



Automotive Exterior Lighting from Set-maker Point of View

EPIC Online Technology Meeting

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Marelli Automotive Lighting History



BOSCH **MAGNETI MARELLI**

JV of Bosch and Magneti Marelli

1999

AL **AUTOMOTIVE LIGHTING**

Automotive Lighting becomes 100% subsidiary of MM

2003

Launch of production plant in China

2006

MAGNETI MARELLI

中国兵器装备集团

Joint Venture of MM and China South Industries Group

2014

MARELLI

We are MARELLI

2019



1998

Magneti Marelli (*1919) acquires Carello (*1876)

2001

Acquisition of rear lamp supplier Seima

2005

Acquisition of Turkish supplier MAKO

2008

Joint Venture of MM and Motherson Sumi Systems in India

2018

Merger announced of Calsonic Kansei and Magneti Marelli

2019

The Brand Automotive Lighting is a Business Unit of MARELLI

Marelli Automotive Lighting



Interior Experience

Powertrain

Ride Dynamics

Thermal Solutions

Motorsport

Marelli Automotive Lighting Portfolio



HEADLAMPS

- Halogen/ Xenon lamps
- Full LED headlamps
- ADB (Adaptive Driving Beam) Full LED headlamp systems
- Matrix headlamp systems
- Laser light headlamps
- Digital light in headlamps



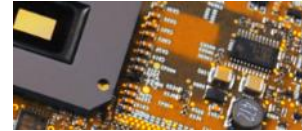
REAR LAMPS

- Full LED rear lamps
- Adaptive & dynamic rear lamp systems
- OLED rear lamps
- FOLIA LED rear lamps
- Homogeneous illuminated appliqué-lamps
- Sensor integration in rear lamps



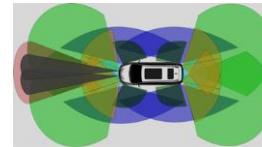
LIGHTING ELECTRONICS

- Standard LED Driver to control full LED headlamps
- Tailored drivers for matrix and laser solutions
- Driver for HD DLP & multi chip LED modules
- LED Printed Circuit Board Assembly (PCBAs) & Electronic Control Units



SENSORS

- Sensor integration
 - Radar/ Lidar/ Camera/ FIR camera/
 - Open architecture
 - Smart Corner
 - Modularity
- ADAS/AD Sensors : LiDAR



Marelli Automotive Lighting Innovation in Front Lighting

3 Examples of Successful Partnership



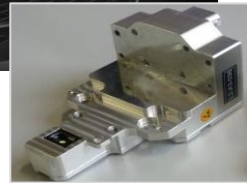
2008 – Audi R8

World Premier all LED Headlamp



2014 – Audi R8 LMX

Laser Headlamp (special edition)

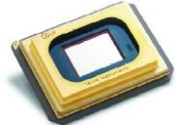


OSRAM
Opto Semiconductors



2020 – Audi e-tron

High Resolution Beam



TEXAS INSTRUMENTS

2018 – Mercedes Maybach S-class

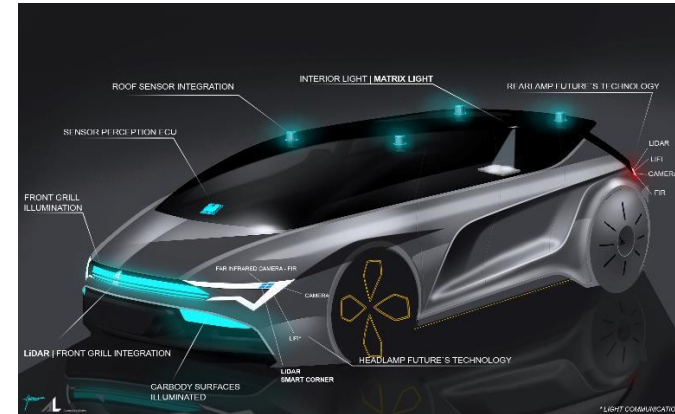
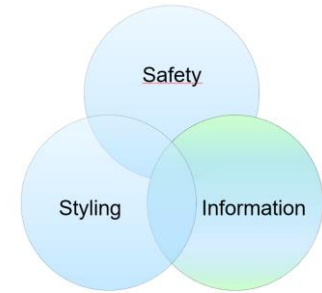
World Premier High Resolution Beam



Trends in Automotive Exterior Lighting

Macro-Trends:

- **Style vs Performance:** Headlamps and rear lamps are heavily styling driven products but performance is an important safety feature with strong legal requirements
- **New Functions:** Signaling for autonomous driving and car status signaling
- **Sensors for driving assistance/AD:** optimization of sensors' performances and sensor integration in lighting components
- **Smaller, lighter however efficient and more complex** (system integration)
- **Digitalization:** Heavy increase of software content, communication functions





Thanks!