



My journey from Audi to DVN

Differences, Changes, new
Perspectives, new challenges

Agenda

My Audi Years Highlights

(very personal ..)

The Transition
New Challenges

2002, After Arrival at Audi: Creation of a Strategy

„Daytime Running Light as Brand Signature“

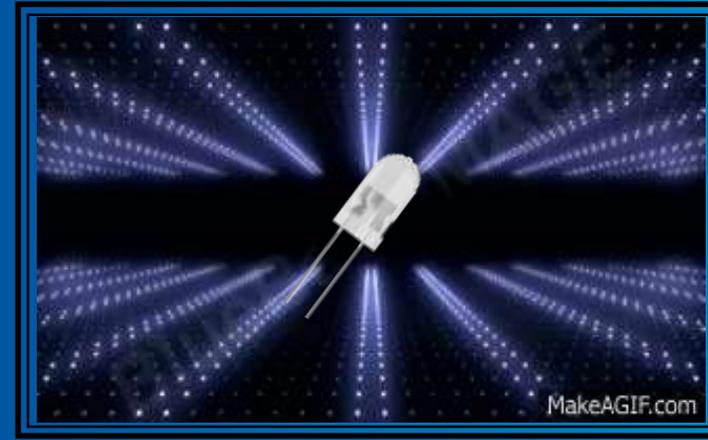


Photo out of an Audi Brand Image Film

2006, LED Era has started



Audi unveils the R8
with Full-LED-Headlamp



The Era of LED Lighting in
car headlamps has started!



Mr. Winterkorn pushes
the progress

2011, the Year of the Awards



Wolfgang Huhn ist „Man of the decade“



„Professor Ferdinand Porsche Award 2011“ of the University of Vienna

Engineers from AUDI AG und Automotive Lighting decorated

2015, Opening Ceremony for the Audi Light Tunnel



„Light Assistant Center“

- Tunnel
- Length 120 m
- Width 15 – 18 m
- Road like Surface
- Turn Table
- 10 m x 6 m Screen

- Workshops
- 2 Car Balances
- LMT GO 1400
- Measuring equipment
- Car Preparation Room
- Laser Lab
- Exercise Room

2019, Audi Lighting Team



EVOLUTION OR REVOLUTION?

1890



Incandescent

- > Point light source
- > Inefficient
- > Cheap

2004



LED

- > Point light source
- > Efficient
- > More expensive than incandescent

2016



OLED

- > Surface light source
- > Efficient
- > Expensive ?
- > USP ?

DIGITAL OLED



Digital Matrix LED headlight Functions



**Advanced Coming /
Leaving Home**



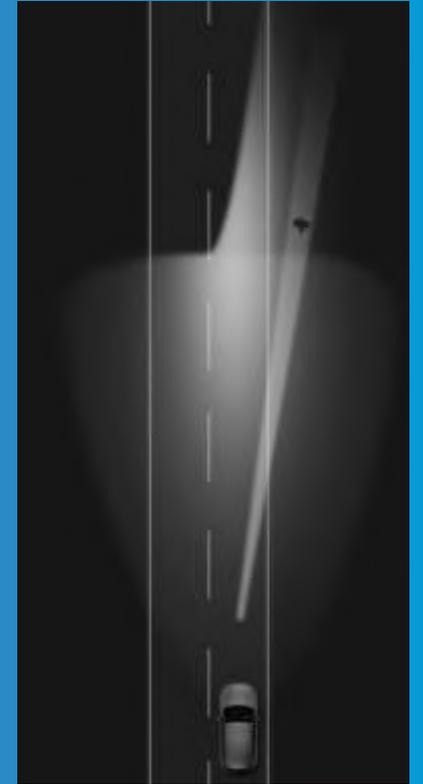
Glarefree high beam



Lane light



Orientation light



Marking light

And now?

Is the Digital Matrix LED headlight the final step in ADB?

Here my Audi Journey ends and the DVN Journey starts.

How is the future of ADB out of the DVN perspective?

Let's have a look to one of my first DVN Results:

The „Future of ADB“ Chapter of the brand new DVN ADB Report.

ADB Projects Prognosis 2026 (See brand new DVN ADB Report)

Technology	Estimated Cost [%]	Estimated Road Flux [lm]	Pixel #	Quality of Road Proj.	Power / [W]	Weight [kg] /Volume [l]
1.Mechanical	20	700	1	no	25	0.5/0.7
2. Matrix low	20	700	4 to 10	no	20	0.2/0.1
3. Matrix high	25	1000	11 to 84	no	35	0.3/0.2
4. μ LED 5	30	800	5,000	poor	0 - 55	0.4/0.3
5. μ LED 25	40	700	25,000	med	0 - 60	0.4/0.5
6. μ LED 100	50	1000	100,000	sufficient	0 - 100	0.5/0.5
7. DMD 1M	100	300	1.3 M	excellent	40 - 60	1/1
8. DMD 200k	40	300	200,000	high	30 - 50	0.5/0.5
9. Blade Scan	30	700	dynamic	med	30	0.6/0.5
10. LCD	40	700	30.000	high	50	0.7/0.7
11. MEMS	100	1000	dynamic	excellent	30	n/c

New Challenges

- Changing perspective from a relatively narrow but deep operations to much wider and less deep view
- A lot of learning!
New Technology, ADAS components and systems, Lidar, Camera, the wide field of Interior and many more I have not even discovered yet.
- Fast increase of the network
- .. and where is my secretary?

New Perspectives

Audi	DVN
Dependend on a huge Organization	Free to act
Taking Decisions, Leading a big unit, Budget of Millions of €	Commenting Decisions, no Boss / no Employees, no budget
Audi and Volkswagen Brands only	Worldwide Interests from OEM to n th tier supplier
Creating the future of one brand's lighting	Observing, Consulting, Influencing
Bringing Volkswagen group's lighting-people together	Bringing lighting-people of the world together
Keeping things secret	Distributing Information
Visiting Workshops and Conferences	Making Workshops and Conferences
Reading Newsletters, Reports and Studies	Making Newsletters, Reports and Studies

GTB (no changes)
Member of German Delegation
Chairman of Working Group Strategy

Thank You!



DrivingVisionNews.com

Automotive lighting, driver assistance and smart interior