

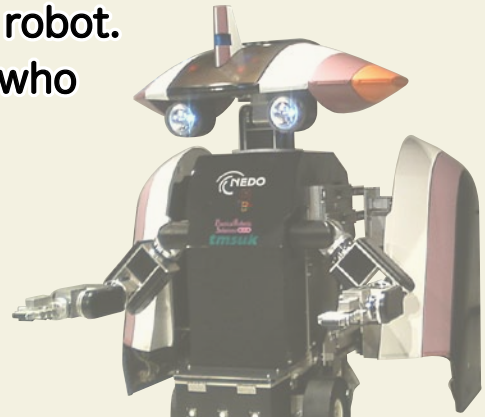


Scanning Laser Range Finder for Robotics "SOKUIKI Sensor"

# URG-04LX-UG01

## Robot's eye, No.1 Share

- ▶ Revolutionarily low price!!
- ▶ Laser range finder for autonomous robot.
- ▶ Best for students and researchers who are involved in robotics.
- ▶ User friendly.
- ▶ Smart to run on USB bus power.

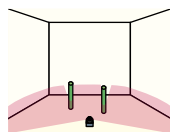
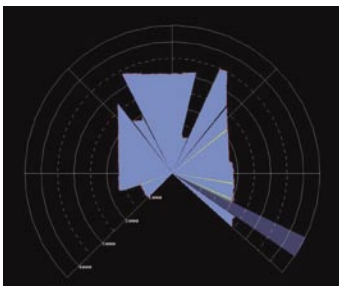
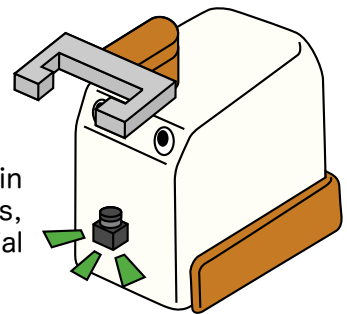


tmsuk Co., Ltd. · NEDO  
Outdoor security robot Mujiro

Simple-URG



Technology frontier and No.1 market share in Japan for service robots! Wide applications, from robot vision sensor to Automatic Material Handling System (AMHS).





Detection performance in the indoor environment with the existence of two poles.

- Light weight(160g). Best for robot!
- Low-power consumption (2.5W) for longer working hours.
- Wide-range (5600mm×240°).
- Accuracy(±30mm).\*
- Distance and angle data output with high angular resolution(0.352°).
- High quality product under Total Quality Management. Designed, manufactured and inspected by HOKUYO.

\* For distance above 1m, accuracy is ±3%.

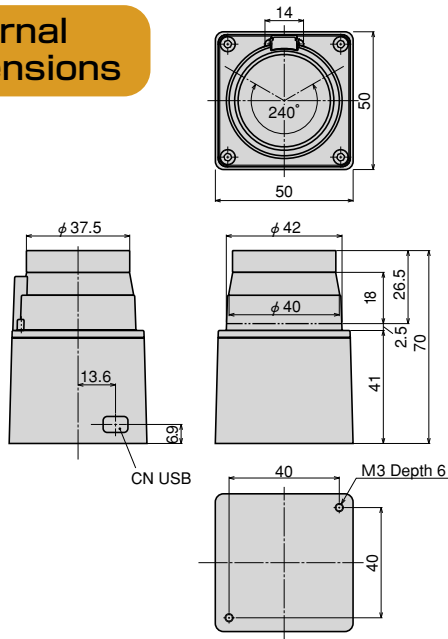
## Specifications

Product name	Scanning laser range finder (SOKUIKI sensor)	
Model No.	URG-04LX-UG01 (Simple-URG)	URG-04LX (Classic-URG)
Appearance		
Power source	5VDC ±5% (USB Bus power)	5VDC ±5%
Light source	Semiconductor laser diode (λ=785nm), Laser safety class 1	
Measuring area	20 to 5,600mm (white paper with 70mm X 70mm), 240°	
Accuracy	60 to 1,000mm : ±30mm, 1,000~4,095mm : ±3% of measurement	60 to 1,000mm : ±10mm, 1,000 to 4,095mm : ±1% of measurement
Angular resolution	Step angle : approx. 0.36° (360° / 1,024 steps)	
Scan time	100ms/scan	
Noise	25dB or less	
Interface	USB2.0/1.1 [Mini B] (Full Speed)	USB2.0/1.1 [Mini B] (Full Speed), RS-232C*1
Synchronous output	—————	NPN open-collector
Command System	SCIP Ver.2.0	SCIP Ver.1.1 or Ver.2.0
Ambient illuminance*2	Halogen/mercury lamp: 10,000Lux or less, Florescent: 6000 Lux (Max)	
Ambient temperature/humidity	-10 to +50 °C, 85% or less (Not condensing, not icing)	
Vibration resistance	10 to 55Hz, double amplitude 1.5mm each 2 hour in X, Y and Z directions	
Impact resistance	196m/s <sup>2</sup> , Each 10 time in X, Y and Z directions	
Weight	Approx. 160g	
Cable	—————	Power cable including RS-232C

\*1. Baud rate: 19.2k,57.6k,250k,750k.

\*2. These products are only for indoor applications. Strong sunlight may cause error output.

## External dimensions



## Connection

### ●Cable URG-C001 (Option)



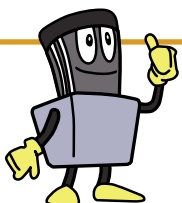
※During booting, 500mA current is required. Please use 2 USB cables (not included) for power supply from 2 USB ports.

Please connect to 2 independent USB ports which can supply 500mA.

⚠ PC's motherboard could be broken if the sensor is connected to the USB ports which are not able to supply 500mA x 2.

⚠ The GND lines connected to the USB are all shorted.

**Note** For applications that required high precision, URG-04LX (resolution ±10mm) is recommended.



★All information in this catalog is subject to change without notice.

International Sales Agencies :

India, Korea, Malaysia, Sweden, Taiwan,  
Thailand, UK, USA



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