

Tue, 25 July 2023
Weekly Newsletter



NEWSLETTER #813

PixCell LED

Ultimate precision in perfect alignment

100+ individual cells with just 25 µm spacing, perfectly matrixed onto a single LED chip for intelligent headlamps

SAMSUNG



Editorial

DVN Report Goes Live: Lights On New Models

Today we publish our [DVN Report](#), looking at the lighting on new vehicles launched between January and June. You will find 40 new models, including a lot of Chinese cars. It's a report worth your eyes, but if you need the quick summary, we bring it to you in this week's in-depth report: a selection of the new models, categorised to show today's trends in lighting equipment, configuration, and design.

In other timely news:

The U.S. DVN Workshop will be held on 29-30 August in San Francisco.

If you intend to attend, hurry and [register](#) while there are still spaces available, and book your reservation at the event hotel at the preferred rate before 4 August.

ADB technology is advancing very fast, and this week we've got an interesting look at new microLED launches. We're working on a very interesting feature for next week, too, about Dr. Michael Hamm's visit to ams OSRAM's Eviyos assembly line in Regensburg.

The whole DVN team have, since the beginning of the year, been developing a [DVN Study](#) on ADB and light projection, to be published 15 October. Watch for more information coming soon.

Sincerely yours,

A handwritten signature in black ink that reads 'W. Frally'. Below the signature, the text 'DVN CEO' is printed in a small, sans-serif font.

In Depth Lighting Technology



DVN Workshop
Lighting

29-30
AUGUST 2023

**"Lighting the Future:
Safety, Communication & Emotions for EVs, Avs & Trucks"**
San Francisco

[Click here for more information](#)

New Launches This Year: DVN Report Summary



This week, we go live with a [DVN Report](#) dedicated to the new vehicles launched so far this year at the Shanghai and New York auto shows and other venues.

Among the other information in the study are these major trends:

Great Proliferation of full width rear light with a slim stripe



VOLKSWAGEN ID.7



VOLKSWAGEN ATLAS



LEXUS LM



TOYOTA PRIUS



BYD SONG L CONCEPT



BYD CHASER



NISSAN PATHFINDER CONCEPT



CUPRA TAVASCAN



POLESTAR 4

Proliferation of full width front light with a slim stripe



VOLKSWAGEN ID.7



VOLKSWAGEN ATLAS



BYD SONG L CONCEPT

Visible lighting modules



LEXUS LM



CADILLAC XT



PEUGEOT 2008



VOLKSWAGEN TOUAREG



NISSAN PATHFINDER CONCEPT



NISSAN PATHFINDER CONCEPT

Invisible lighting modules



IM MOTORS L7



LYNK & CO 08



HONDA e:NY1

Lights become art objects



MG CYBERSTER



CUPRA TAVASCAN



NISSAN ARIZON CONCEPT

Double-band styling



RAM REV 1500



GENESIS GV80 COUPÉ CONCEPT



TOYOTA PRIUS

Special lights



BMW 5 SERIES



GAC VAN LIFE CONCEPT

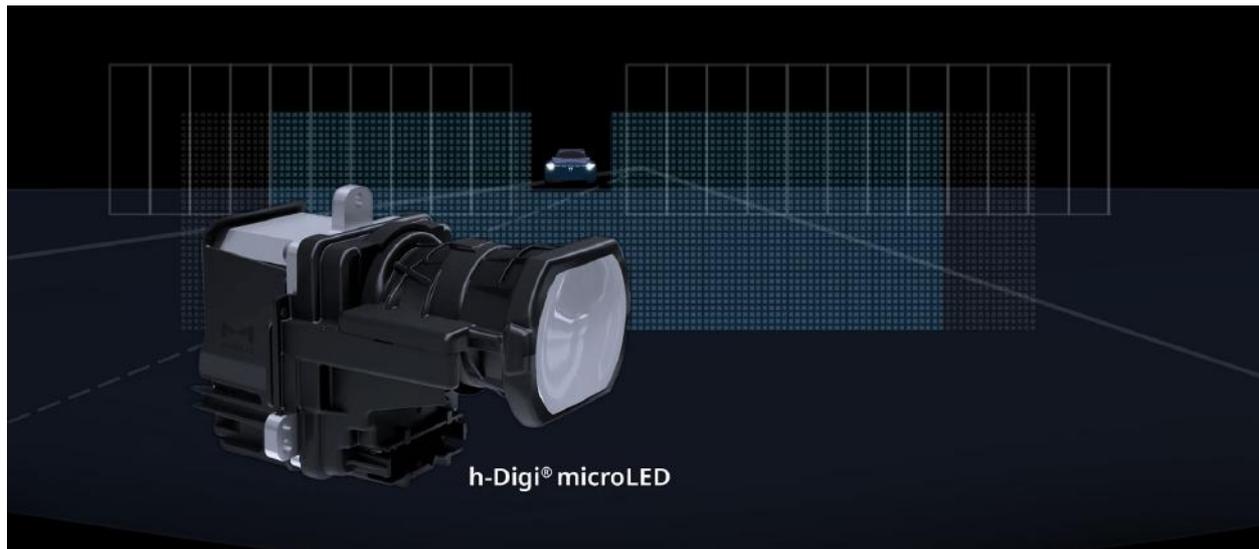


LANCIA PU+RA HPE CONCEPT

Lighting News

Marelli's New Headlight Module With Osram MicroLEDs

LIGHTING NEWS



Marelli have launched and begun series production of their new h-Digi microLED module. It uses a new multipixel LED, and enables affordable fully adaptive, dynamic headlight operation and image projection.

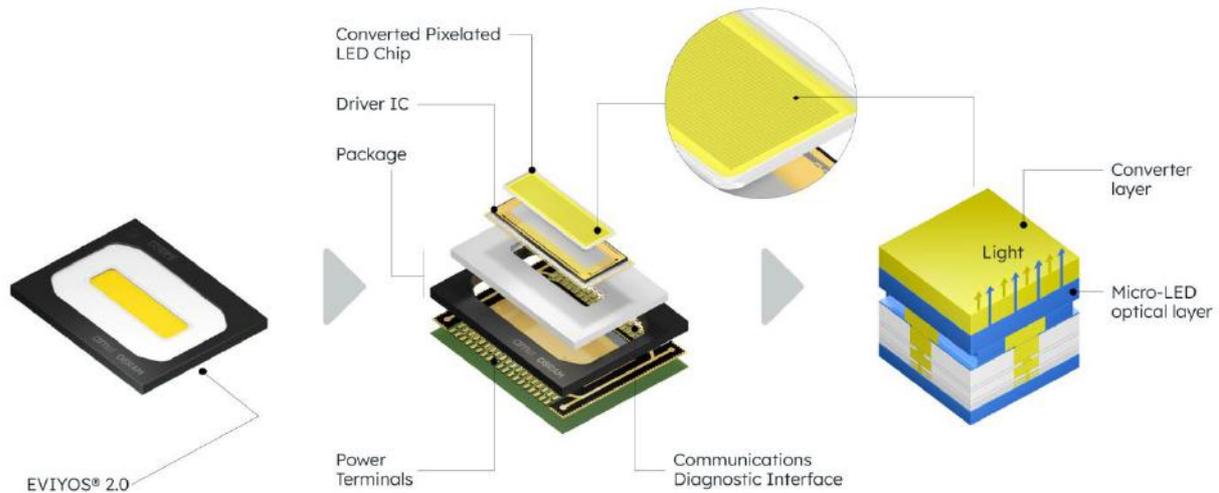
The new high-resolution module is based on a roughly-20-kilopixel microLED matrix. The pixels are individually controlled to create very flexible beam patterns, adapting to various driving situations; *town*, *country*, *motorway*, and *adverse weather* options can be realised. It also provides dynamic curve light and very precise glare-free high beam shadows. It also can project warnings or driver assistance images on the road, directly in the driver's field of view. It is extremely compact, and highly energy-efficient.

The magical new LED is ams OSRAM's Eviyos 2.0. In combination with a special optical lens system and a new electronic control engineered by Marelli's Automotive Lighting & Sensing division, it enhances the adaptability of the illumination field. This is the first time $40 \times 40 \mu\text{m}$ LEDs have been used as pixel elements in vehicle headlamps.

With pixels smaller than 0.1° , the resolution of this illumination matrix system is 10 times more precise than conventional LED glare-free high beam systems currently on the road. Two microLED aspect ratios are available—1:4, for 25.6 kilopixels, or 1:3, giving 19.2 kilopixels.

ams OSRAM's New Eviyos 2.0 LED for ADB

LIGHTING NEWS



ams OSRAM have launched their Eviyos 2.0, a new type of intelligent multipixel LED that enables ADB and image projection. The chip's 25,600 individually-controllable LEDs with a pixel pitch of 40 μm can also project high-resolution images on to the road surface, for instance to display warning symbols to the driver or other road users, or to guide the driver past obstacles.

The design draws on multiple ams OSRAM innovations in chip design and fabrication. The 25,600 pixels are fabricated in a monolithic μLED chip array, which facilitates the achievement of exceptionally high colour and brightness uniformity.

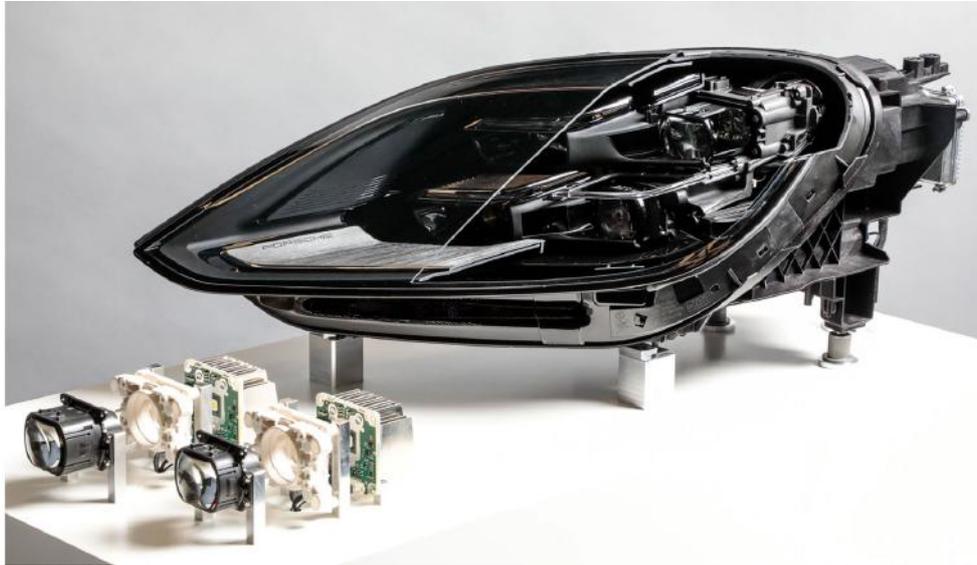
Several globally significant car manufacturers and suppliers are designing the new Eviyos 2.0 into new headlamp modules; Marelli are first to market with their new h-Digi μLED headlight module described earlier in this week's DVNewsletter.



DVN's Dr Michael Hamm (photo, left) visited the Eviyos assembly line at ams OSRAM's Regensburg facility together with Joachim Reill (Senior Application Engineering Director) and Dr. Jörg Schäfer (Site & Manufacturing Director). Watch for the writeup of Hamm's site visit, and his interview with Senior Automotive VP Wolfgang Lex, next week.

Hella, Porsche Launch First SSL HD Matrix Headlamp

LIGHTING NEWS



Hella and Porsche, have, in close cooperation with other partners, launched the world's first high-resolution, 32-kilopixel headlamp based on matrix LED technology. It's based around Hella's SSL HD digital technology, and is now available in the new Porsche Cayenne as an extra-cost option.

Hella Lighting Managing Director Yves Andres says, «Together with Porsche and our other partners, we have realised top-class lighting technology for the new Cayenne. With our digital headlamp system (...) we create the best visibility for the end user in every traffic situation. In this way, we actively increase safety in road traffic and further enhance driving comfort".

Hella's SSL HD technology, which received the prestigious CES 2023 Innovation Award at the end of last year, is an evolutionary further development and significant miniaturisation of matrix LED systems. Compared to conventional headlamps, the space required for the light module has been reduced by up to 75 per cent. In the new Porsche Cayenne, two high-resolution LED chips, not even the size of a fingernail, generate over 32,000 pixels per headlamp. The pixels are controlled by one electronic control unit for each headlamp, which Hella also developed as a system supplier. GMSL interfaces are used for the first time due to the high data volumes. In order to control two light sources per headlamp with one control unit, Hella also developed new algorithms that allow the light distribution to be calculated in real time.

On this basis, the high-resolution headlamp system realises not only further improvements to already established functions such as adaptive, glare-free high beam, but also the most sophisticated new lighting functionalities. For example, on the motorway or at narrow construction sites, the optimal lane can be projected dynamically onto the road to provide the driver with additional support in safe vehicle guidance.

ZKW Elektronik, ZKW Lichtsysteme to Merge

LIGHTING NEWS



This coming September, ZKW Elektronik and ZKW Lichtsysteme will merge into one company. The aim of the integration is to bundle the competencies of both locations, to use resources more efficiently and to accelerate decision making. ZKW Group CEO Dr. Wilhelm Steger says, "By merging the two companies, we want to exploit synergies, strengthen cooperation between the two sites, and sharpen our global electronics strategy".

The integration of ZKW Elektronik will involve some personnel changes. Mathias Koehler, previous General Plant Manager, will leave the company. Hermann Seitz will be Head of Operations and will be in charge of site management at the ZKW plant in Wiener Neustadt. He brings with him a great deal of experience; he has already held many positions at the lighting systems specialist, including General Plant Manager of the ZKW Elektronik plant there in Wiener Neustadt.

A number of positive aspects are associated with the merger. These include consolidated financial reporting, shorter decision paths, and greater resource efficiency. Dr. Steger says, "It is a common step in the industry to bundle production plants in the same country into one company. ZKW Lichtsysteme is the largest customer of the ZKW electronics plant in Wiener Neustadt. Therefore, the integration is particularly profitable".

General News

Audi, SAIC to Cooperate on EVs

GENERAL NEWS



Audi's plan to buy an electric platform in China is taking shape; they and SAIC Motor have agreed to partner on electric vehicle projects. The cooperation, coming as sales of Audi's EV products in the Chinese market fall sharply behind those of Tesla and Chinese competitors such as Nio, spotlights the pressure on all legacy and Western brands in the world's largest auto market, as they battle over EVs.



IM Motor L7 Sedan

Audi seek to take over the EV platform owned by SAIC's EV unit, IM Motors. IM Motors, which started delivery of their first model in June 2022, the L7 sedan, is a premium EV brand controlled by SAIC; investors include e-commerce giant Alibaba Group. The L7 from sub-brand IM Motors was built on an electric platform from China's automobile giant SAIC.

Audi have not bought a platform from another manufacturer before, and up to now they have used Volkswagen's EV-dedicated MEB platform for models on offer in China, while concurrently developing a new EV platform with Porsche.

Adrian Mardell is New JLR CEO

GENERAL NEWS



JLR have named Adrian Mardell as CEO for a three-year term, confirming the role he has held on an interim basis.

Mardell, an accountant, has worked for JLR for more than 30 years in financial roles. He became CFO in 2019, and was appointed interim CEO in November 2022 when Thierry Bollore left the company.

Mardell's appointment was announced last week, a day after JLR parent Tata Motors said they will open an EV battery plant in the UK to supply JLR's future battery-electric models, with the potential to also supply other automakers.

Ferrari Ex-Exec is New Alpine CEO

GENERAL NEWS



Renault have picked Philippe Krief to replace Laurent Rossi as CEO of their Alpine brand, which competes in Formula One. Renault say Rossi will now focus on "special projects linked to the transformation of the Group".

Krief is Alpine's head of engineering and product performance; before that, he worked for Ferrari as director of engineering, and also at Fiat and Maserati.

Renault Group CEO Luca de Meo, in a statement, said, "Alpine is now ready to enter a new phase of development and to become a brand of the future".