TechforGreen #4 :

Témoignage de VALEO Vision sur sa démarche d'éco-conception

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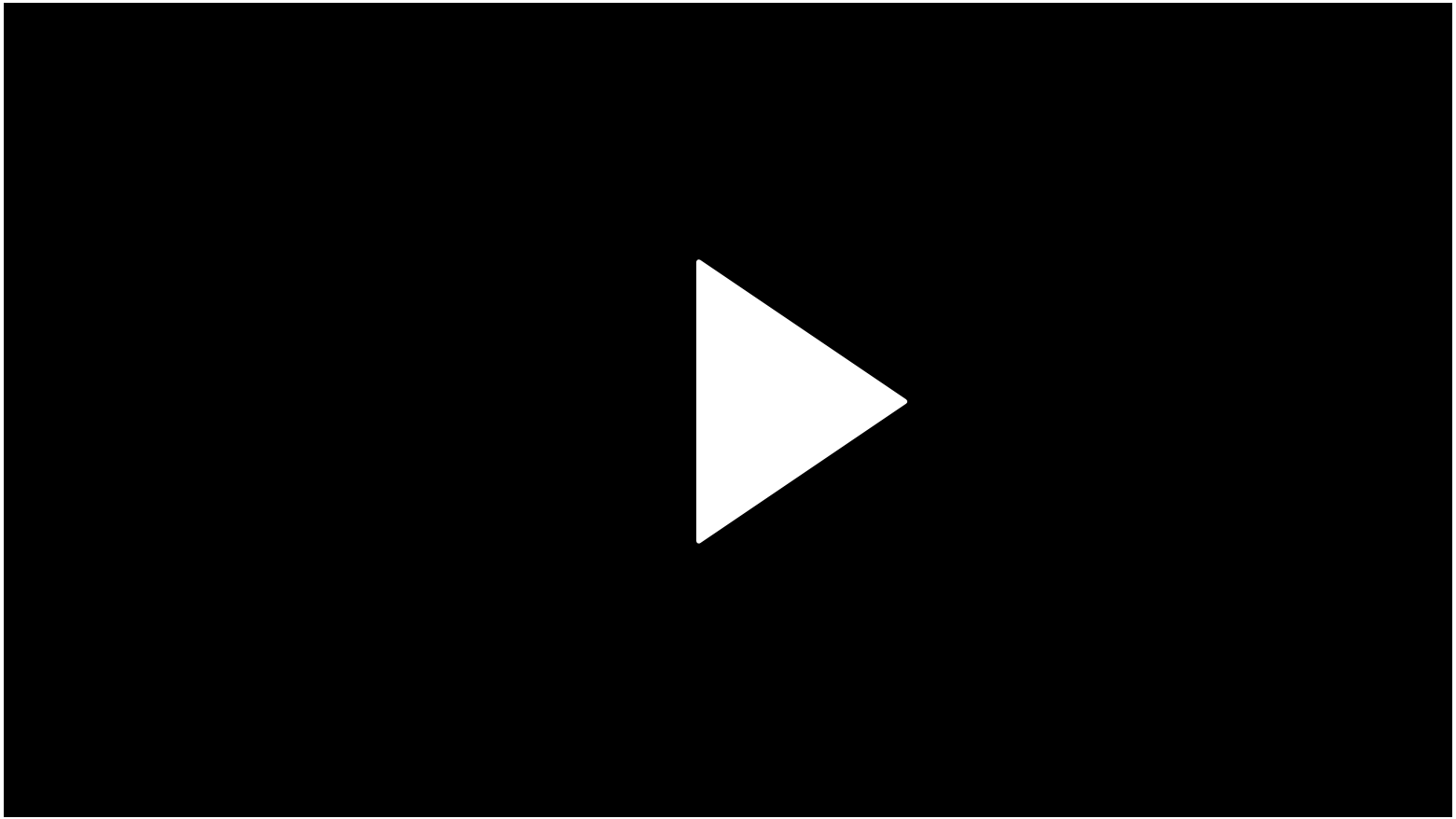
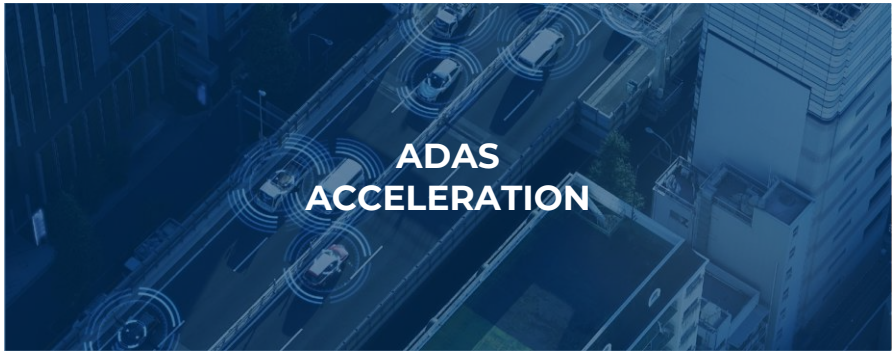
Valeo
100
YEARS
A CENTURY OF INNOVATION
TO BUILD CLEANER, SAFER AND SMARTER MOBILITY

100th Anniversary Video



VALEO'S STRATEGY
FROM MOBILITY REVOLUTION TO VALUE CREATION



KEY FIGURES

20.0BN
TOTAL SALES

109,900
EMPLOYEES

29
COUNTRIES

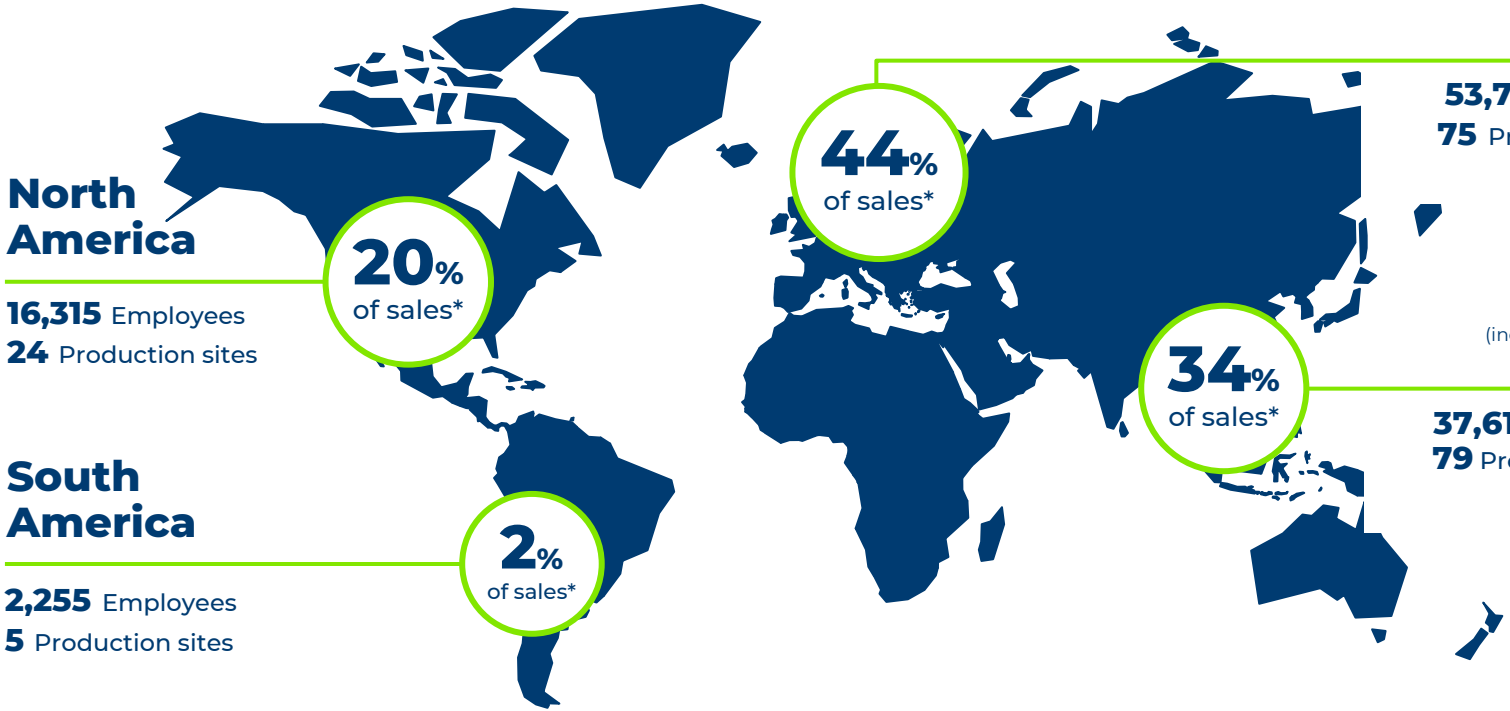
183
PRODUCTION SITES

65
R&D CENTERS

18
DISTRIBUTION PLATFORMS

All figures at end 2022

A BALANCED WORLDWIDE PRESENCE



North America

20% of sales*

16,315 Employees
24 Production sites

South America

2% of sales*

2,255 Employees
5 Production sites

Europe

(incl. Africa)

44% of sales*

53,716 Employees
75 Production sites

Asia

(incl. the Middle East & Oceania)

34% of sales*

37,614 Employees
79 Production sites

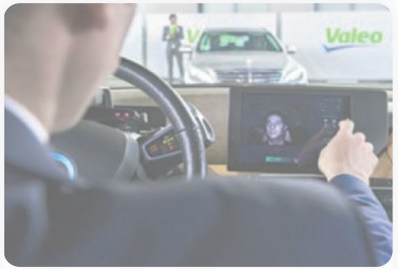
Valeo's
4 business groups

COMFORT & DRIVING ASSISTANCE SYSTEMS

Making driving safer, more autonomous and better connected through perception systems and artificial intelligence. Providing reinvented mobility solutions and human-machine interfaces. Resulting in an innovative user experience.

POWERTRAIN SYSTEMS

Developing comprehensive, integrated electric powertrain solutions for all vehicle categories, from small urban cars to premium sedans,and technologies to make internal combustion engines cleaner.



THERMAL SYSTEMS

Reducing pollutant emissions from internal combustion engines, optimizing the driving range and battery life of hybrid and electric vehicles, and improving comfort and well-being for passengers in the cabin.

VISIBILITY SYSTEMS

Designing and producing innovative and efficient lighting, wiping and washing systems for safer, more comfortable manual driving and for improved and enhanced visibility in autonomous vehicles.

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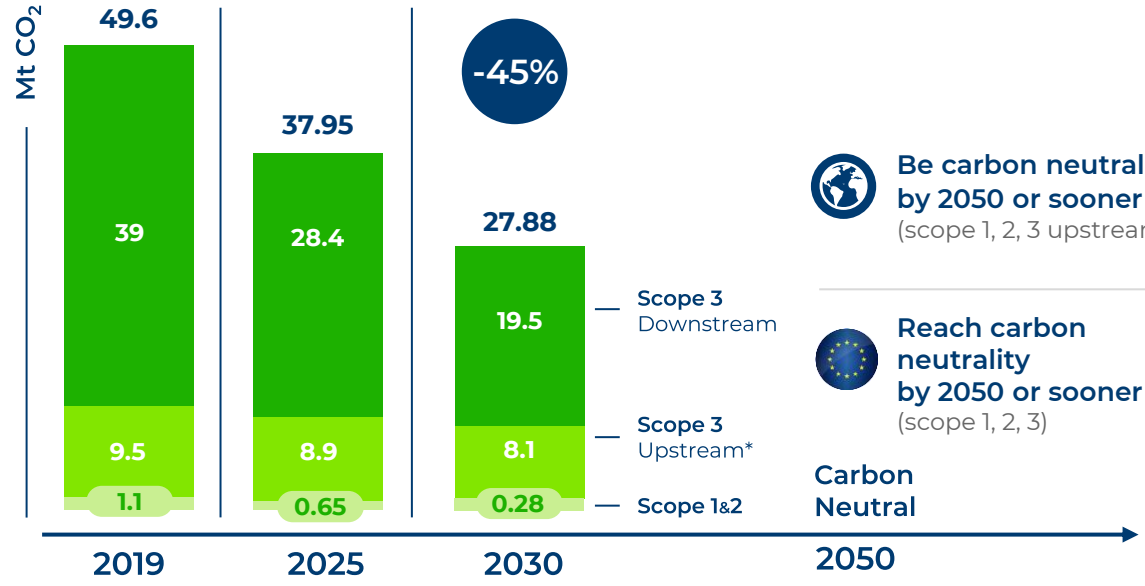
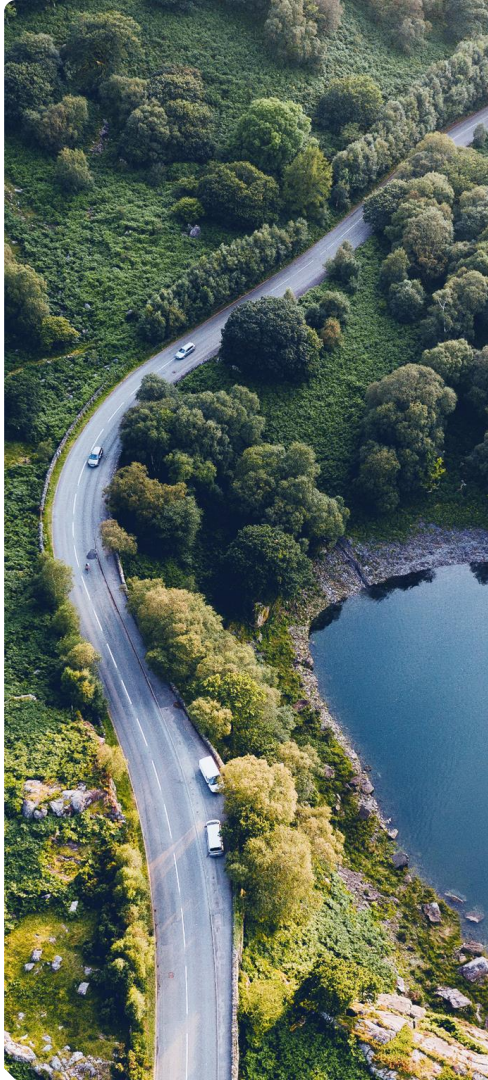
GROUP VALEO

Valeo will go carbon neutral by 2050 - 45% achieved in 2030



*2019 Scope 3 upstream includes: Raw Material (9.1Mt) / Employees travel & Upstream logistics (0.4Mt)



GROUP VALEO

SUSTAINABILITY IS IN OUR DNA

Benchmark in our industry

SAM Now a Part of S&P Global — N°1*

MSCI ESG RATINGS AAA (CCC B BB BBB A AA AAA) — N°1

ISS ESG ethix • climate • oekom — N°1*

Corporate Knights — N°1

CDP DISCLOSURE INSIGHT ACTION A LIST 2020 CLIMATE

SUSTAINALYTICS a Morningstar company — N°1

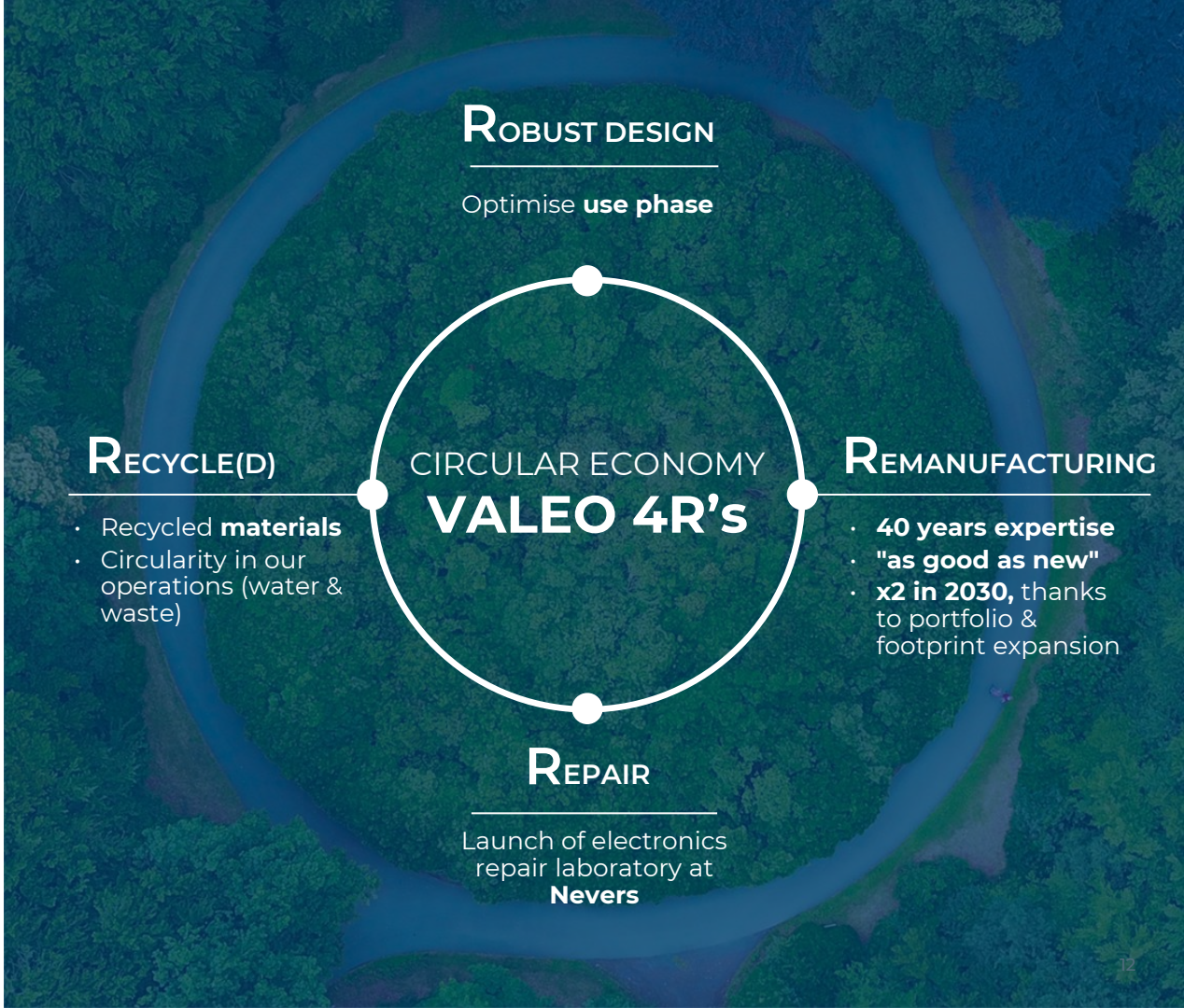
MOST REPRESENTED SUPPLIER* IN ESG INDICES INCLUDING

- EURONEXT CAC40 ESG
- STOXX Global ESG Leaders
- FTSE4Good
- MSCI ESG Leaders

* excl. Tyres companies

RESPONSIBLE CONSUMPTION & PRODUCTION

We contribute to the **circular economy**, ensuring that our technologies are in line with the four fundamental aspects of circularity, or **4 “R”s**.



Visibility Systems

We are contributing…

① LOWER CONSUMPTION

② WEIGHT SAVING

To CO_2 reduction

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Visibility Systems

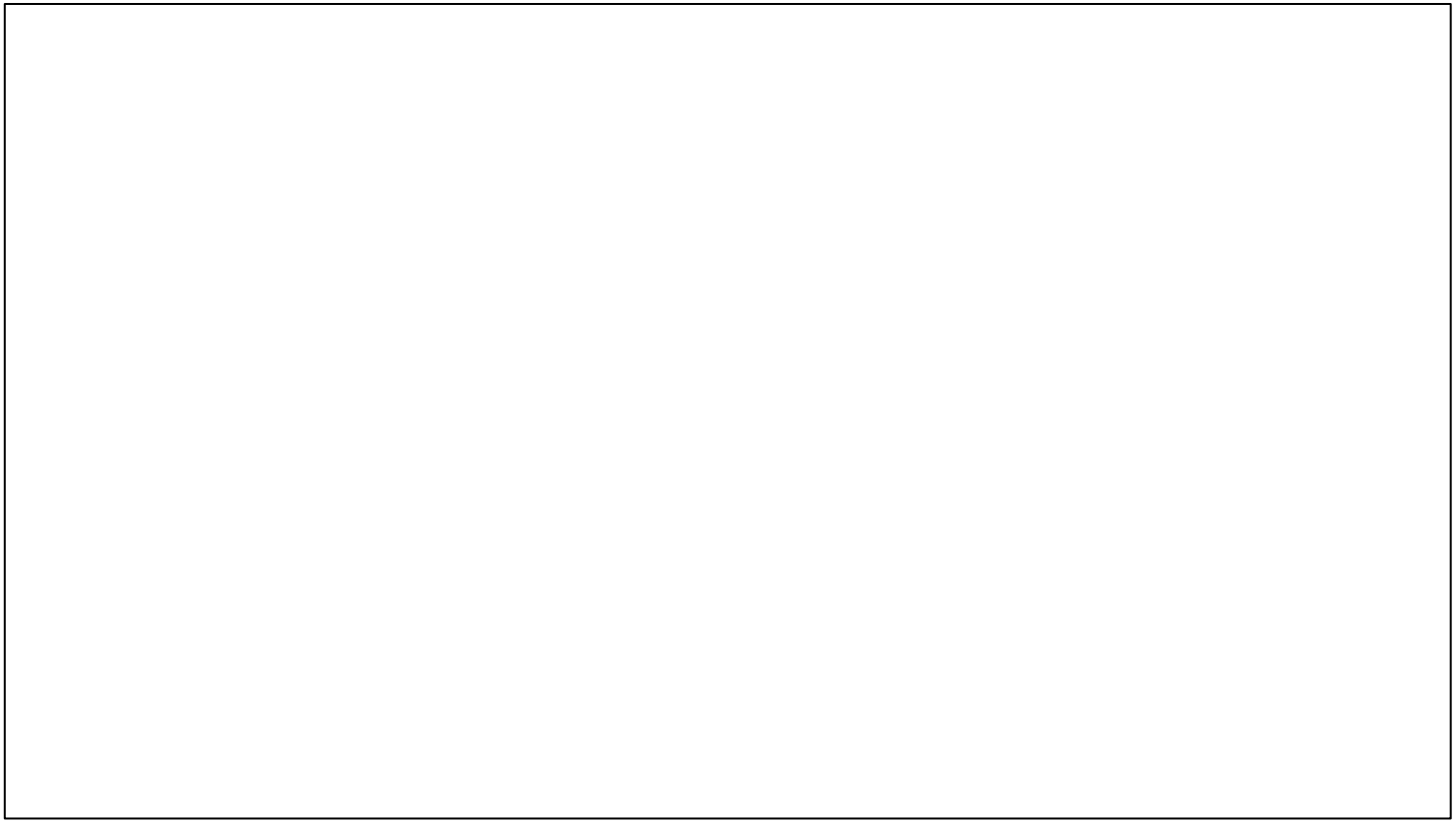
GLOBAL SYSTEM & LIGHTING FUNCTIONS

ELECTRONICS

LIGHTING FUNCTIONS

Visibility Systems

HEADLAMP EXPLODED VIEW



HEADLAMP: 4 MAINS ITEMS

Main Plastics Parts

Signaling System

Electronic controllers

Lighting Modules

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LIGHTING MODULE : THINLENS GEN1

LOW BEAM

Lens height size: **30** mm

Power consumption: 40 W

Flux: 900 lm

Maxi: 55 Lux

Active cooling

MATRIX BEAM

Lens height size: **30** mm

Power consumption: 63 W

Flux: 1000 lm

Maxi: 110 Lux - 24 segments

Active cooling

LIGHTING MODULE : ULTRA THINLENS

LOW BEAM

Lens height size: **15** mm

Power consumption: 20 W

Flux: 850 lm

Maxi: 55 Lux

Passive cooling

MATRIX BEAM

Lens height size: **15** mm

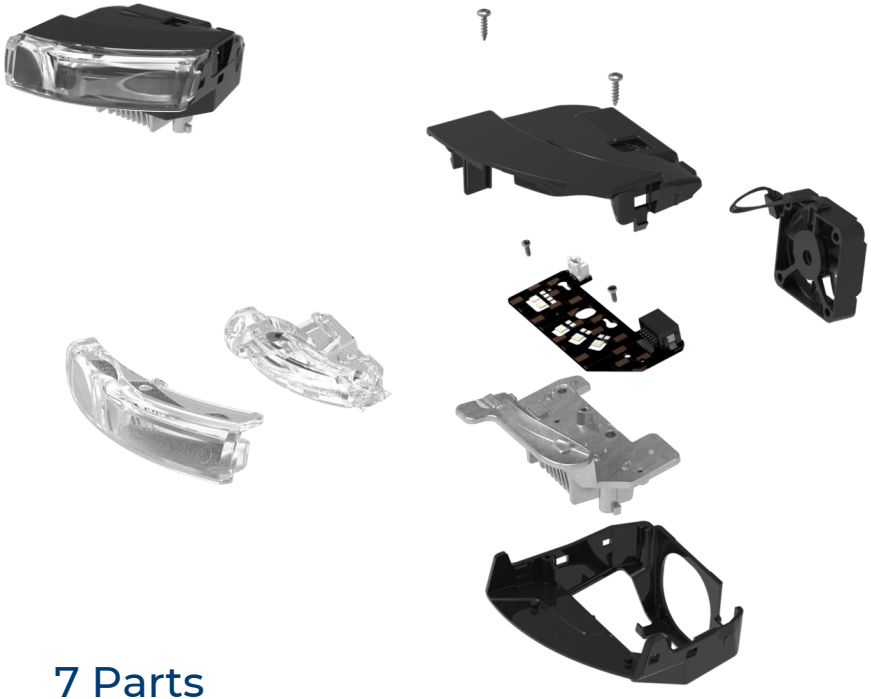
Power consumption: 39 W

Flux: 1000 lm

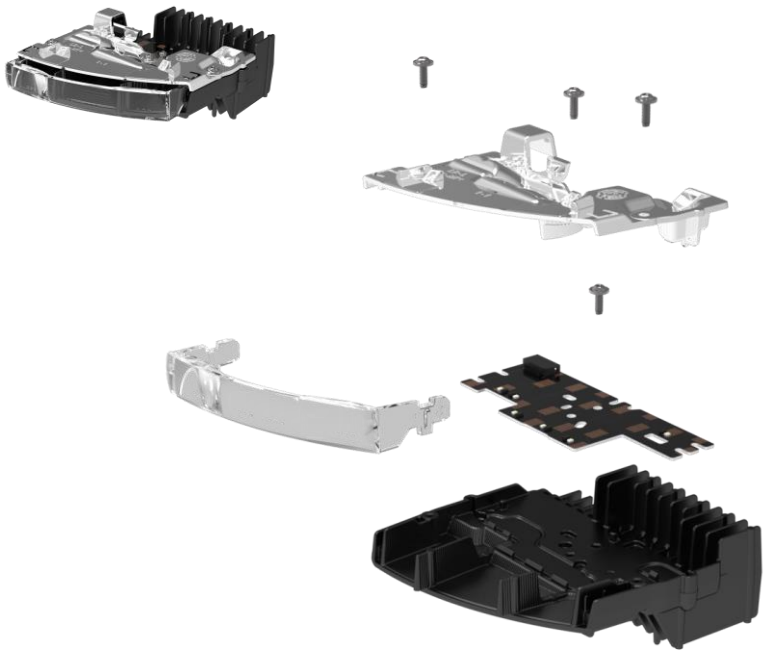
Maxi: 110 Lux - 20 segments

Active cooling

LOW BEAM COMPARISON: A MINIMALIST BOM



7 Parts

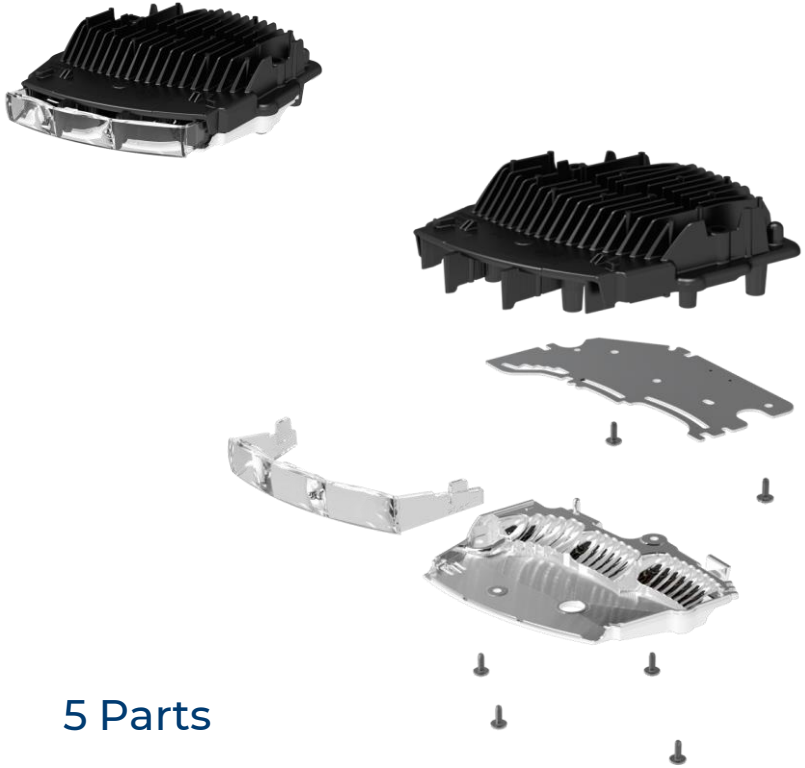


4 Parts

Visibility Systems

MATRIX BEAM COMPARISON: A MINIMALIST BOM

20 Parts



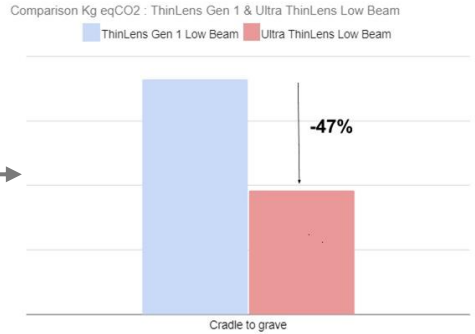
5 Parts

CO2 PERSPECTIVE: CRADLE TO GRAVE

Low Beam

ThinLens Gen 1

Ultra ThinLens



Weight : 270g
270g

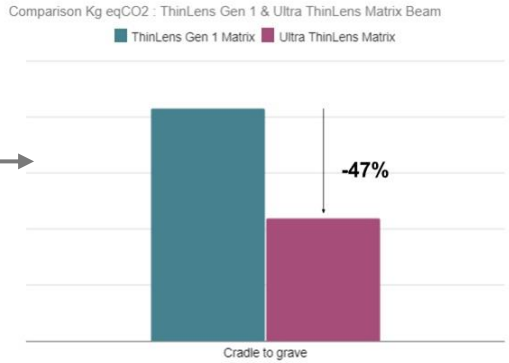
BOM : 7
4

Consumption : 40W
20W

Matrix Beam

ThinLens Gen 1

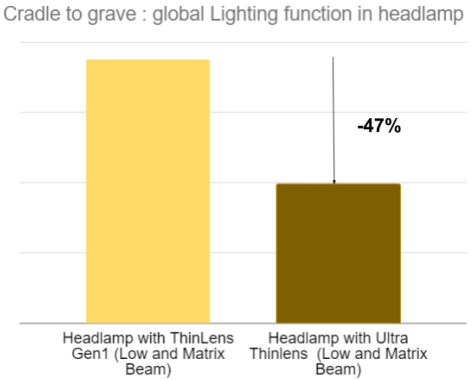
Ultra ThinLens



Weight : 480g
330g

BOM : 20
5

Consumption : 63W
39W



C02 reduction Gain : 47%

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Visibility Systems

SCOPE 3 UPSTREAM

① REDUCED BOM

OPTICS PATENTS

LESS PARTS

ELECTRONICS & OPTICS SIMULTANEOUS ENGINEERING

PROCESS OPPORTUNITIES

② FOCUS ON MATERIAL

BIO MATERIAL

RECYCLED MATERIAL

ELECTRONIC BOARD IMS

SCOPE 3 DOWNSTREAM

① LOWER CONSUMPTION

1 g.CO_2 / km

V.s. halogen

Optical efficiency	Smart signaling design	Global power saving
65%	**-30%**	**50%**

Halogen	LED today	LED 2026
65 W	**20 W**	**10 W**

Minimum electric consumption of a Low beam (per side)

② WEIGHT SAVING

0,1 g.CO_2 / km

from current design

Weight reduction of the wiper system	Weight reduction of liquid
-400g	**-0.5Kg**

2011	Today	2026
7.4Kg	**3.7Kg**	**2.8Kg**

Average weight of a wiper/cleaner system

SMART TECHNOLOGY
FOR SMARTER MOBILITY