese brands such as BYD.
In a reversal of strategy under Ghosn, de Meo emphasized a push for value over volume, and said Renault would emphasize sales in the higher-margin compact segments rather than small cars, where they had long been successful with lower-profit cars such as the Renault Clio and Dacia Sandero.

De Meo also announced an expansion of the Alpine brand from a single model, the A110 sports coupé, to a full lineup of electric cars. He consolidated Renault Group's racing efforts under the Alpine umbrella, including Formula One and endurance racing teams.

Other moves included a revamping of Renault's overseas ambitions, avoiding the turbulent Chinese market and moving Renault models slightly upscale in markets including Latin America and the Middle East. India remained a challenge, however, despite the launch of several new models.

De Meo is leaving Renault at the peak of a new model cycle. In addition to the Renault 5, launched last autumn, new cars include the Renault 4 small electric SUV, Scenic electric compact SUV, revamped Dacia Duster, and new Bigster, and Alpine A390, a midsize electric crossover rival to the Porsche Macan.

Stellar financial results followed largely positive reviews for Renault's new models. By 2021, Renault were once again in the black after 2020 losses totaled €8.1bn. In 2024, Renault were one of the few international automakers to beat forecasts, with a record operating profit of €4.3bn; operating margin was 7.6 per cent. They also were one of the only major automakers not to issue a profit warning in 2024, as a global decline in demand for new cars and operational issues hit larger peers such as VW Group and Stellantis.

To go further ...

Audi Q3 light details

TO GO FURTHER ...

See all lamp details on new Audi Q3 in Audi Head of Headlight development Michael Kruppa video.

[The lighting technology of the Audi Q3 SUV | Video | Audi MediaCenter]