

2D Solid State (Flash) LiDAR Sensors

# SPECIFICATIONS

Rev. 1.1.0

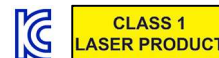


**VL-S16LE, VL-S16LU, VL-S16LD**

**Model: VL-S16EIK02/VL-S16UIK02/VL-S16DIK02**

## VL-S16LE,VL-S16LU,VL-S16LD

### PRODUCT SPECIFICATIONS



1. Features & Performance	
Technology	Time of flight (dToF)
Laser Source	905nm
Channels(Lines)	1Ch. /16-Segments
Detection Range	0.25m to 50m (TBD@10% Reflectivity)
Horizontal FoV. / Ang. Resolution	Horizontal 100°/ 3.12°(Per segment)
Vertical FoV. / Beam divergence	0° / Under 0.3°
Range Accuracy	Typ. $\pm 3$ cm
Frame Rate / Reading Frame	Up to 50Hz
Points per Second	Up to 800p/s

\* Distance accuracy refers to performance when measured including temperature and reflectivity of an object in a typical use environment. However, it may depend on many other environmental factors.

2. Interface & Software	
Connector	M8 (1Port / 3 Options:VL-S16E,VL-S16U,VL-S16D)
Ethernet Connection	Modbus TCP : 100M Ethernet: VL-S16E(VL-S16EIK01)
Serial Connection	Modbus RTU : RS-485(All Options), USB Serial: VL-S16U(VL-S16UIK01)
Signal Output	Digital Output : VL-S16D(VL-S16DIK01) 1port : Detection Output (Push-Pull Output + Dry Contact) 2port : Self-Check Output (Push-Pull Only)
Indicators	2 LEDs(Power & Operating status)
GPS Time sync	N/A
Software(3D Viewer)	3D Viewer(for Windows) & Configuration

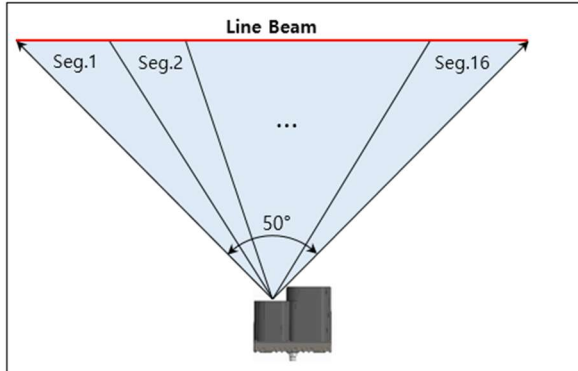
3. Electronics & General	
Operating Voltage(VDC)	10~32VDC
Power Consumption	Typ. 2.7W
Operating Temp.	-40°C ~ +85°C
Storage Temp.	-40°C ~ +125°C
Size (mm)	93(W) × 79(D) × 56(H)
Weight (g)	TBD (Without cabling)
Environmental Protection	IP66

4. Optional & Accessories	
Power / Comm. cable	M8 8Pins, AWG26, 6m

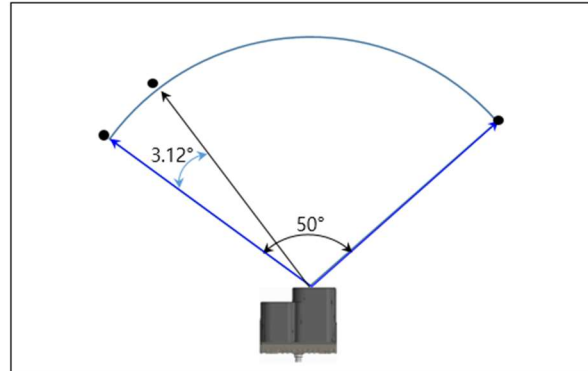
5. Certificate	
Certificate	KC / Eye-safety(Class1)

## 6. Working Diagram

- Horizontal FoV. / Ang. Resolution: 100° / 3.12°
- Vertical FoV. / Beam divergence: 0° / Under 0.3°

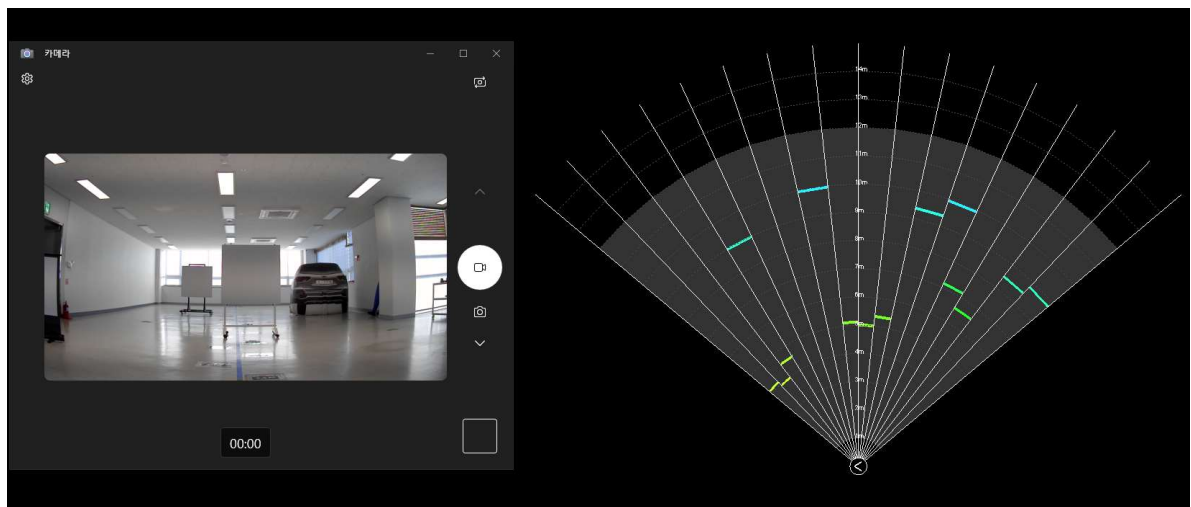


[Vertical FoV Diagram]

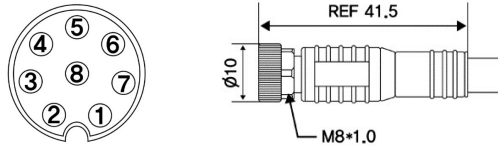


[Horizontal FoV Diagram]

## 7. Shape of point cloud(Example)



- \* The shape of the point cloud is an image that represents the shape of object recognition in a laboratory.
- \* It may vary depending on the user's installation and usage environment.

**8. Connector Info.**

**[8Pin – Ethernet VL-S16LE(VL-S16EIK02)]**

Pin No.	Color	Description
1	White	RS-485- (Modbus RTU)
2	Brown	RS-485+ (Modbus RTU)
3	Green	Ethernet (Modbus TCP/RXN)
4	Yellow	Ethernet (Modbus TCP/RXP)
5	Gray	Ethernet (Modbus TCP/TXN)
6	Pink	Ethernet (Modbus TCP/TXP)
7	Blue	GND
8	Red	VDC

**[8Pin – USB Serial VL-S16LU(VL-S16UIK02)]**

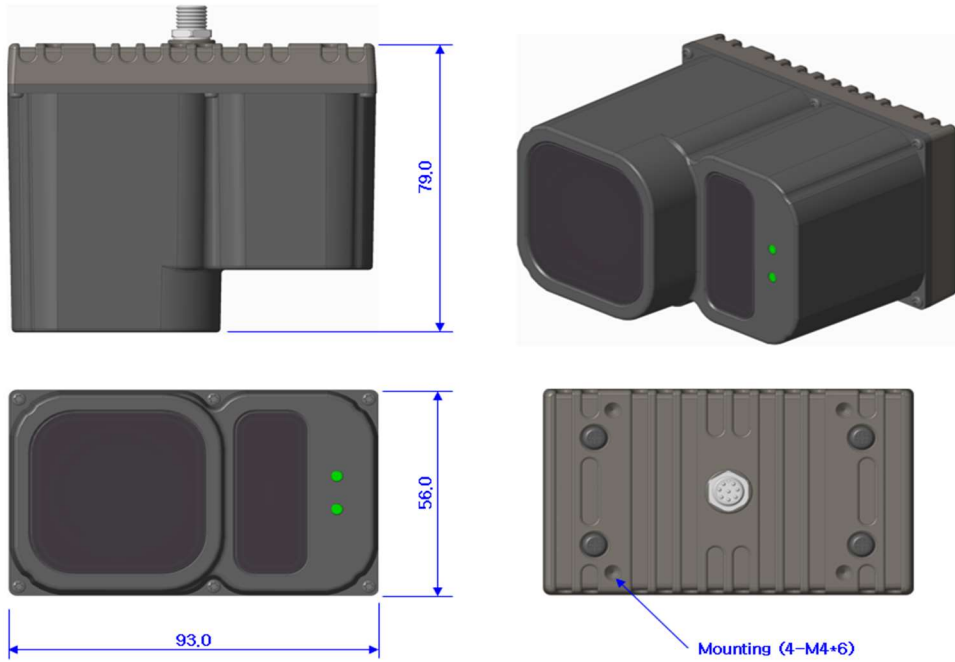
Pin No.	Color	Description
1	White	RS-485- (Modbus RTU)
2	Brown	RS-485+ (Modbus RTU)
3	Green	USB GND (Modbus RTU)
4	Yellow	USB D+ (Modbus RTU)
5	Gray	USB D- (Modbus RTU)
6	Pink	USB V+ (Modbus RTU)
7	Blue	GND
8	Red	VDC

**[8Pin – Digital Output VL-S16LD(VL-S16DIK02)]**

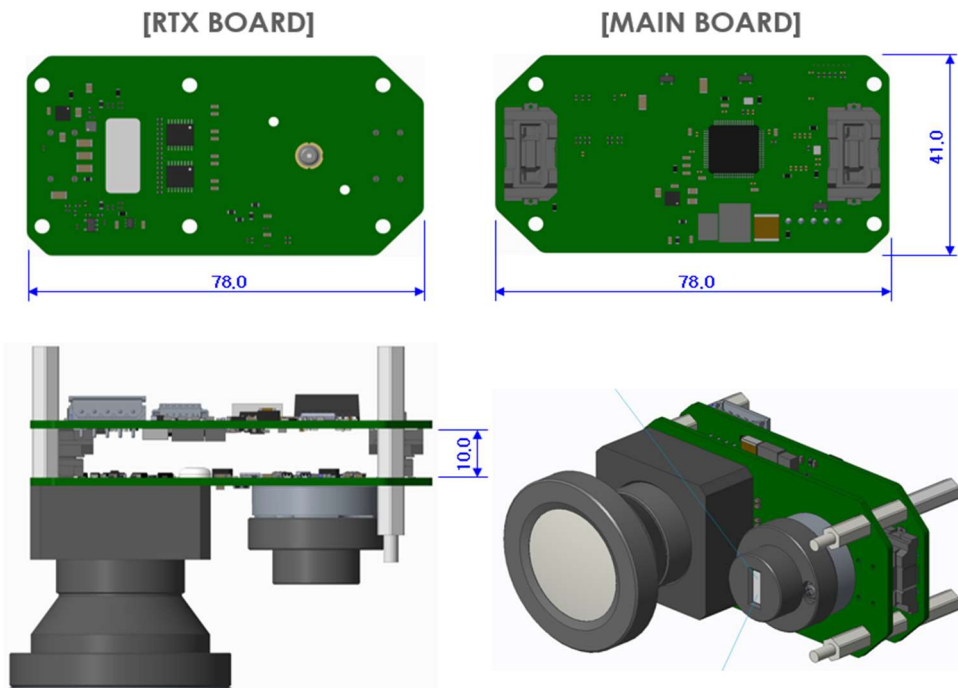
Pin No.	Color	Description
1	White	RS-485- (Modbus RTU)
2	Brown	RS-485+ (Modbus RTU)
3	Green	Digital-Output A (Push-Pull* : Detection)
4	Yellow	Digital-Output B (Push-Pull* : Self-Check)
5	Gray	Digital-Output (Dry Contact : Detection)
6	Pink	Digital-Output COM (Dry Contact : Detection)
7	Blue	GND
8	Red	VDC

\* Push Pull : Level Output (Level : Power Input)

**9. Dimension(mm)**



**8. PCB Module Board(mm)**



## **Corporate Headquarters**

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