

From Design to Production: Cielie-Tronics srl Automotive Lighting Expertise





CIELLE-TRONICS S.r.l.

Offices : Via Grange Palmero 131
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E-mail : luigi.clinco@cielle-tronics.it

Since 2013, Cielle-Tronics S.r.l. has been at the center of automotive and general lighting innovation. We specialize in 3D lighting systems, optics, and automotive PCB design. Our staff, based in Rivoli, Italy, is ready to compete on a global scale. We strive for inventive and effective ways to bring your lighting ideas to life, from design to manufacturing.

Our sales turnover in 2023 : €2,450,000
Our expected sales turnover in 2024 : €3,600,000

Total Employed workers in 2024 : 30
Total Employed workers in 2025 : 50



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New 5,000 sq m Facility - Fully Operational from 2025

The 1st floor features a 6-meter-high production area equipped with 4 overhead cranes but lacks a driveway door. The 2nd floor comprises a 4-meter-high production area with 7 overhead cranes, representative offices, and accommodation for the caretaker. The external area is fenced and includes three driveway gates.



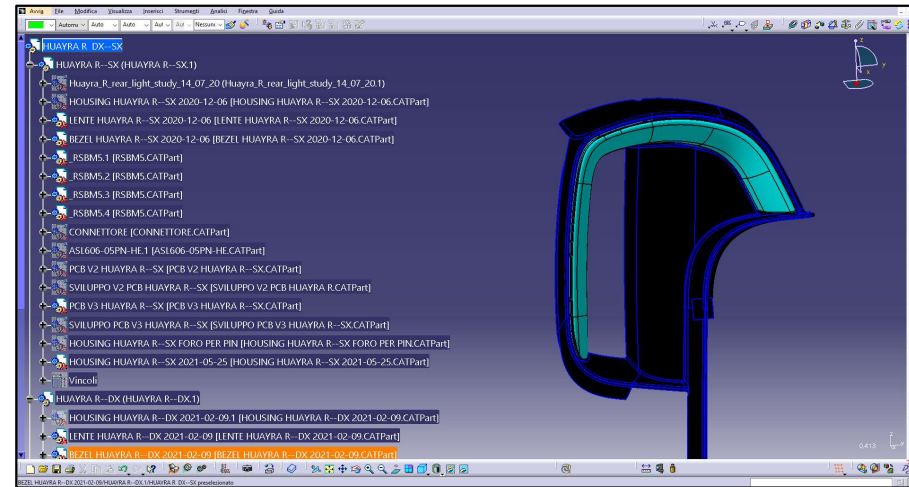
Your One-Stop Solution for Automotive Lighting and Electronics

- **Project Development**
- **Mechanical Engineering for Automotive and General Lighting Applications**
- **Optical Design with Proprietary Validation System**
- **Electronic PCB Development and Production**
- **Customized and Tailor made light for Cars**
- **Testing and Validation**
- **Homologation Testing**

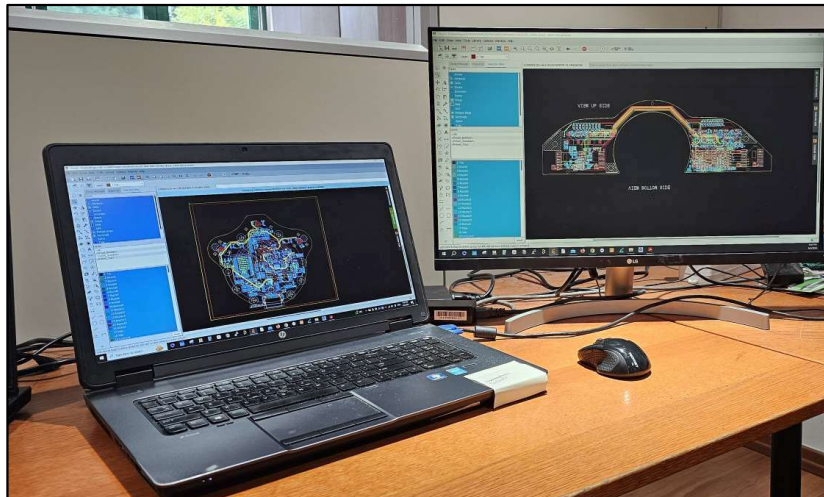
Our Services

- **Complete Light Device Production for small and high Series Manufacturing**
- **Preliminary Design Studies for all Lighting Devices**
- **End-to-End Prototype Development for Automotive Lighting and Electronic Systems**
- **Advanced mechanical Simulation Services for Lighting Solutions**
- **Electronic Board Design and Production**

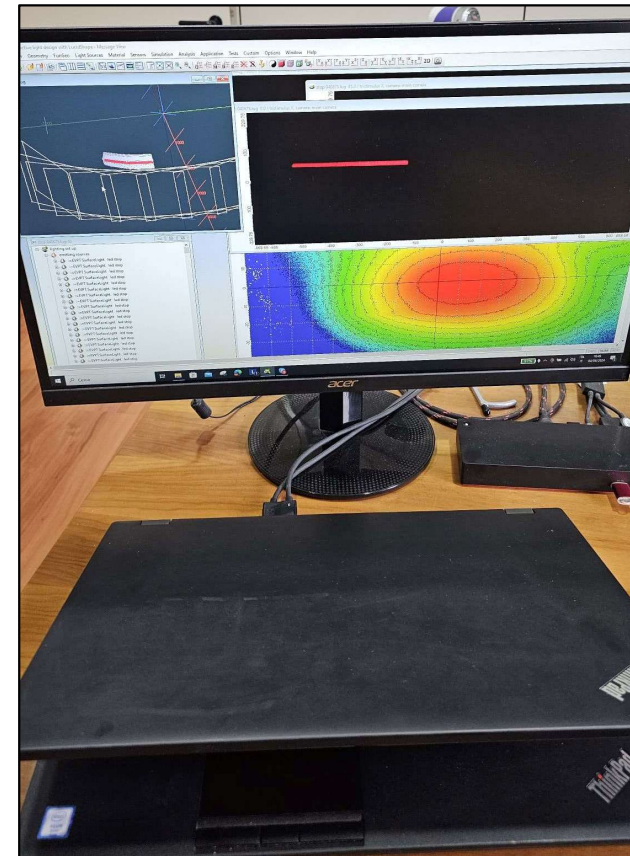
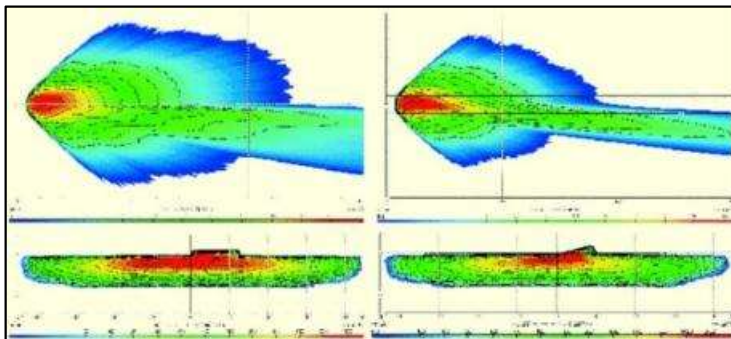
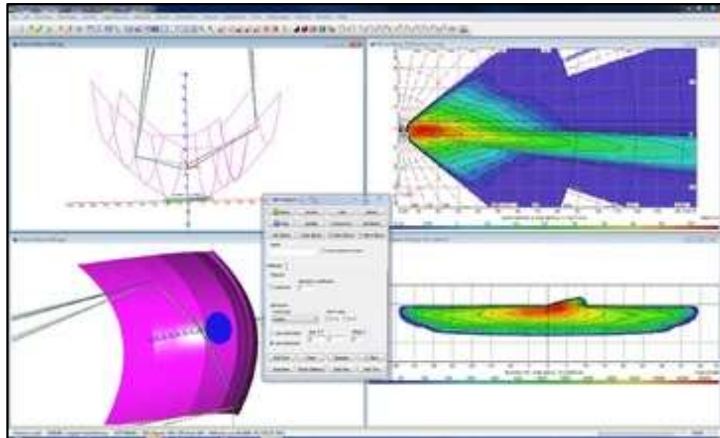
- CATIA V5 (all releases) for 3d conception and Design.



- AUTODESK FUSION 360 for Electronic design and rendering



- Lucidshape For Optical Simulation



- Thermal and Mechanical simulations with Ansys Workbench.
- We have one person in Italy and a small office in Turkey with five employees

Our competencies

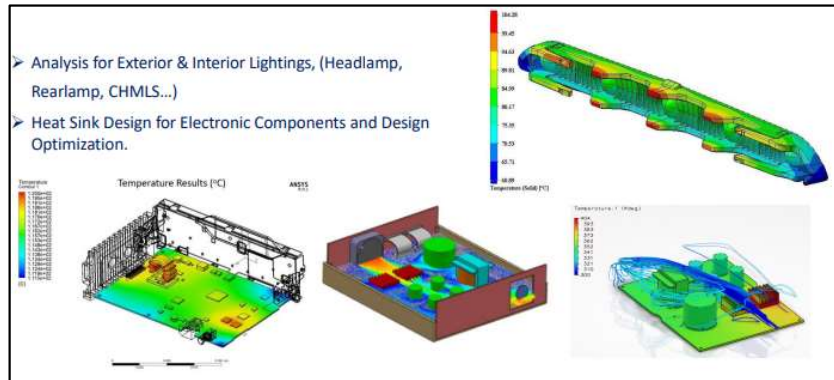
We have an all simulation capabilities for vehicles, motorbikes, coaches (trams), trains, etc

- CFD Simulations: Thermal, Condensation, Combustion, Aerodynamic, HVAC, Inlet-Outlet-Mixed Flows, Electronic Cooling, Fan & Pump Performance, Multiphase, Battery Thermal Analysis (Charge- Discharge)...etc..
- Structural (FEA) Simulations (Vibration, Shock, Device Restrict, Snap Fit, Fatigue, etc.)
- Fluid-Solid Interface Simulations
- Mold Design and Flow Simulations
- Fixture and Apparatus Design

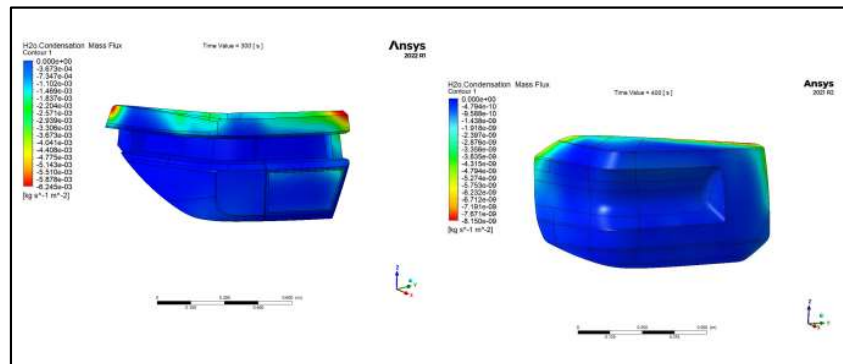
CFD Simulations

- | | |
|----------------------------|--|
| ➤ Thermal | ➤ Fan & Pump Performance |
| ➤ Combustion | ➤ Multiphase |
| ➤ HVAC | ➤ Aerodynamic |
| ➤ Inlet-Outlet-Mixed Flows | ➤ Condensation |
| ➤ Electronic Cooling | ➤ Battery Thermal Analysis (Charge- Discharge) |

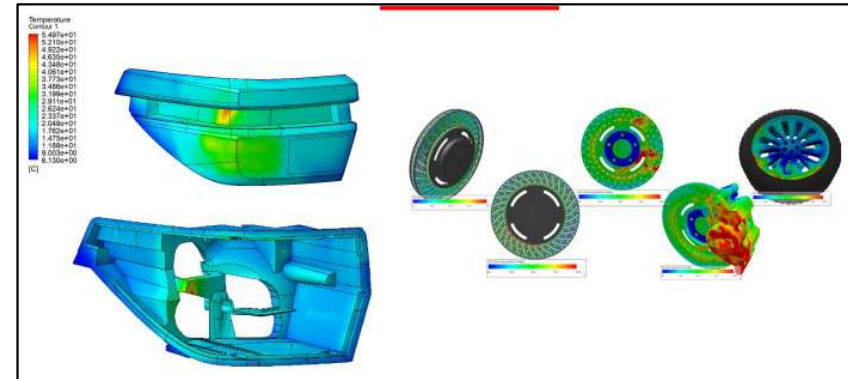
-Electronic cooling simulation examples



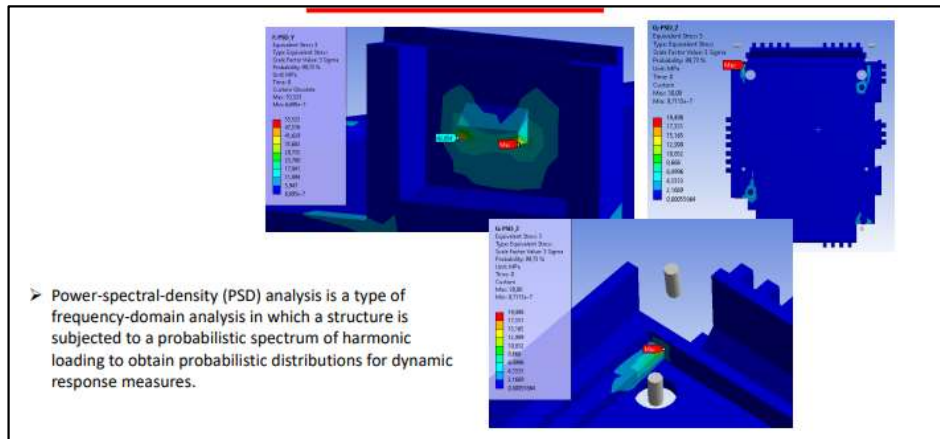
-Condensation simulation examples



-Thermal simulation examples



-Random Vibration analysis



AUTOMOTIVE PROJECT



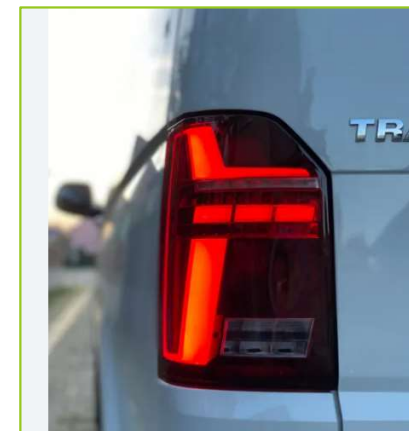
**New rear lamp
Continental Benley**



**Side marker
Lamborghini
Centenario**



**Lamborghini SC20
headlamp**



**VW T6 REAR
LAMP FULL
LED**



**New CHSML
Porsche Boxter 983**

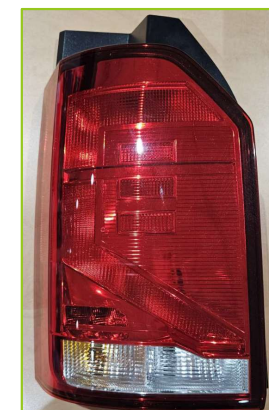


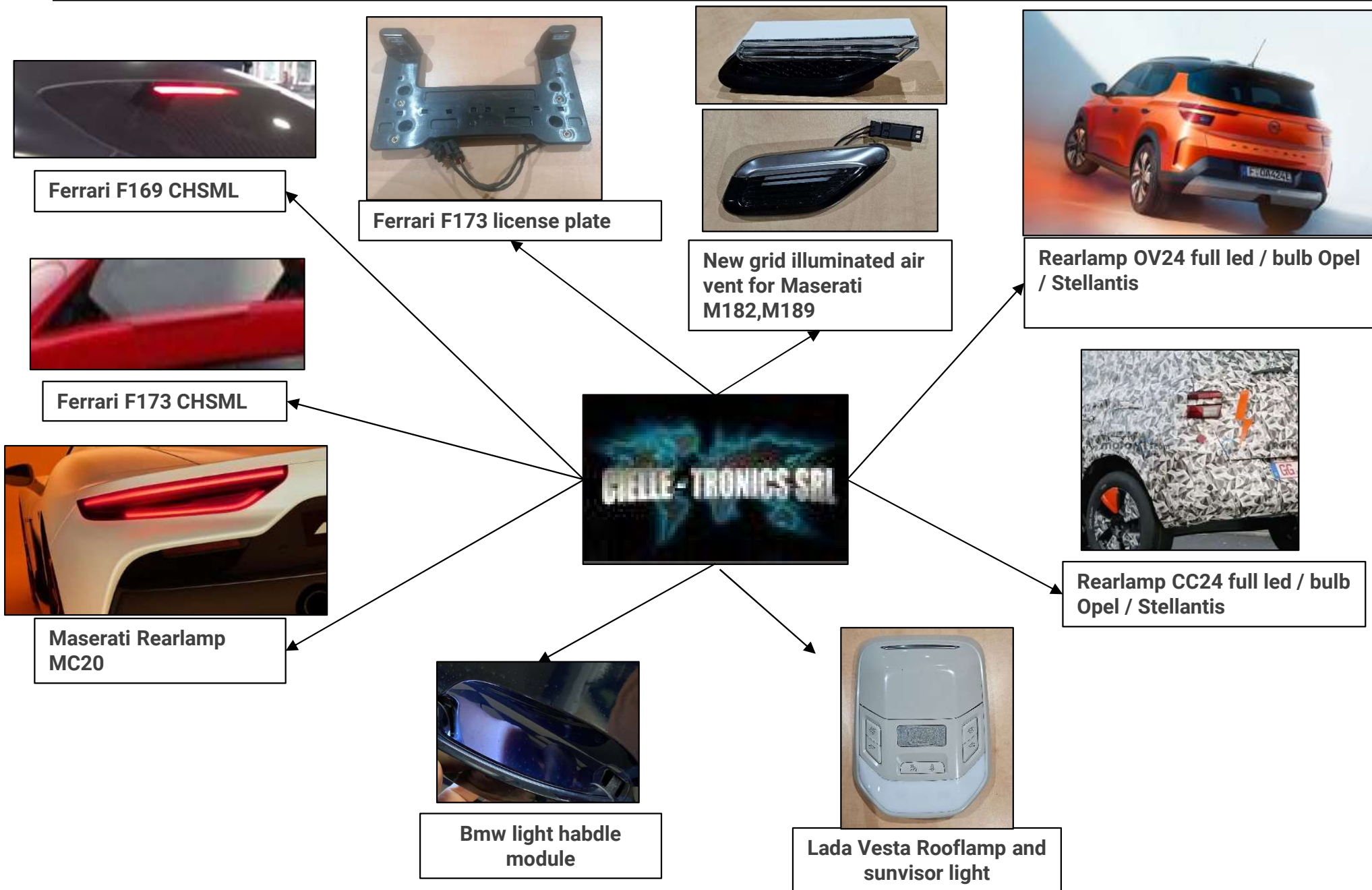
**Door light handle
Minebea**



**Door light handle
Minebea**

**VW T6 Rear
Lamp With
Bulbs**





**Aston Martin side mirror blinker
under patent for specific
homologation kinds in all position
(15000 kits/year)**



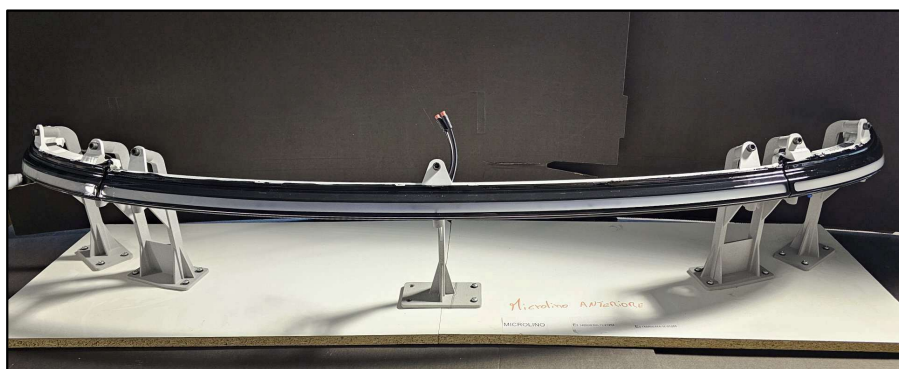
**Aston Martin side mirror
bsd
(15000 kit/year)**



**Mclaren side mirror bsd
(5000 kit/year)**



**Microlino front bar (position,turn
indicator) for 6000 cars yearly**



**Microlino rear bar (position,turn
indicator,stop) For 6000 cars yearly**



KIMERA EVO37/EVO38 Headlamp (37 kits/year)



KIMERA EVO 37/EVO38 Rearlamp (37 kits/year)



Maserati Rearlamp MCXTREMA rearlamp and frontlamp (60 kits/year)



Pagani HUAYRA R rearlamp and frontlamp (50 kits/year)



BERTONE GB110



BERTONE GB110

Rear lamp : stop,tail ,turn



ARES S1



ARES S1

Rear lamp : stop,tail,turn



Front lamp : drl,position,turn,highbeam,lowbeam



DIABLO ECCENTRICA RESTOMOD



DIABLO ECCENTRICA RESTOMOD

Front Drl/position/Turn and front fog all integrated in small space and side turn indicator



KIMERA EVO 38

New headlamp- Highbeam, Lowbeam, Turn, DRL & Position



New rearlamp – stop,tail,turn



Bugatti-Rimac BR1



Side Markers, Rear reflex, Rear
fog/reverse

PORSCHE 928 RESTOMOD



PORSCHE 928 RESTOMOD



Hight beam/low beam drl



Front indicator



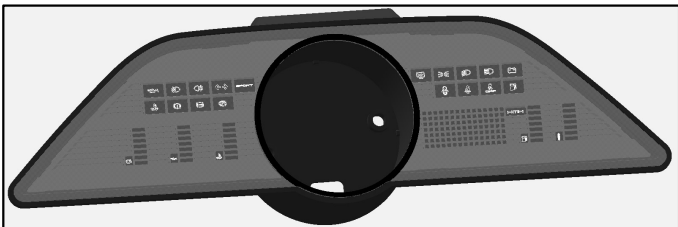
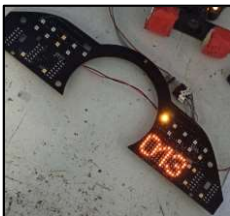
Front high beam auxiliary



Front Drl / position



Rearlight tail/stop/turn



Dashboard /cluster

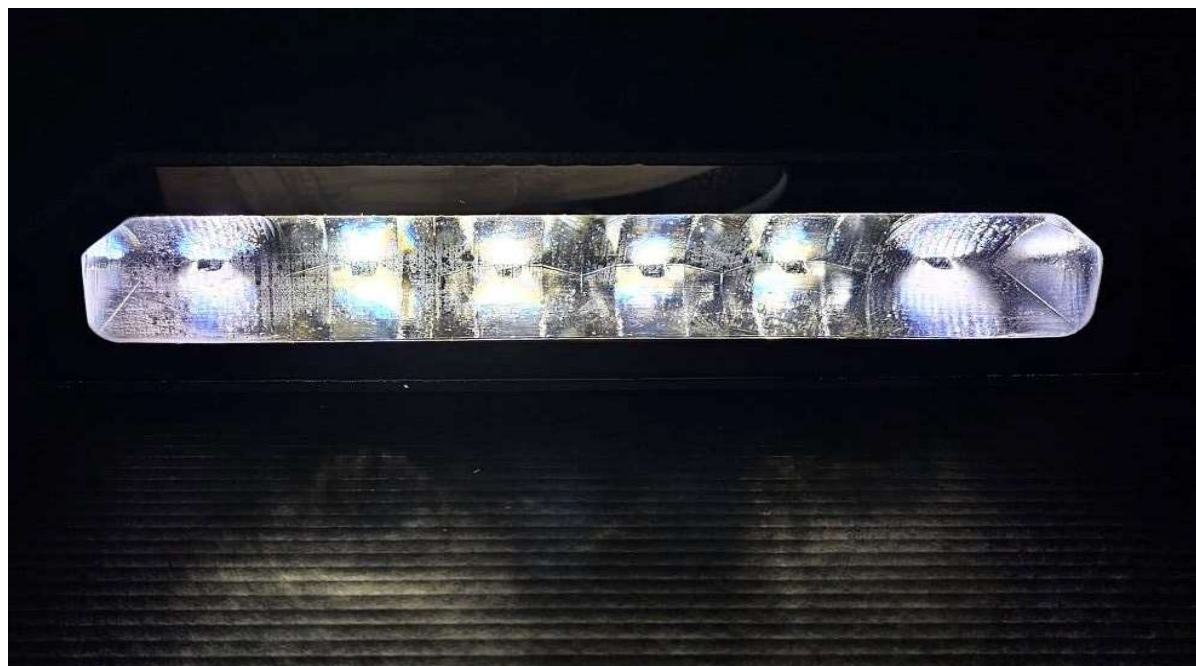


LIGHT RAILWAY PROJECT AS REAL STUDY WITH APPLIED AUTOMOTIVE THECNOLOGY

Advantage :

- **Low power consupction**
- **IP67 also without maintenance**
- **Very good light distribution and more high visibility in all condition**
- **Long life product**
- **Optimal Thermal dissipation**
- **New Aesthetical thechnology and performance**

UPPER HIGHBEAM AND POSITION WITH CALCULATED OPTICS



FRONT AND REAR LAMP TRAIN WITH CALCULATED OPTICS



FRONT TRAM AND BUS WITH CALCULATED OPTICS HIGH BEAM/LOW BEAM/DRL/POSITION/TURN

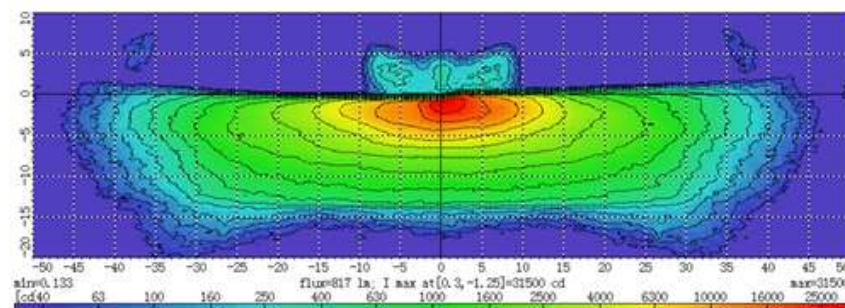


Photometric performance high beam/low beam regulation ECE 148

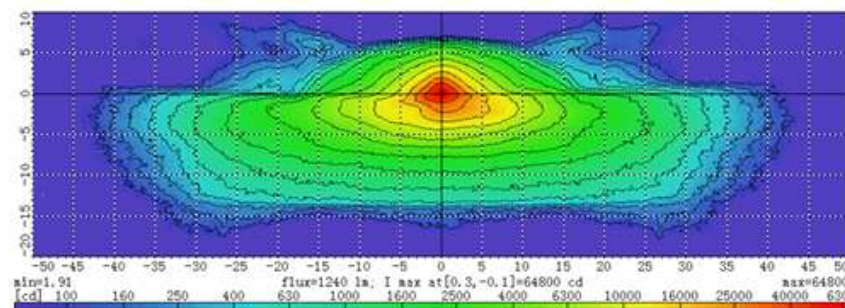
Light distribution for simulation (Base on 950mA@Ta=25 C):

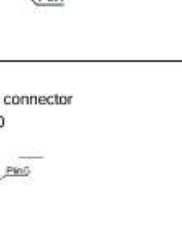
Light distribution considered 15% loss from outer lens in simulation:

Low beam



High beam



7.2	Dimension(length*width*height)	150mm*103mm*83mm														
7.3	Weight	~430g														
8 Electronic system																
8.1 Connector information																
High Beam----Match connector Molex: 505151-0200 <table border="1"> <thead> <tr> <th>HB connector</th><th>Pin</th><th>Pin define</th></tr> </thead> <tbody> <tr> <td rowspan="2">505151-0200</td><td>1</td><td>HB-K</td></tr> <tr> <td>2</td><td>HB-A</td></tr> </tbody> </table>  HB connector		HB connector	Pin	Pin define	505151-0200	1	HB-K	2	HB-A	2 pin 						
HB connector	Pin	Pin define														
505151-0200	1	HB-K														
	2	HB-A														
Low Beam----Match connector Molex: 505151-0500  LB connector <table border="1"> <thead> <tr> <th>LB connector</th><th>Pin</th><th>Pin define</th></tr> </thead> <tbody> <tr> <td rowspan="5">505151-0500</td><td>1</td><td>SW</td></tr> <tr> <td>2</td><td>80HND</td></tr> <tr> <td>3</td><td>NILC</td></tr> <tr> <td>4</td><td>LB-K</td></tr> <tr> <td>5</td><td>LB-A</td></tr> </tbody> </table>		LB connector	Pin	Pin define	505151-0500	1	SW	2	80HND	3	NILC	4	LB-K	5	LB-A	5 pin 
LB connector	Pin	Pin define														
505151-0500	1	SW														
	2	80HND														
	3	NILC														
	4	LB-K														
	5	LB-A														

Electronic PCB engineering and production

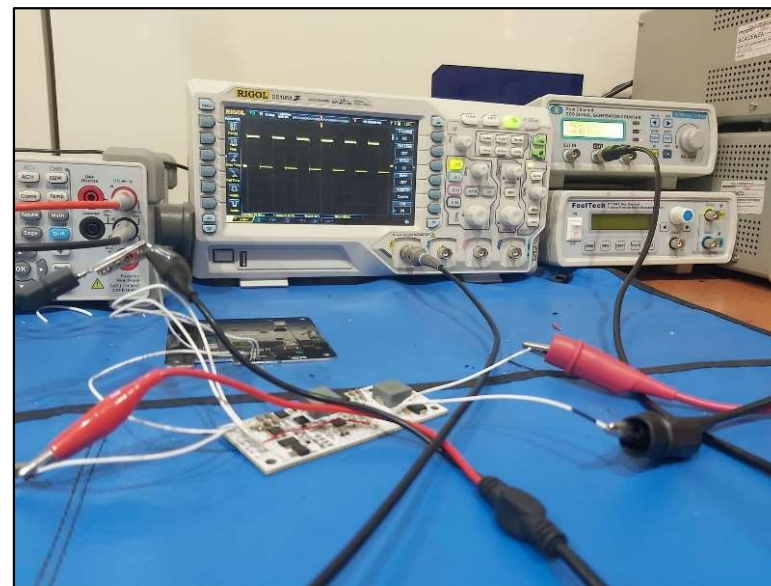
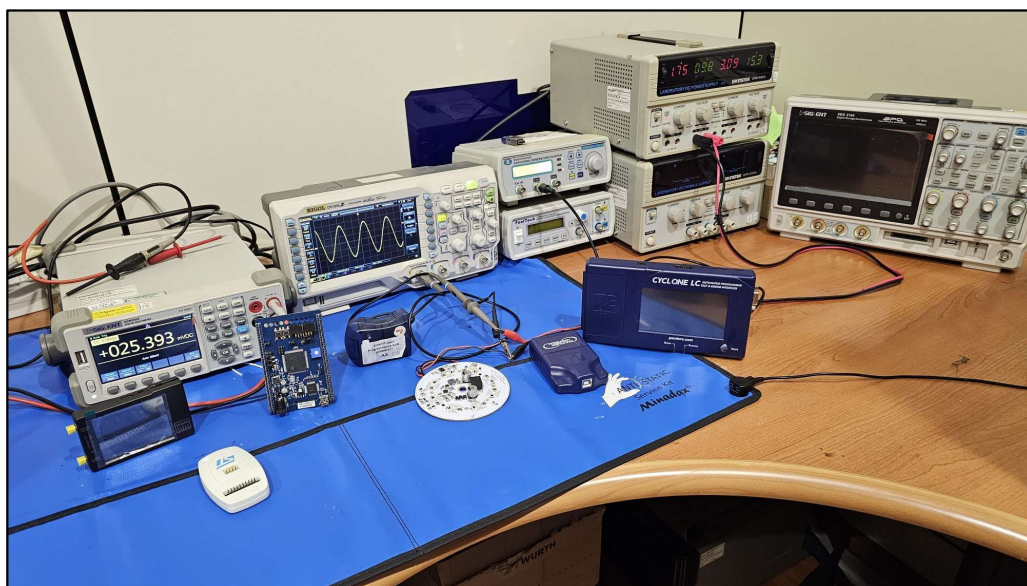
- **Oscilloscope Hp**
- **Luxmeter Hi-tech**
- **Fluke Thermal Camera**
- **Peak Lcr 40 For Component Passive Identification**
- **3 Power Supply**
- **2 Rework Air System**
- **Vacuum Device For Replace Components**
- **System Contion Themperature With Ionizzer**
- **Dotation Esd Protection**
- **2 Optic Visor Marants**
- **2 Driller Device**
- **1 Scooring Depannelling**
- **1 Push-up De-pannelling welding Machine Branson 2000**
- **Laser De-pannelling**

Electronic PCB engineering and production

- 1 Eagle 9 Workstations
- 1 Cam 350 Workstation
- 1 Visual System For Image Comparison
- 1 Station Weller Wha 3000p For Rework Pcb
- 1 Station Weller Wr 3m For Rework Pcb
- 2 Pick & Place Cp 40cv
- 2 Pick & Place Cp 45fv
- 2 Pick & Place Cp 45 Neo
- 3 Automatic Printer Dek Horizon I02
- 1 Router Esatek
- 2 Reflow Oven Zevatech 7 + 7 Zones
- 1 Reflow Oven Samsung 7 +7 Zones
- 1 Optical Inspection
- 1 AOI Marantz/MASS VQZ III
- 2 AOI Saki Bf50 Scanner
- 1 Mini -Cnc-engraving Z-dq Machine With Mach 3
- 1 Automatic Printer Dek 265lt°
- 1 Panasonic SPI Ip321
- 1 Wave Soldering Machine EPM Premium 400 TMS
- 2 ICT In-Circuit Testers SPEA EasyTest 100A







Spray paint department for plastic parts



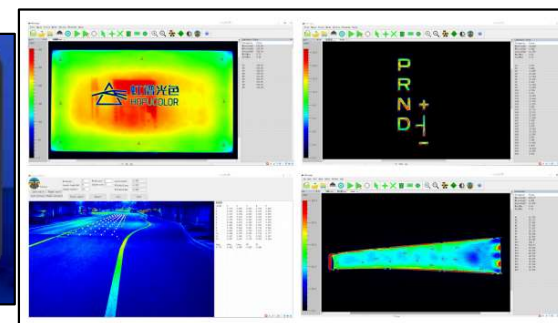
Photometric chamber

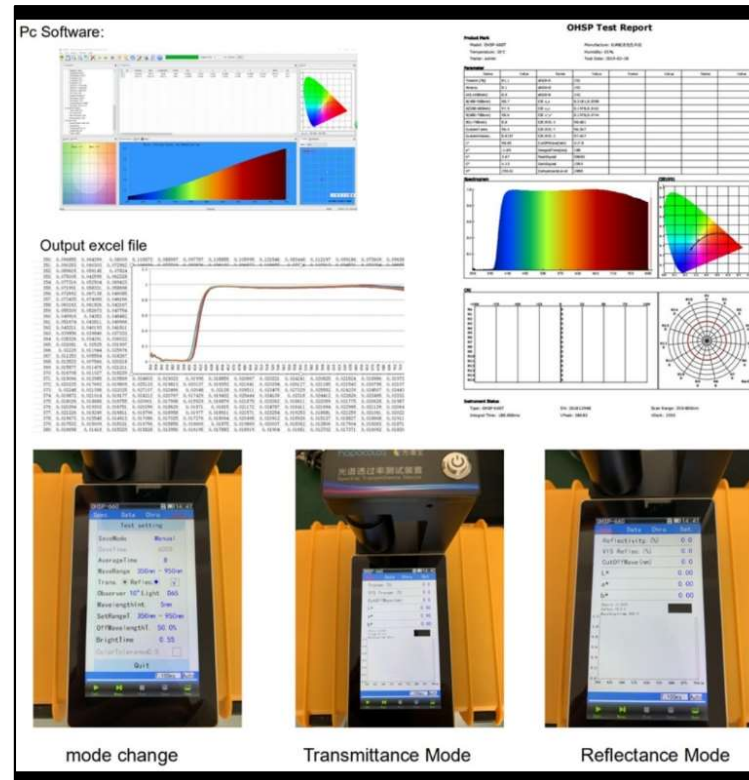


Colorimeter device



Camera luminance device

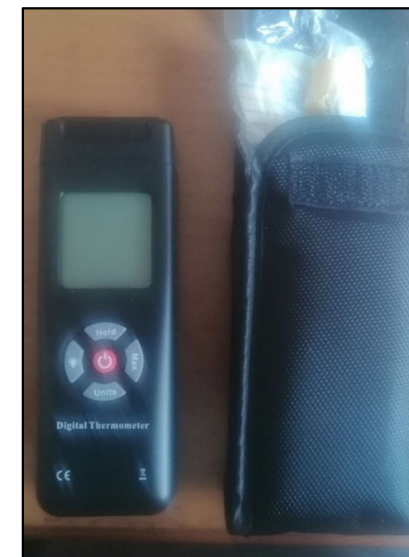




A spectrophotometer with reflectance and transmittance measurement capabilities is an essential instrument In our lab for material characterization and reverse engineering.



Infrared Thermometers for quick thermal analysis.

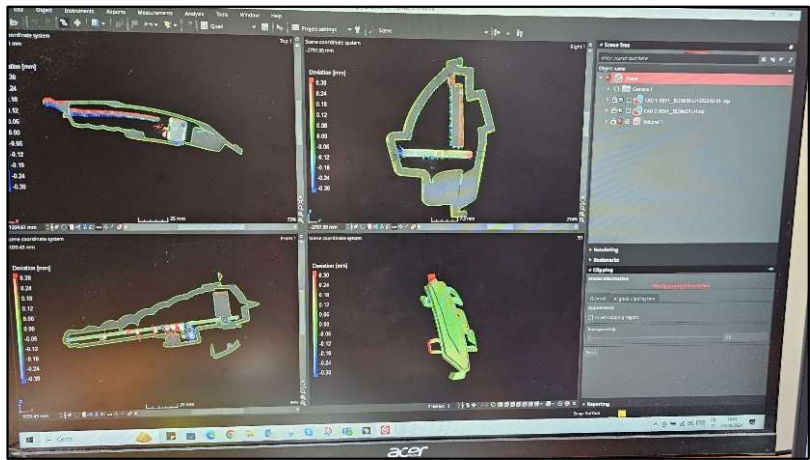
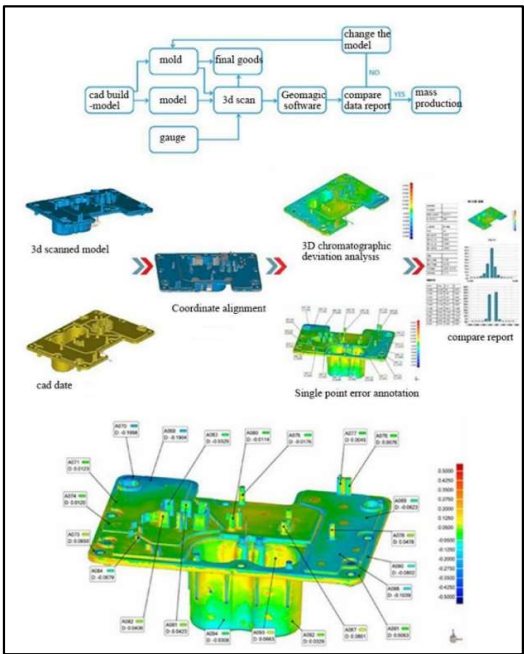


Data logger

Simulates extreme temperature, humidity, and weather conditions

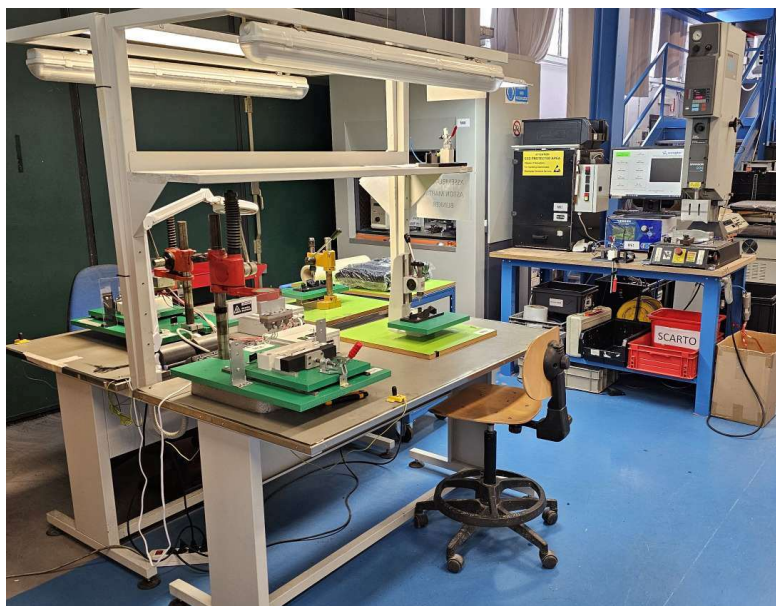
Capabilities-
3d Printers (FDM & SLA)
Laser machine





Our typical end of assembly line incorporates several key stages and testing procedure-

- Component Assembly
- Quality Control Checks
- End-of-Line Testing-
 - a) Camera Inspection
 - Proper illumination
 - Correct light patterns
 - b) Leak Testing
 - c) Functional testing
- Data Logging



- 10 resources in smd department.
- 8 resources in manual work department.
- 10 resources in Technical office.





Our Technical team

CIELLE-TRONICS S.R.L.

DESIGNATION	NAME	EXPERIENCE
SUPERVISOR	G.PENNA	30 YEARS IN DEVELOPMENT OF AUTMOTIVE LIGHTING ; DIRECTOR IN OLSA
R/D MANAGER	L.CLINCO	20 YEARS IN DEVELOPMENT OF AUTOMOTIVE LIGHTING; in OLSA ,Varroc-Triom , DBM
PROJECT MANAGER	G.FILIPPA	15 YEARS IN DEVELOPMENT OF AUTOMOTIVE REARLAMPS
QUALITY MANAGER	A.NEGRI	15 YEARS IN DEVELOPMENT OF AUTOMOTIVE REARLAMPS
DESIGN LEADER	P.IORI	5 YEARS IN DEVELOPMENT OF AUTOMOTIVE REARLAMPS
OPTICS ENGINEER	SUNDEEP	10 YEARS IN DEVELOPMENT OF AUTOMOTIVE REARLAMPS
3D ENGINEER	A.DELL'AGLIO	5 YEARS IN DEVELOPMENT OF AUTOMOTIVE REARLAMPS
MECHANICAL ENGINEER	T.HARSHA	3 YEARS IN DEVELOPMENT OF AUTOMOTIVE REARLAMPS
ELECTRONIC ENGINEER	K.REZA	5 YEARS EXPERIENCE IN AUTOMOTIVE HARDWARE AND SOFTWARE DEVELOPMENT
SOFTWARE ENGINEER	C.BONDANI	20 YEARS IN AUTOMOTIVE HARDWARE AND SOFTWARE LIN-CAN SYSTEMS

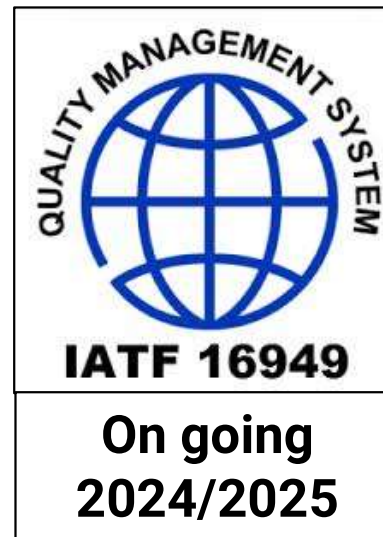
Strategy Looking Forward to 2025

- We are looking to find a new plant around 4000-6000 Sq.m
- We are looking to purchase aftermarket components to integrate into our structure mold machine, metallization department, and wire production processes.
- We are in the process of being homologated by STELLANTIS.
- We are participating to IVECO RFQs sourcing.



OUR CERTIFICATIONS

CIELLE-TRONICS S.R.L.



Thank you for your Attention