

## SENSICK W130L

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More representatives and agencies in all major industrial nations at [www.sick.com](http://www.sick.com)

00 02 in26 - The specified product features and technical data do not represent any guarantee

We reserve the right to make changes without prior notification

**WARNING** For further information regarding the configuration menu and teaching function please take note of the handbook. Available on the internet at [www.sick.com](http://www.sick.com) or from your contact person at SICK.

### Safety Precautions

Carefully read and understand the safety precautions before operation. The important information is provided to protect your health and property. Do not apply any other installing or operating procedure other than that described in this manual.

#### Meanings of Safety Symbols

- WARNING** Indicates a possible hazard that may result in death, serious injury, or serious property damage if the product is used without observing the stated instructions.
- CAUTION** Indicates a possible hazard that may result in personal injury or property damage if the product is used without observing the stated instructions.

### Mandatory Requirements

- WARNING** This product is not an explosion-proof construction. Do not use the product under flammable, explosive gas or liquid environment.
- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- The light source of this product applies the visible light semiconductor laser.
- Do not disassemble or modify the product since it is not designed to automatically stop the laser emission when open. Disassembling or modifying at customer's end may cause personal injury, fire or electric shock.

- Do not stare into the laser beam directly, install at eye-level of the people around, nor expose the beam to the human body intentionally.
- Use the exclusive amplifier unit to connect the product.
- Not doing so may result in an accident or product damage. Wiring or disconnecting with the power ON is danger. Never fail to turn OFF the power supply.

This product cannot be used as a safety device to protect human body.

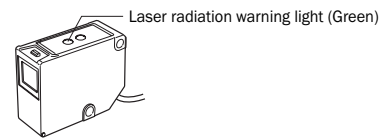
**CAUTION** Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### Operating Precautions

- CAUTION** Installing in the following places may result in malfunction:
  - A dusty or steamy place
  - A place generating corrosive gas
  - A place directly receiving scattering water or oil
  - A place suffered from heavy vibration or impact
- Do not use the sensor outside nor expose the detection surface directly to ambient light (laser light, incandescent light and sunlight).
- Do not use the sensor in transient state after power on (approx. 100 ms).
- The sensor performance may depend on the individual units.
- Wipe off dirt on the emitting/receiving parts to maintain correct detection. Also, avoid direct impact on the product.

### Precautions for using laser

**Laser emission warning light**  
Confirmation of laser emission is available with the laser emission warning light. It starts lighting after turning the power on and keeps lighting while the laser is being radiated. It is also possible to confirm with the exclusive amplifier unit.



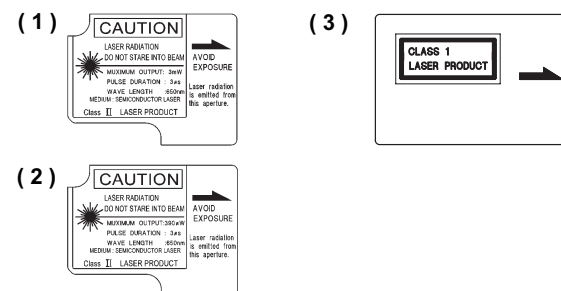
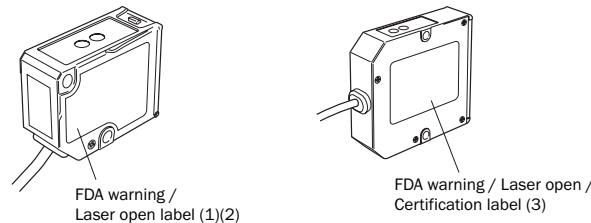
#### Laser label

This product is classified as a Class 2 (II) Laser Product by JIS C6802 / IEC / FDA Laser Safety Standard as this radiates the visible laser beam. The warning label and the description label in English are attached on the side face of the sensor head indicating the CLASS 2/Class II.

\*The emitters WS130L-34 and WS130L-54 of WSE130L-32/34 and WSE130L-52/54 are rated as Class II by the FDA standard (when exporting to the US). However, the class 1 is applied for the JIS/IEC standard.

When exporting this machine to the US, the US laser control, FDA (Food and Drug Administration) is applied. This product has been already reported to CDRH (Center for Devices and Radiological Health). For details, contact our Customer Service.

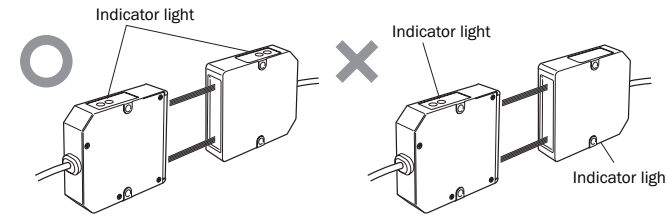
WT130L-32 WSE130L-32  
WL130L-32 WSE130L-34 WSE130L-52  
WSE130L-54



### Precautions in using WSE130L

When using WSE130L-32/34 or WSE130L-52/54 for length measurement, follow the instructions below.

- Emitter is applied to gray cable and Receiver is applied to black one.
- Install the sensor so that the sensor of flood beam is positioned in the center of the light receiving part. (Install so that the indication value of amplifier unit is maximum.)
- Install the flooding/receiving device in the same direction. Refer to each label or indicator light as a standard.



### Specifications

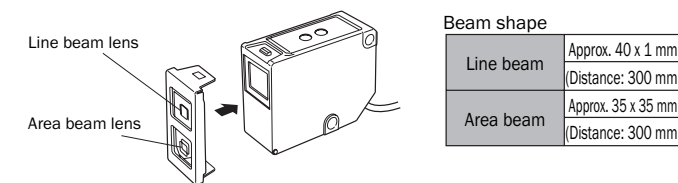
Model	Retro reflection type	Diffuse reflection type	Through beam SPOT	Through beam LINE
Cable	WL130L	WT130L	WSE130L-32 WS130L-32 WE130L-32	WSE130L-52 WS130L-52 WE130L-52
M8 Relay-type	-	-	WSE130L-34	WSE130L-54
Emitter M8	-	-	WS130L-34	WS130L-54
Detector M8	-	-	WE130L-34	WE130L-54
Adaptable amplifier unit	W130			
Light source	Visible light semiconductor laser 650 nm			
Output	max. 3 mW		max. 390 µW	
IEC/JIS CLASS	CLASS 2		CLASS 1	
FDA CLASS	Class II			
Detection distance	Long	8 m	1 m	2 m
	Standard	5 m	0.7 m	2 m
	*1 Fast	2 m	0.25 m	2 m
Beam size	*2	Approx. 2 mm Ø (Distance: 2 m)	Approx. 1 mm Ø (Distance: 1 m)	Approx. 2 mm Ø (Distance: 2 m)
Repeat accuracy	*3	0.2 mm	0.2 mm	0.3 mm
Indicator light	Laser radiation indicator light: Green Output indicator light: Orange			
Operating temperature/humidity	-10 to +55 °C/35 to 85 %RH (No condensation or freezing)			
Store temperature/humidity	-25 to +70 °C/35 to 85 %RH (No condensation or freezing)			
Ambient light	3,000 lx (Incandescent light) 10,000 lx (Sunlight)			
Shock resistance	10 to 55 Hz Double-amplitude 1.5 mm 2 hours at each direction of X, Y and Z			
Protection category	IP67			
Material	PC (Case, Cover)		PMMA / Glass (Front glass)	
Weight (including the codes)	*4	45 g	90 g	115 g

- \* 1 WT130L-32 : With white paper (90 %) of 200 x 200 mm  
WL130L-32 : With the reflector P41F (accessory)
- \* 2 Defined with center strength 1/e<sup>2</sup> (13.5 %). There may be leak light other than the specified spot size. The sensor may be damaged when there is a highly reflective object around the targets
- \* 3 Right angle to sensing axis (to 2 m).
- \* 4 The weights of WSE130L types include the emitter and receiver.

### Accessories and others

#### Lens attachment (Optional)

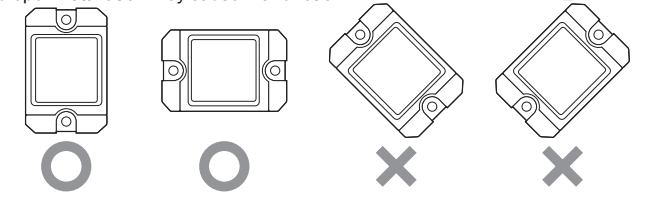
Installing the attachment to WL130L-32 allows two types of beam shape: Line beam and area beam. Attach the beam-shape lens and the optical axis to use together.



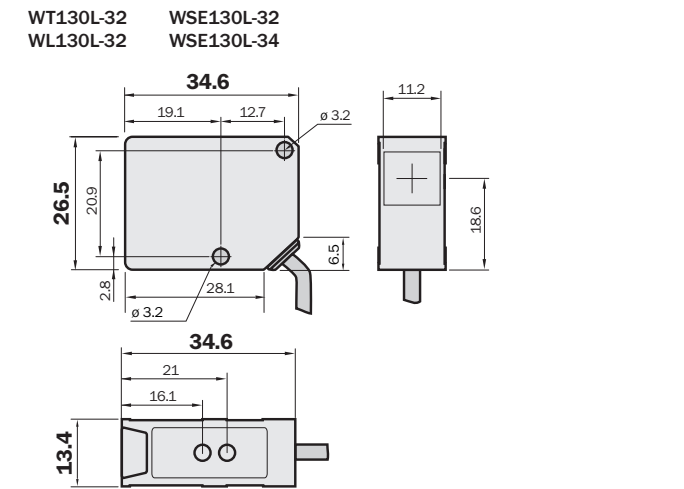
- The beam shape may depend on the individual products.
- Do not use for WT130L-32. Uninstallable to WSE130L-52/54.

### P41F Reflector (WL130L-32)

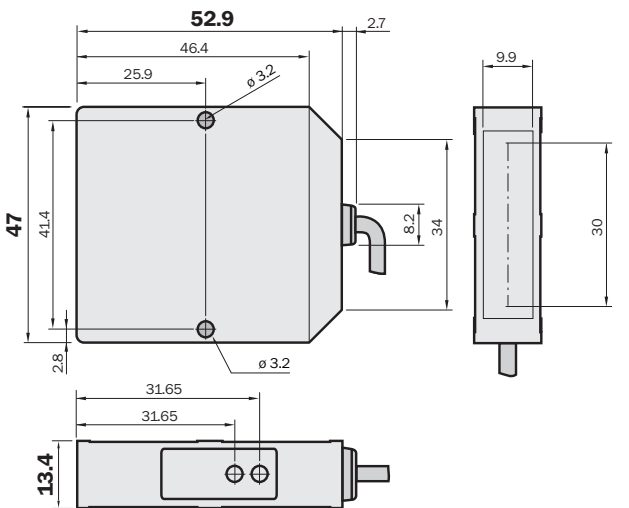
- Instruction for use
  - When cleaning, blow off or lightly wipe with a soft cloth. Do not use thinner, benzene or kerosene.
  - Avoid strong push of the reflecting surface or direct impact. Doing so may result in damaging the prism and deteriorating the performance.
  - Avoid using outside or under the environment where oil or water scatters.
- Installation procedure  
Refer to the figure below and use in the correct direction. Improper installation may cause malfunction.



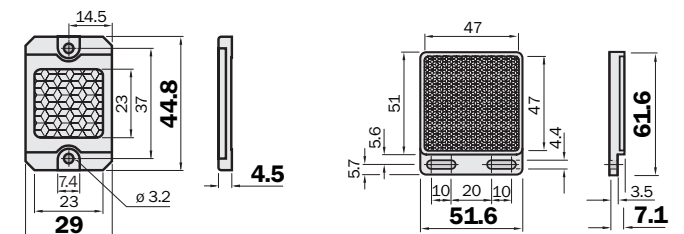
### Dimensional drawing



### WSE130L-52 WSE130L-54



### P41F



- The product specification may change without notice for improvement.
- For any inquiry, please contact the manufacture/vendor below.