

Tue, 21 March 2023
Weekly Newsletter



NEWSLETTER #795

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



Editorial

DVN Website: Your Google For Lighting!

Driving Vision News, as you know, is the vehicle lighting and driver vision industry's journal of record which **informs** with weekly tech watch and monthly reports; **networks** high-level decisionmakers with workshops in rotating locations throughout America; Europe; China; Japan; India, and Korea; and **promotes** innovations from DVN members' companies, facilitating new relationships and strengthening existing ones through the DVN Community, to build and expand business worldwide.

Networking and promotion are very well known and widely used by DVN Gold members, but the information—the tech watch aspect—is less centred in many minds. There is an enormous amount of lighting information available on the DVN website from around 10,000 news articles and 176 reports written by some of the world's greatest lighting experts, including former R&D directors at tier-1 suppliers and automaker lighting chiefs.

Here's my suggestion to each of you 1,500 Gold members, representing 160 companies: take just ten minutes to explore the *other* benefits of the DVN website, then make it your first stop when searching on any question about vehicle lighting technology; industry; regulation; events, and experts.

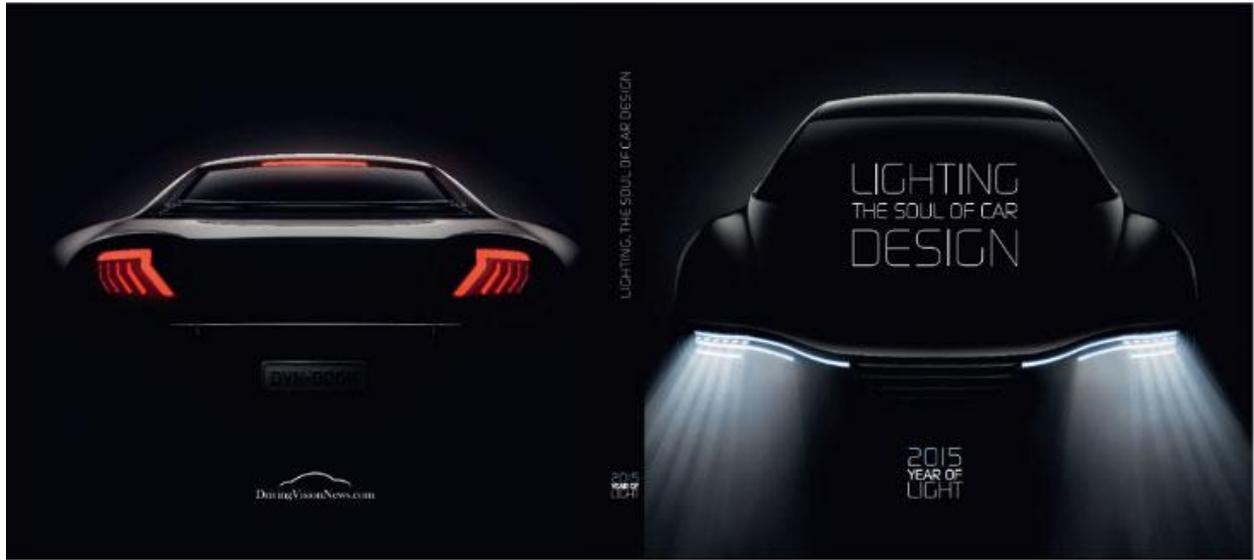
Why? Simple: DVN, with our 15-year track record, is all signal, no noise: better than Google to find out any information you might need about vehicle lighting.

Sincerely yours,

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

In Depth Lighting Technology

Explore DVN's Tools—Here's How!



The DVN lighting community comprises 1,500 Gold members from 160 companies, including around 30 carmakers; 40 lighting tier-1 suppliers; 15 light source suppliers; 60 tier-2 & -3 suppliers; universities, and research outfits. There's a giant treasure trove of relevant information waiting for you on the DVN website, including around **10,000 articles** from 800 DVNewsletters on lighting, ADAS, and the auto industry...**176 DVN Reports** on technologies; companies; regulations, and events (the next report, on universities involved in lighting, will be published next week)...**five DVN Studies** of which four on lighting and one on lidar (the 2022 DVN StudyMarket Forecast on New Lighting Systems brought a great deal of informed forecasting)...and the grand **DVN Book** published in 2015, presenting a century's worth of lighting achievements and advancements.



There's detailed coverage of the **26 DVN Workshops**, from the first one in Stuttgart with 18 attendees and no exhibitors to the 26th one in Paris with 350 attendees and 25 exhibitors (the next one's coming up in Tokyo this summer).



1ST WORKSHOP IN STUTT GART, 2009



26TH WORKSHOP IN PARIS, 2023



There's celebratory commemoration of **DVN awards** bestowed to recognise especially important contributors in the field, such as Dr Wolfgang Huhn, who was named DVN Personality of the Decade 2000-2010 in January 2011. He was honoured for his commitment to showing the importance of lighting technology for safety and design.



And Paul-Henri Matha was named DVN Personality of the Decade 2010-2020 in January 2023, for his achievements at Renault and at Volvo Cars, for his many lectures in lighting events, and his activity in regulations

These achievements have been possible by dint of the cooperative DVN team of lighting experts:

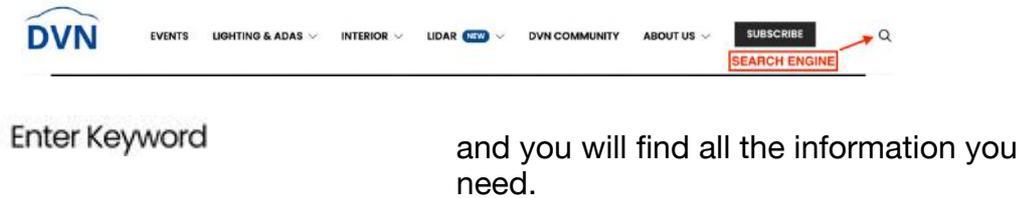
- Hector Fratty, former R&D director of Valeo Lighting Systems
- Gerd Bahnmüller, former R&D director of Automotive Lighting
- Wolfgang Huhn, former lighting and vision systems development director at Audi
- Michael Hamm, former head of headlamp development at Audi
- Jean-Paul Ravier, former research director at Valeo Lighting Systems
- Daniel Stern, one of the greatest experts in lighting in North America
- Ralf Schaefer, former R&D director at Lumileds
- Eichi Ono, former head of lighting development at Nissan

So, how best to access all this information?

Start at the DVN website, www.DrivingVisionNews.com. What to do next depends on just exactly what you're looking for, so let's look at the options:

1) Looking for info on a technology, company, regulation, event:

Use the Search engine on the right side of the navigation toolbar.

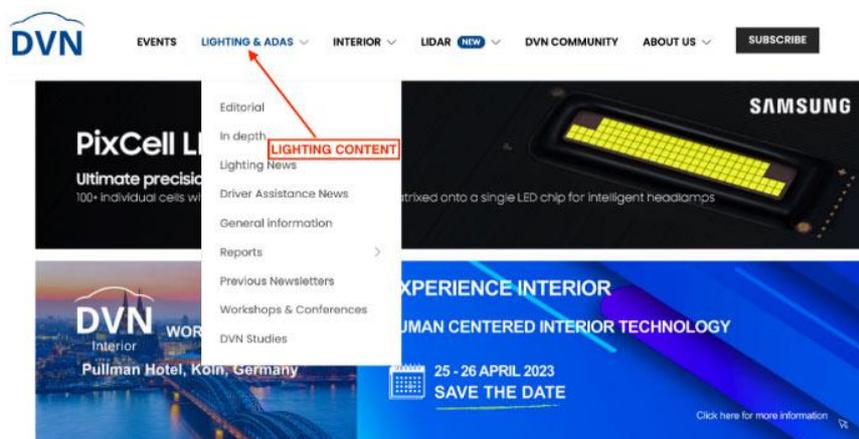


and you will find all the information you need.

then Enter the needed information in the area labelled

2) Looking for an editorial, in-depth article, lighting & DA news, DVN Report, DVNewsletter, information about a past or future DVN Workshop:

Use the "LIGHTING & ADAS" left side of the navigation toolbar



You will find all the information you need.

We are proud of the enormous amount of work DVN has done over the last decade-and-a-half, consolidating all relevant information to help the DVN lighting community. We are happy to offer you the fruits of this work, on the DVN website.

Why not try some searches right now? It's your lighting-specific search engine!

Lighting News

A Look at VW's ID.2all Concept

LIGHTING NEWS



VW's ID.2all concept, about the size of a Polo (for North American readers, that means smaller than a Golf) is among 10 new battery-electric vehicles VW plan to launch by 2026. It takes a more modern design approach than VW's first small electric car design, and this time there's a GTI model planned, as well.

The concept replaces the retro look of the 2021 concept ID.Life in favour of a more traditional design along the lines of the rest of the VW brand's cars. The production ID.2 will share DNA with another VW-branded small EV; a Cupra, and a Škoda. The four EVs will use a shortened version of the MEB electric platform, which also underpins the larger VW ID.3 and ID.4 as well as Škoda and Audi compact EVs.

Important point for lighting: the premium VW innovation IQ.LIGHT will also be available on this small car illustrating the strategy of democratization from VW.

VW say the ID.2 will launch by 2026 from less than 25,000€

Advances in Automotive MicroLEDs

LIGHTING NEWS



Last week, the European Photonics Industry Consortium (EPIC) held a conference on automotive microLEDs.

Highlights:

Volvo's lighting chief, Paul-Henri Matha, explained his company's diverse concepts for ADB. MicroLED technology, he said, is required for high-definition headlamps. Volvo offer a DLP solution with light source and micro-mirrors, and they're looking at 100-kilopixel systems for 2026.

Morphotonics's CTO, Jan Matthijs ter Meulen, presented large-area nano-imprinting for automotive applications. This technology addresses demand for nanoscale surface customisation for new visual experiences: 3D displays, antiglare treatments, HUDs, and more, as well as smaller optical products. All in all, it's about more efficient interior lighting using enhanced light management features.

Phabulous bill themselves as Europe's one-stop shop for the manufacture of free-form microoptics. They offer accelerated innovation and production cycles from prototypes to piloting and large volume production. They are now developing headlamps with Forvia Hella; interior lighting with Seisenbacher; decorative lighting with Swarovski, and displays with Microoled.

AUO's product manager, William Liu, presented on how μ LED displays such as AUO's are quickly becoming prevalent in super luxury and sports vehicles. Advantages include free form that enables new format of displays and seamless design; sunlight readability, and wide viewing angle— μ LEDs provide the largest viewing angle without banding or colour shift.

Porotech's Dr. Kunal Kashyap presented Dynamic pixel tuning (DPT), described as the ultimate solution for microdisplays. A University of Cambridge spinoff, Porotech have over 15 years' R&D experience and over 70 patents issued and pending. They created the world's first native red InGaN micro-display.



Porotech offer DPT—a paradigm shift from monolithic RGB microLED visual display (shown here), allowing a fourfold increase in pixel density. They've announced the world's first all-in-one, full-colour microLED display, which uses DPT to enable a single pixel to emit light across the entire colour spectrum. It also reduces power consumption and improves the pixel density and picture quality.

Forvia innovation manager Benjamin Willeke presented two innovations: Digital FlatLight, an innovative multicolour and multifunctional signal light system to create luminous surfaces that communicate through signature lighting; and SSL high-resolution 'intelligent' headlighting and vision systems.

Kia EV9 Has Eyecatching Lights

LIGHTING NEWS



Kia's big new EV9 electric SUV, set to go on sale later this month, has interesting lights at both ends. The taillights are an extremely homogeneous red technical-architectural structure hewing to the sculpted, rounded-rectilinear bodyside shape. It's not yet known which colour the turn signals will be on the American-spec model, but interestingly, there's no full-width red light band. Could the end of that trend be at hand?



There's an ice-cubical theme to the front lights, resonating with the overall design of the EV9, with two side-by-side columns of six little square projector lenses. The DRL has a complex shape and form, reinforcing the contours of the car itself. And here again...no full-width white light band!

Marelli Communicates on the DVN Paris Workshop

LIGHTING NEWS



MARELLI TEAM IN THE MARELLI BOOTH

“The workshop of the Driving Vision News, DVN organization, which took place in Paris as an in-person event was again a great success for Marelli.

“In addition to the booth, Marelli's Lighting Division contributed to the high quality of this event with 3 lectures. Jean-Pascal Herlin, VP R&D Lighting spoke on the topic "Evolution of lighting and sensing in the next 5 to 8 years", giving an outlook on future requirements and technologies to meet them. Ernst-Olaf Rosenhahn, Director Headlamp Innovation, presented in his talk "Digital control of front lighting functions for optimization of power consumption” Marelli's ideas on sustainability in automotive lighting. In a round table discussion entitled "The new front end", Stephan Braun, Director Lighting Innovation and Markus Meier, Head of R&D Exterior from SMP, our partner for front panels, represented Marelli's position on this important topic.

“The personal exchange within the lighting community is always very valuable for the business. Thank you for visiting us at our stand and taking the time for personal discussions and exchange about our products and services.

**“Let's co create the future of automotive lighting.
Great event.**

See you @ next DVN workshop in Tokyo in June!

<https://www.al.world/news/article/marelli-automotive-lighting-at-dvn-workshop-in-paris>

Myotek Win Biz Award

LIGHTING NEWS



Luxit Group's tier-1 division, Myotek, just won the Large Business of the Year Award from Manistee County, Michigan.

Myotek Vice President Bob Nash (photo) accepted the award on behalf of the company and the production facility, saying "Being involved with the communities that we are part of is extremely important to Myotek and our parent Luxit Group. We are grateful to be able to share this with the entire team at Manistee". The Manistee plant is a blend of three distinct manufacturing disciplines: surface mount transfer; automotive assembly, and commercial assembly.

Diverse electronic components and assemblies are produced there, and since 2019 the facility has produced millions of LED fog lamps for the automotive industry as well as LED spot Lamps for first responders, as well as conveyor drive units for delivery vehicles.

Driver Assistance News

Super Bowl Advert Blasts Tesla

DRIVER ASSISTANCE NEWS



The Super Bowl is the ultimate event in American Football, and rabidly enthusiastic fans will do (or spend) just about anything to see it. But the amount spent on seeing the show is trivial compared to the amount spent to advertise to them—up to \$7 million for a 30-second commercial last month. Mostly they're ads for soda pop and SUVs and other products and services, but one of them this time wasn't; a Silicon Valley CEO spent more than half a million dollars to publicly criticise NHTSA for doing nothing to stop Elon Musk misleading consumers about the capabilities of the 'Autopilot' and 'Full Self Driving' systems in Tesla cars. The ad, placed by software entrepreneur Dan O'Dowd under the aegis of an organisation called [The Dawn Project](#) ("Making Computers Safe for Humanity") and [viewable online](#), shows clip after video clip of Teslas getting it wrong—very wrong—and asks why NHTSA are allowing it.

American press and public reactions to the ad are polarised along predictable lines: safety advocates and researchers heartily agreeing; Tesla fans and apologists hastening to downplay or wave away the cars' misbehaviour, and analysts calling it a clear illustration of the chaos and carnage wrought by haphazard, underdone (or entirely absent) regulation of the ADAS-AD-AV technology constellation. Mr. O'Dowd seems to have a valid point; Tesla drivers openly and without irony [act as though](#) 'Autopilot' means their car is a self-driving one.

It remains to be seen whether, when, and how NHTSA might act to correct the public misinformation that a below-average L^2 driver-assist system is the same as an autonomous vehicle. More broadly, the impetus for an ad like this in the first place should give pause to everyone involved, even tangentially, and in any country, with ADAS and AD technology. Whatever one's individual views on Tesla as a car or as a company, O'Dowd's ad is unsettling when watched in context of the patchwork of minimal, uncoordinated regulation of the evolving, easily hazardous capabilities of cars to take, mistake, and abdicate decisions in the blink of an eye.

General News

Gorden Wagener, Mercedes design chief: Tech and Design *Extract from CARmagazine*

GENERAL NEWS



Chief design officer since late 2016, Gorden Wagener now oversees the aesthetics of everything Mercedes creates, from cars to showrooms, including everything digital.

“Mercedes was always a very engineering-driven company. Now it’s about two things: tech and design. That’s our definition of luxury and you can’t do it without tech because we are in a tech business, especially this decade. Cars are becoming rolling supercomputers. But tech is nothing without design. We’re moving in the right direction and keep evolving our “sensual purity” design philosophy, which makes the brand beautiful and extraordinary.’

“The focus this decade is 60% SUV, 30% limousine and 10% specialty vehicles, like sports cars or whatever. Then there are crossover possibilities in between a low limousine and a high SUV. We have done mono-volume concepts too. Back in 2015, when we showed the F 015 concept that was a totally new approach, and when I talk

to people like Apple, they said, “That’s exactly what we had in mind and is so cool” – that’s a quote – but I don’t know what they will actually come up with.’

“When it comes to increasing autonomy, it’s taken longer than we thought, but it will get better and eventually be here and then you’ll want more space in the cabin. When you’re stuck in traffic you’ll want this “third space”, neither home nor office. So do we want to have a more mono-volume vehicle that takes advantage of a better footprint?

“The next level we have already shown on the 2022 EQXX concept is full-width but one screen under one glass, rather than three screens like in the Hyperscreen. That opens up even more possibilities and use cases. We will use Unity gaming-engine software for our interface, which is almost like a jump from a Nokia to an Apple iPhone, from a two-dimensional digital world to a three-dimensional one. It’s a completely different way of programming which makes it easier to change too.