



# Optical Fibers for Automotive applications

Benoit Reiss- VALEO LIGHTING SYSTEMS - JULY 2020  
EPIC Online Technology Meeting on Specialty Optical Fibers

Based on 2 priorities

# VALEO'S STRATEGY



## INNOVATION

CO<sub>2</sub> emissions reduction and autonomous driving for cleaner, safer and smarter mobility

## GROWTH

Reinforcement in high growth potential regions

## KEY FIGURES 2019



**19.2<sub>BN</sub>**

Total sales



**114,700**

employees



**33**

countries



**191**

Production sites



**59**

R&D centers



**15**

Distribution  
platforms

# 4 INDUSTRIAL BUSINESS GROUPS

## COMFORT & DRIVING ASSISTANCE



PAVING THE WAY  
FOR INTUITIVE  
DRIVING AND THE  
AUTONOMOUS  
CAR

## POWERTRAIN SYSTEMS



ELECTRIFICATION  
A NEW  
GROWTH DRIVER

## THERMAL SYSTEMS



THERMAL  
MANAGEMENT  
FOR ENHANCED  
COMFORT

## VISIBILITY SYSTEMS



AUGMENTED  
VISIBILITY  
FROM THE TASK  
OF DRIVING TO  
THE EXPERIENCE  
OF TRAVELING

# VISIBILITY BUSINESS GROUP ACTIVITIES

## LIGHTING SYSTEMS

### EXTERIOR LIGHTING

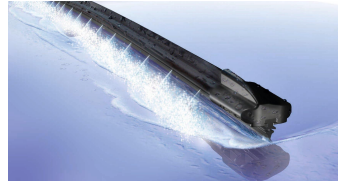


### INTERIOR LIGHTING



## WIPER SYSTEMS

### WIPER SYSTEMS



### SENSOR CLEANING



## ICHIKOH

### MIRRORS & CMS



## VISIBILITY ELECTRONICS

OPTICAL FIBERS FOR EXTERIOR LIGHTING

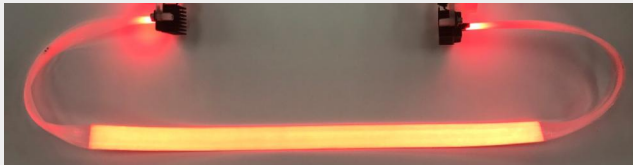
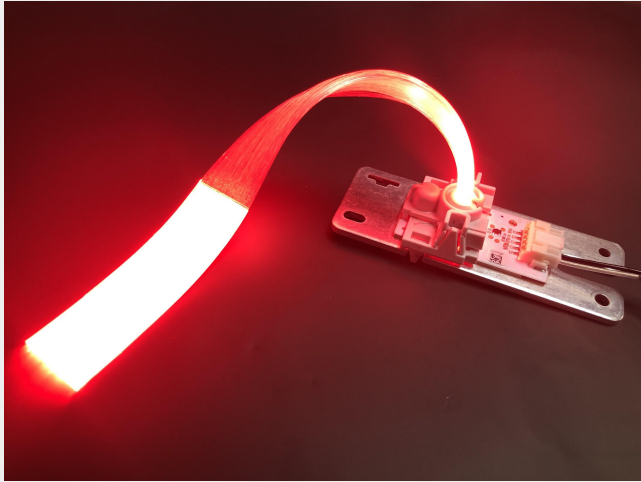
## LINCOLN AVIATOR REAR APPLIQUE

- World Premiere
- Production since May 2019
- Homogeneous & ultra thin optic
- 1.5 meters long rear lamp



## OPTICAL FIBERS FOR EXTERIOR LIGHTING

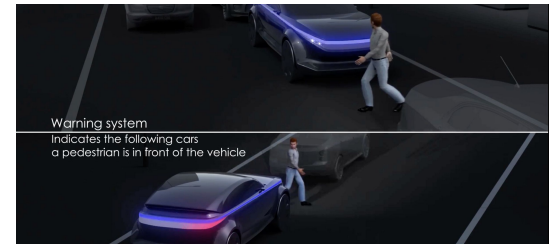
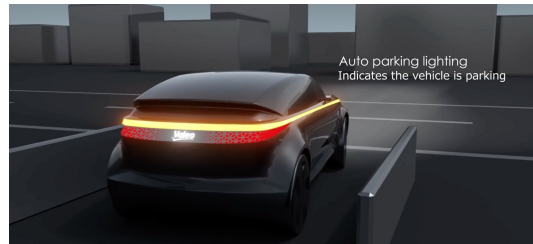
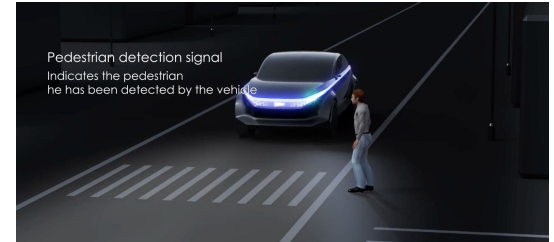
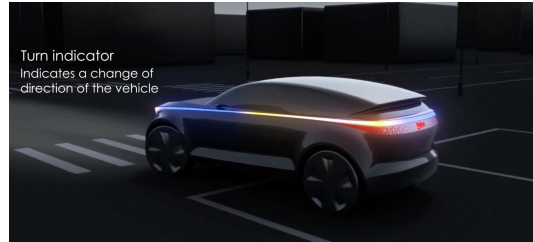
# KEY CHARACTERISTICS



Double ended construction

- 1393 x 13.8 mm<sup>2</sup>
- Light source: Osram LRH9GP
- System Efficiency : 0.63 lm/W (15x25)
- Homogeneity: > 85% MSLC
- Power consumption: 3.8 W
- Maximum intensity: 6 Cd
- Lambertian emission

# OPTICAL FIBERS FOR EXTERIOR LIGHTING





# OPTICAL FIBERS FOR INTERIOR LIGHTING





## OPTICAL FIBERS FOR AUTOMOTIVE APPLICATIONS

# SUMMARY & PERSPECTIVES

- ➔ Linear signalisation to continue around the vehicle
- ➔ Interior integration with more ambient lighting including illuminated fabrics
- ➔ Potential need also for autonomous vehicles with high speed network, up to 10 Gbits for ADAS ECUs



SMART TECHNOLOGY  
FOR SMARTER CARS