SOS LƎB
Smart Optical Sensors

WE MAKE THE WORLD SMARTER WITH LiDAR

SOSLAB

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Smart Optical Sensors

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SOSLAB, a LiDAR provider based in South Korea, has been developing LiDAR sensors considering market-commercialization based on experienced LiDAR core technology.

$28M
Total
Fund Raised

25+
Global
Partners

55
Patents Registered
(+133 Applications)

THE PATH WE WALK ON

Solid-state
2D LiDAR
TL

Mechanical Scanning
2D LiDAR
GL

Hybrid Scanning
3D LiDAR
SL

Solid-state
3D LiDAR
ML-2

NEW
ML-X
Solid-state
3D LiDAR

2016.06 SOSLAB is founded

2017.08 Raised Seed Funding from Future Play

2017.11 Awarded KSME-SEMES OPEN INNOVATION Grand Prize

2018.07 Awarded Silicon Valley International Invention Festival (SVIIF) Gold Prize

2018. 09 Raised $6M in Series A

2019.06 Awarded Best Product in CES Asia 2019 Vehicle Part

2019.12 Raised $8M in Series A+

2020.07 Awarded "King Sejong Award", highest honor in 2020 patent technology award

2021.01 Awarded CES Innovation 2021

2022.05 signed MOU with HYUNDAI Motors Group

2022.07 Raised $14.7M in Series B

2022.08 signed MOU with TUV-Rheinland

INDUSTRIAL 2D LiDAR MANUFACTURER

SOSLAB has completed the development of high-performing 2D LiDAR with SEMES, the major OHT(Overhead Hoist Transport) supplier for Samsung Electronics production lines in 2021, and started production of GL, the industrial 2D LiDAR.
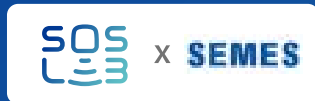
SOS LAB X SEMES	Factory Automation	Industrial Robot	OHT/AGV /AMR	Area Detection	Security

AUTONOMOUS INNOVATION
WITH FULLY SOLID-STATE 3D LiDAR

SOSLAB has been proceeding the development of solid-state 3D LiDAR for the automotive market with automotive OEM and Tier-1 partners since 2019. We confidently propose our solid-state LiDAR that delivers durability, scalability and productivity based on simple architecture composed of VCSEL and SPAD design technologies.

SOS LAB X OEM Tier1, Tier2	Autonomous Driving	Mobile Robot	Smart City/Infra	Last Mile Delivery	Industrial Safety

PARTNERS

- HL Mando
- Automotive OEM
- kt
- SK telecom
- HYUNDAI Rotem
- SONY
- BPA
- SEMES
- DONGWOON ANATECH
- SK securities
- FURONTEER

INVESTORS

- HL Mando
- futureplay
- KDB Capital
- KDB Bank
- Ventures
- Yuanta Securities (Korea)
- HYUNDAI INVESTMENT PARTNERS
- bap BRIDGE ALLIANCE PARTNERS
- Shinhan Financial Group

SOSLAB

ML
PERFECT SOLiD-STATE 3D LiDAR

LiDAR FOR MOBILITY

PRODUCT DESCRIPTIONS

✓ Key enabler of autonomous driving technology.
✓ Optimal performance for monitoring of vehicle surroundings based on advanced optical technology.
✓ Compact size, lightweight : easily mountable in various locations.
✓ Designed with simple structure which enables the mass production.
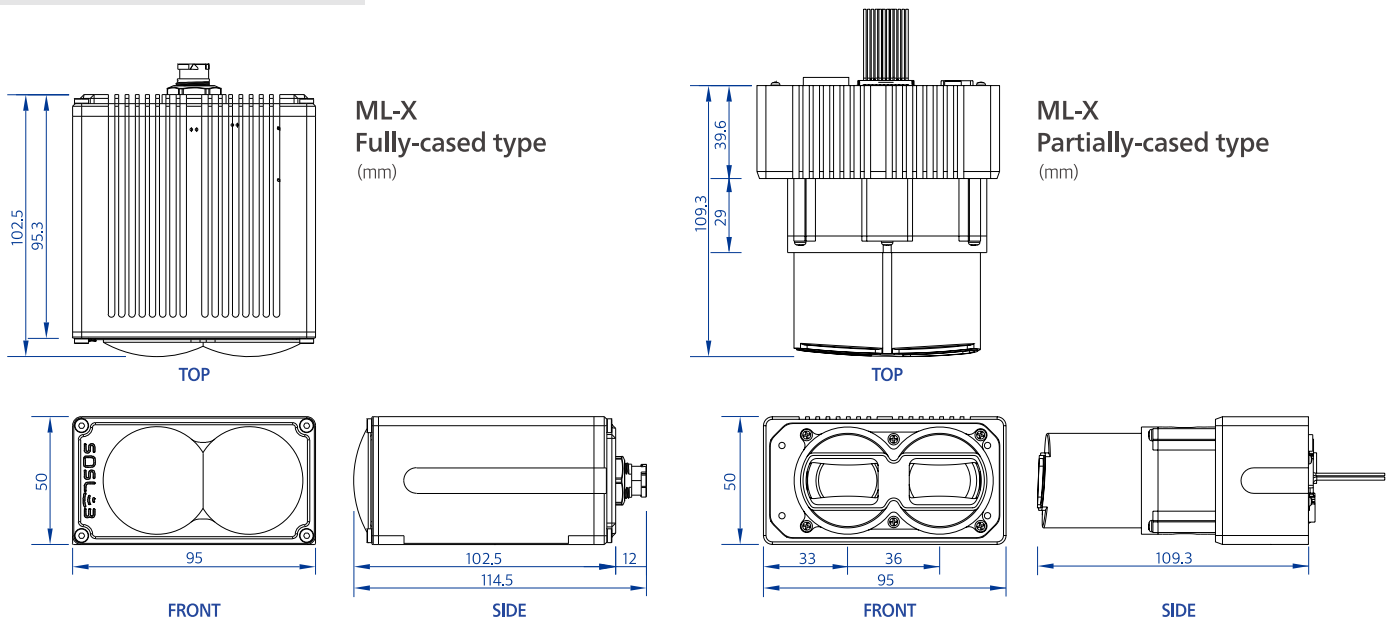✓ Mutual interference free.

RoHS2 Compliant

CLASS 1 LASER PRODUCT

Product line up
by field of view (max)

• ML-X (120) : 120° X 35°
• ML-X (80) : 80° X 23.3°

SPECIFICATIONS

	FIELD OF VIEW	DETECTION RANGE	ANGULAR RESOLUTION	SCANNING FREQUENCY	DISTANCE ERROR
ML-X (120)	120°[H] x 35°[V]	80 m (@10%)	0.21°[H] x 0.63°[V]	up to 25 fps	< 30 mm
ML-X (80)	80°[H] x 23.3°[V]	150 m (@10%)	0.14°[H] x 0.42°[V]	up to 25 fps	< 30 mm

STRUCTURE

✓ Simple architecture that is consisted of no-moving components. (Two Chips + Two Lenses)

For more information,
scan the QR code, please.

ML LiDAR FOR MOBILITY

DIMENSIONAL DRAWING

ML-X
Fully-cased type
(mm)

TOP

FRONT

SIDE

ML-X
Partially-cased type
(mm)

TOP

FRONT

SIDE

SPECIFICATIONS

	ITEMS	ML-X (120)	ML-X (80)
Features	Field of View (HxV)	120° x 35°	80° x 23.3°
	Scanning Frequency	20FPS (up to 25 FPS)	20FPS (up to 25 FPS)
	Angular Resolution	0.209° x 0.625°	0.139° x 0.417°
	Detection Range	80m (R10%, 100klux, Detection Probability = 90%)	150m (R10%, 100klux, Detection Probability = 90%)
	Multi-Echo	2 per Pixel	2 per Pixel
Mechanics / Electronics	Supply Voltage	12~24V	12~24V
	Power Consumption	<12W	<12W
	Dimension	95x50x102	95x50x102
	Weight	860g	700g
	Wavelength	940nm	940nm
	Mounting	Customizable	Customizable
	Certification	CE, FCC, KC	CE, FCC, KC
Performance	Distance Error	<30mm	<30mm
Interface	Data Points / Sec	645,120 (up to 806,400)	645,120 (up to 806,400)
	Interface	Gigabit Ethernet (TCP/IP)	Gigabit Ethernet (TCP/IP)
	Output	Point Cloud (X,Y,X) + Intensity	Point Cloud (X,Y,X) + Intensity
	Connector	"Proprietary pluggable connector (Power + data + DIO)"	"Proprietary pluggable connector (Power + data + DIO)"
Operational	Vibration	IEC 60068-2-64:2008	IEC 60068-2-64:2008
	Shock	IEC 60068-2-27:2008	IEC 60068-2-27:2008
	Operating Temp	-40~85℃	-40~85℃
	Storage Temp	-40~105℃	-40~105℃
	Ingress Protection (Fully-cased Type)	IP69K (with I/O cable attached)	IP69K (with I/O cable attached)
	Laser Safety	IEC EN 60825-1 Class 1	IEC EN 60825-1 Class 1
	Life Time*	10,000hr	10,000hr
	RoHS	RoHS2(2011/ 65 / EU)	RoHS2(2011/ 65 / EU)

*Ongoing for Autehntication (1Q, 2023)

SOSLAB

GL HIGH PERFORMANCE 2D LiDAR

LiDAR FOR INDUSTRY & ROBOTICS

IP65 CE FC [⬚]

Product line up by detection range (max)
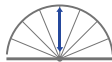
- GL-310 : 10m
- GL-325 : 25m

For more information, scan the QR code, please.

PRODUCT DESCRIPTIONS

✓ 2D LiDAR for industrial robots and factory automation.
✓ Responsible for precise area detection and the field of view of robots for every movement by rugged, and reliable scanning technology.
✓ Flexible response to various situation with 40hz scanning speed.
✓ Accurate measurement at 0.18 angular resolution.
✓ Ensure performance even under high-speed movements.

SPECIFICATIONS

	FIELD OF VIEW	DETECTION RANGE	ANGULAR RESOLUTION	SCANNING FREQUENCY	ACCURACY
GL310	180°[H]	0.06 ~ 10m	0.18°[H]	40 fps	Typ. ± 30 mm
GL325	180°[H]	0.5 ~ 25m	0.18°[H]	40 fps	Typ. ± 70 mm

OPTIONAL FEATURES (SW)

✓ Set 12 levels & 31 patterns according to distance or ratio.

GL LiDAR FOR INDUSTRY & ROBOTICS

DIMENSIONAL DRAWING

GL-3 (mm)

FRONT   SIDE   BACK
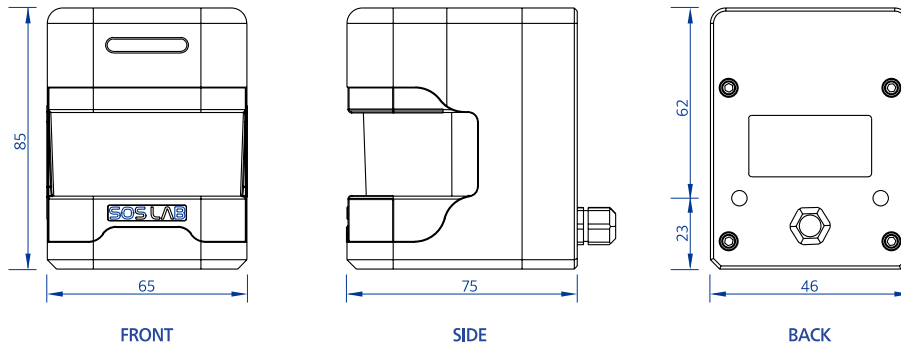
SPECIFICATIONS

ITEMS		SPECIFICATION
Features	Horizontal Field of View	180°
	Scannign Frequency	40Hz
	Angular Resolution	0.18°
	Detection Range	10m (R.90%, GL310)
		25m (R.90%, GL325)
	Echo	1
Mechanics / Electronic	Supply Voltage	12VDC ~ 24VDC
	Power consumption	< max. 9.6W
	Dimentions	65 x 75 x 85mm (WDH)
	Weight	340g
	Light Source	905nm
	Certification	CE, FCC, KC
Performance	Distance Error	≤ ±30mm (typ. @310)
		≤ ±70mm (typ. @325)
	Repeated Precision	≤ ±30mm (typ. @310)
		≤ ±30mm (typ. @325)
	Response Time	< 25msec.
Interfaces	Interface	RS-232, ethernet(100M)
	Data points / sec.	40,000
	OS	window(Windows 10-x86_64), Linux(Ubuntu 18.04-x84_64,AArch64)
Output	Point Cloud Data	distance (r) ,Intensity(i)
	I/O port	Input 5ch. / output 4ch.
	Connector	Power, Interface, I/O
		51021-1200, 1100
Ambient Data	Vibration	55Hz ~150Hz, 19.6m/s2, 2min./swp (@operating condition)
	Shock	20G, 11msec.
	Operating Temp.	-20℃ ~ +60℃, R.H. 85%
	Storage Temp.	-35℃ ~ +80℃, R.H. 85%
	Ingress Protection rating	IP65
	Laser Class	1
	Restriction of Hazardous Substances Directive	RoHS2
	Ambient Light Immunity	< 15,000 lux ※ Avoid an environment with direct light or light source that produces strong light.

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