



*LiDAR specialized manufacturer spun off  
from **Hyundai Motor Company**.*

*Scan even the direction of objects as well as the 3D space*

*Autonomous Driving, Logistics Robot and Smart City Infra  
are AutoL's Main Business Industries.*

[www.autol.co.kr](http://www.autol.co.kr)

## CONTENTS

1. COMPANY PROFILE
2. LiDAR PROSPECT
3. AutoL LiDAR ADVANTAGE
4. PRODUCT LINE-UP
5. CERTIFICATE
6. PARTNER & CLIENT
7. CONTACT INFORMATION
8. INFO GALLERY

# 1. COMPANY PROFILE


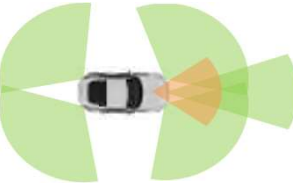
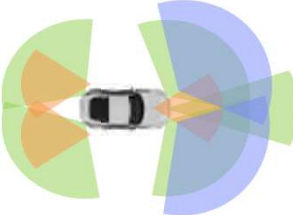
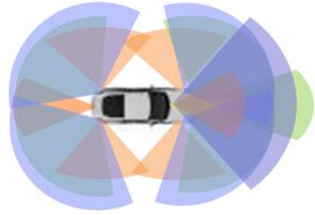
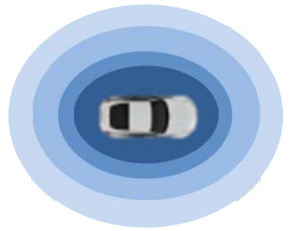
|                   |  |
|-------------------|--|
| <b>Name</b>       | AutoL Co., Ltd.  |
| <b>CEO</b>        | Yong-Sung Lee  |
| <b>Foundation</b> | 10 <sup>th</sup> May 2021  |
| <b>Employee</b>   | Sales & Marketing: 3<br>Management Support: 4<br>Software: 7<br>Hardware: 4<br>Logic Circuit: 4<br><u>Total Employee: 27</u><br>(To be 48 until 2023Y)                   |
| <b>Capital</b>    | \$280,000  |
| <b>ADDRESS</b>    | #305, 11,Geumto-ro 80beongil, Sujeong gu,<br>Seongnam-si, Gyeonggi-do, South Korea 13453<br>Tel: +82-70-4228-1072<br>Fax: +82-31-702-5314<br>Web: Http://www.autol.co.kr |
| <b>CONTACT</b>    | Scott Han / Senior Manager in Sales & Marketing Team<br>Email: <a href="mailto:scott@autol.co.kr">scott@autol.co.kr</a>  |



## 2. LiDAR PROSPECT

■ LiDARs provide superior resolution and accuracy compared to cameras and radars.

- ✓ From Level 3, OEM has a responsibility for accident of autonomous driving, and detectability is very important.
- ✓ At least two LiDARs for level 3 and five LiDARs for level 4 would be equipped for autonomous driving.

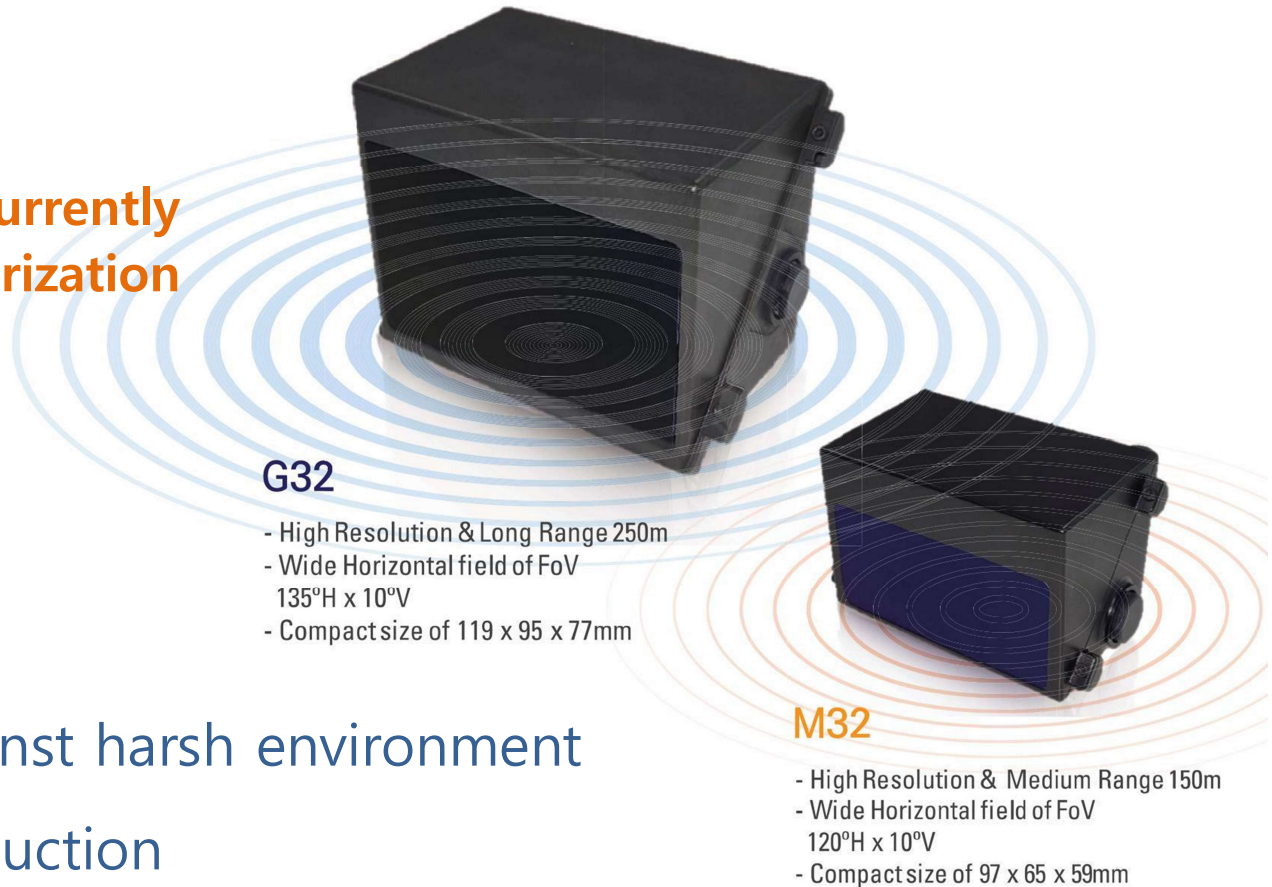
|        | Level 1   | Level 2   | Level 3   | Level 4   | Level 5   |
|--------|---|---|---|---|---|
| Sensor | • Camera > 1EA  | • Camera > 1EA<br>• Radar > 5EA   | • Camera > 3EA<br>• Radar > 5EA<br>• LiDAR > 2EA                                      | • Camera > 6EA<br>• Radar > 5EA<br>• LiDAR > 5EA                                      | • Camera > ?<br>• Radar > ?<br>• LiDAR > ?  |
| Area   |  |  |  |  |  |



### 3. AutoL LiDAR ADVANTAGE

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Our mission is to break the problems which are currently an obstacle to the popularization of autonomous driving.



- ***Automotive Grade*** against harsh environment
- ***Low Cost*** for mass production
- ***High Definition*** to detect proper objects

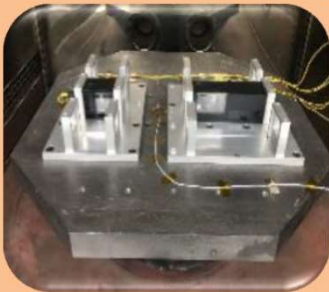
### 3. AutoL LiDAR ADVANTAGE

#### 1) AUTOMOTIVE GRADE certified LiDAR

- AutoL completed the environmental durability test of HMG(Hyundai Motor Group).
- Currently improving high temperature(up to 105°) and drop test for an upgraded LiDAR.



Vibration Test



Over Voltage Test



Temperature Cycle Test



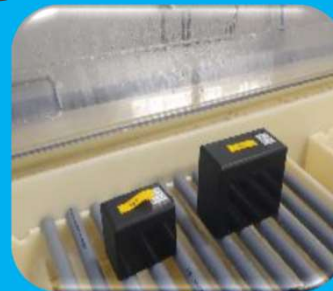
Waterproof Test



Drop Test



Salt Spray Test



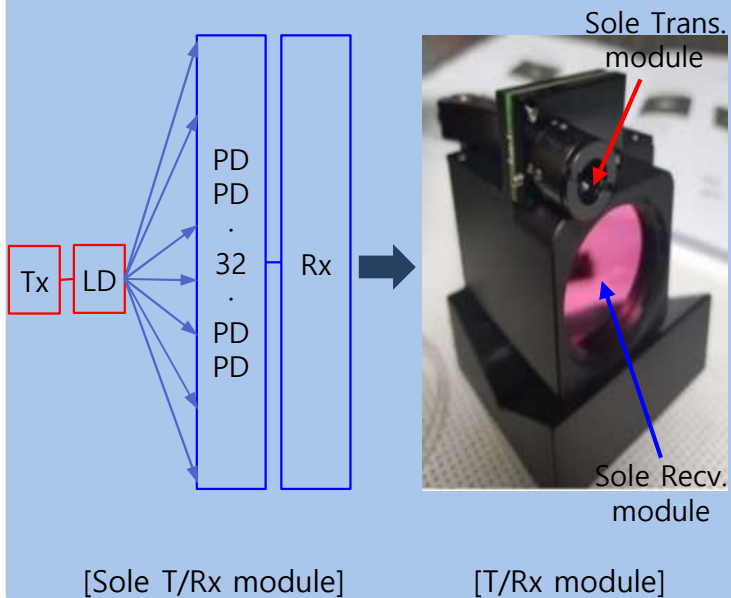
|             |   |
|-------------|---|
| ISO 16750-1 | Road vehicles – Environmental conditions and testing for electrical and electronic equipment – Part1: General   |
| ISO 16750-2 | Road vehicles – Environmental conditions and testing for electrical and electronic equipment – Part2: Electrical loads  |
| ISO 16750-3 | Road vehicles – Environmental conditions and testing for electrical and electronic equipment – Part3: Mechanical loads  |
| ISO16750-4  | Road vehicles – Environmental conditions and testing for electrical and electronic equipment – Part4: Climatic loads  |
| ISO 16750-5 | Road vehicles – Environmental conditions and testing for electrical and electronic equipment – Part5: Chemical loads  |
| ISO 19453-1 | Road vehicles – Environmental conditions and testing for electrical and electronic equipment for drive system of electric propulsion vehicles – Part 1: General |
| ISO 20653   | Road vehicles – Degrees of protection (IP code) – Protection of electrical equipment against foreign objects, water and access                                  |

<Test report extract>

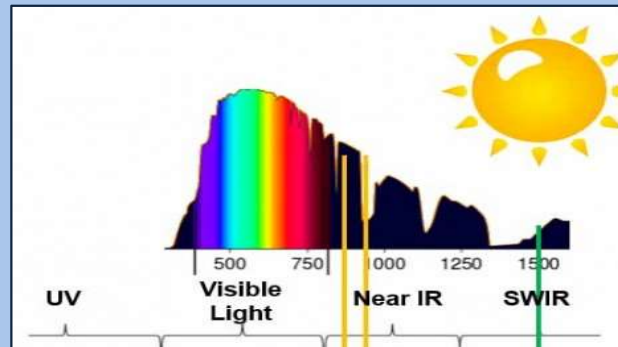
### 3. AutoL LiDAR ADVANTAGE

#### 2) LOW COST

##### Sole Tx/Rx module for 32 channels

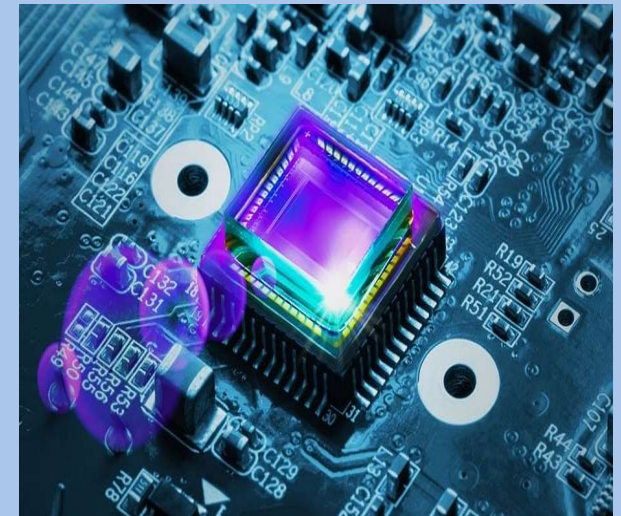


##### 905nm instead of 1,550nm



|                   | 905nm | 1,550nm |
|-------------------|-------|---------|
| Price             | ↓     | ↑       |
| Power consumption | ↓     | ↑       |
| Durability        | ↑     | ↓       |
| Affect a machine  | ↓     | ↑       |

##### Sensor for **SiPM** receiving module



AutoL reduced 90% of sensor price with our technology

Production yield increase for Mass production

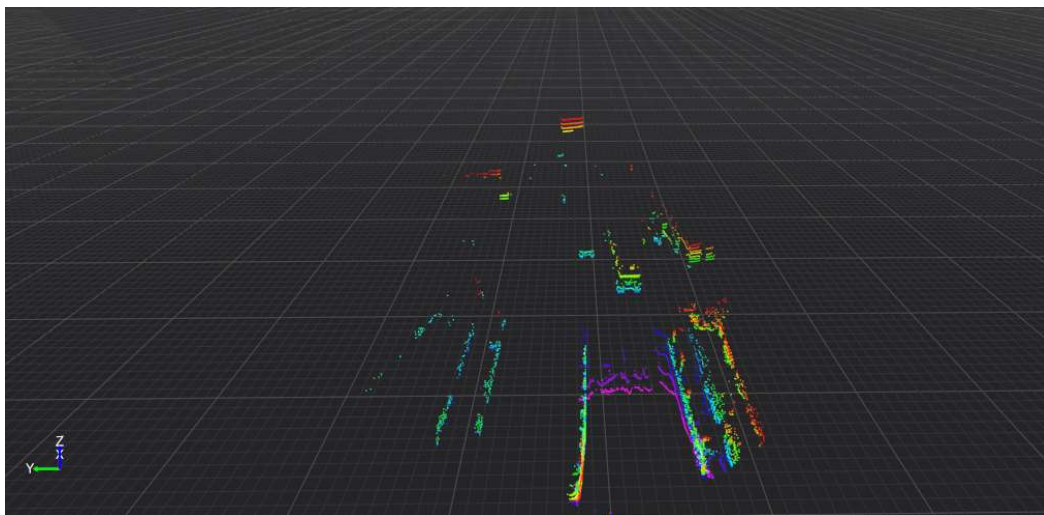


### 3. AutoL LiDAR ADVANTAGE

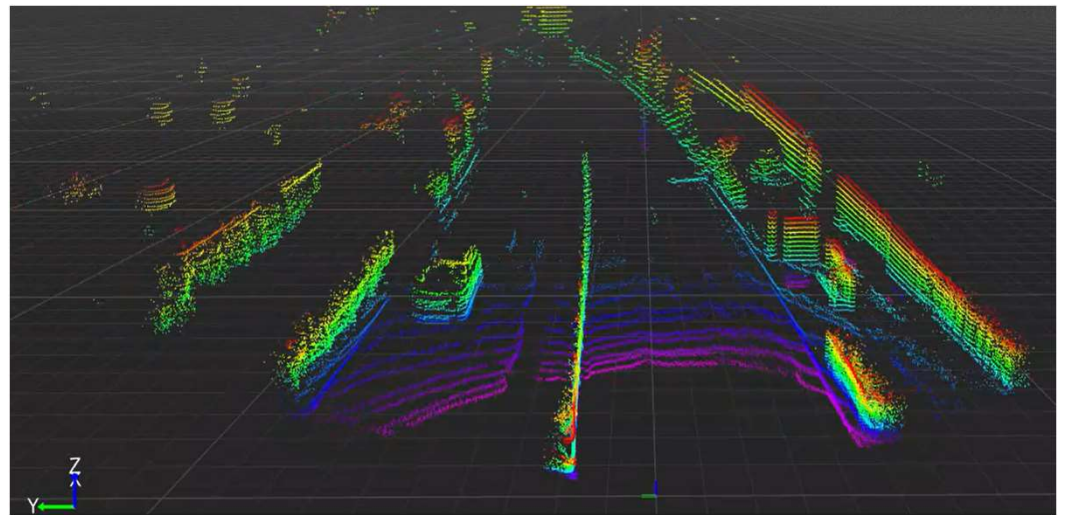
#### 3) HIGH DEFINITION

|                            |   |
|----------------------------|---|
| <b>a. Rx module</b>        | SiPM method which has high sensitivity and long range detection       |
| <b>b. Detection</b>        | Better detection range up to 256m rather than competitors             |
| <b>c. Durability</b>       | Stable motor inside of LiDAR for rotating mirror                      |
| <b>d. Channel doubling</b> | AutoL's patent to double 16channels with same definition as 32channel |

**Competitor's LiDAR**



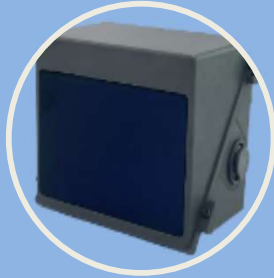
**AutoL G32 LiDAR**





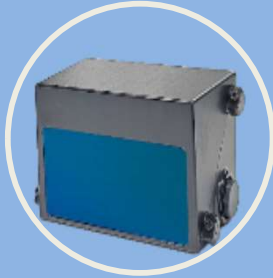
## 4. PRODUCT LINE-UP

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### Model: G32

- Number of Channels: 32
- FoV(HxV): 130°x 10°
- Resolution: 0.1°x 0.3°
- Range: 250m
- Size: 126×96×76mm
- Status: B sample



### Model: M32

- Number of Channels: 32
- FoV(HxV): 120°x 10°
- Resolution: 0.1°x 0.3°
- Range: 150m
- Size: 87×55×60mm
- Status: B sample(4Q 2023)



### Model: G192



- Number of Channels: 192
- FoV(HxV): 120°x 30°
- Resolution: 0.1°x 0.1°
- Range: 250m
- Size: 228×108×84mm
- Status: A sample(1Q 2024)

## 5. CERTIFICATE (To be completed in June 2023)

- Electronic Test



- Certificate

|  |  |   |  |  |  |
|--|--|---|--|--|--|
|  |  <p>KC안전인증마크<br/>국가통합인증마크(KC)를 획득한<br/>인체에 무해한 안전한 제품입니다.<br/>This product has Safety Certificate<br/>for Industrial Products,<br/>Korea Certificate(KC)</p> |  |  |  |  |
| Federal<br>Communicatio<br>ns<br>Commission<br>in USA                              | Korean safety<br>standards   | The<br>Conformity<br>European in<br>EU  | Restriction of<br>the Use Of<br>Certain<br>Hazardous<br>Substances                   | Water &<br>Dustproof   | Eyesafety  |

## 6. PARTNER & CLIENT

### Partners



Korea Major OEM  
R&D Cooperation to develop LiDAR to be adapted ECU



Korean Major Tier1  
Registered as a vendor for LiDAR sensor



Korean Major Security Company  
Combining LiDAR sensor and Thermal camera for security industry

### Clients



Specialized Autonomous Driving company



Korea Automotive Technology Institute



New Zealand's Automotive Shuttle bus company



## 7. CONTACT INFOMATION

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### CEO \_ Yong Sung Lee

“ The revolution called ‘autonomous driving’ that will change the paradigm of our lives will never come easily. There is an inevitable technical burden of ensuring the highest level of safety.

AutoL's first-stage business model is LiDAR, which will be in charge of safety and key sensor of autonomous vehicles. ”



ysl21@autol.co.kr



## 7. CONTACT INFORMATION

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### OUR TEAM

AutoL's competitiveness is the experienced former automotive engineers and specialized personnel for each team.



**Aaron S. Park**

CO-FOUNDER / CTO



sgpark@autol.co.kr



**Wooil Lee**

DIRECTOR of S/W



Woohana@autol.co.kr



**Scott Han**

SALES MANAGER



scott@autol.co.kr

## 8. INFO GALLERY

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### Info Gallery

We are looking for someone to grow our businesses with AutoL.



Enjoy a Video

Share AutoL's technology



Leave inquiry

We offer expert technical support .



Learn More\_G32

We provides a high-performance lidar optimized for autonomous driving.



Find More \_M32

It is used in autonomous driving, robotics and various industrial fields.





# Thank you

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## **CONTACT**

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