

Non-Contact Displacement Sensor

- Measure velocity/length without contacting moving target
- Track fast acceleration (up to 100G)
- Measure zero velocity (from stopped position)



PD-704 / PD-710

CANON QUALITY, SIMPLE OPERATION

01

Non-Contact Measurement

Perform precious measurement of moving target without staining/damaging objects

03

Measure Velocity from Stopped Position

Capable of measuring in both moving directions from zero velocity (stopped position)

05

Safe Operation with White LED

No need for safety precautions to protect against Laser Radiation

02

Tracking High Acceleration

Tracking fast acceleration (up to 100G) by Canon Original Profile machining technology

04

Wide Tolerance of Vertical Shaking

Auto adjust to observe vertical wobbling $\pm 15\text{mm}$

06

Compact & Stand Alone

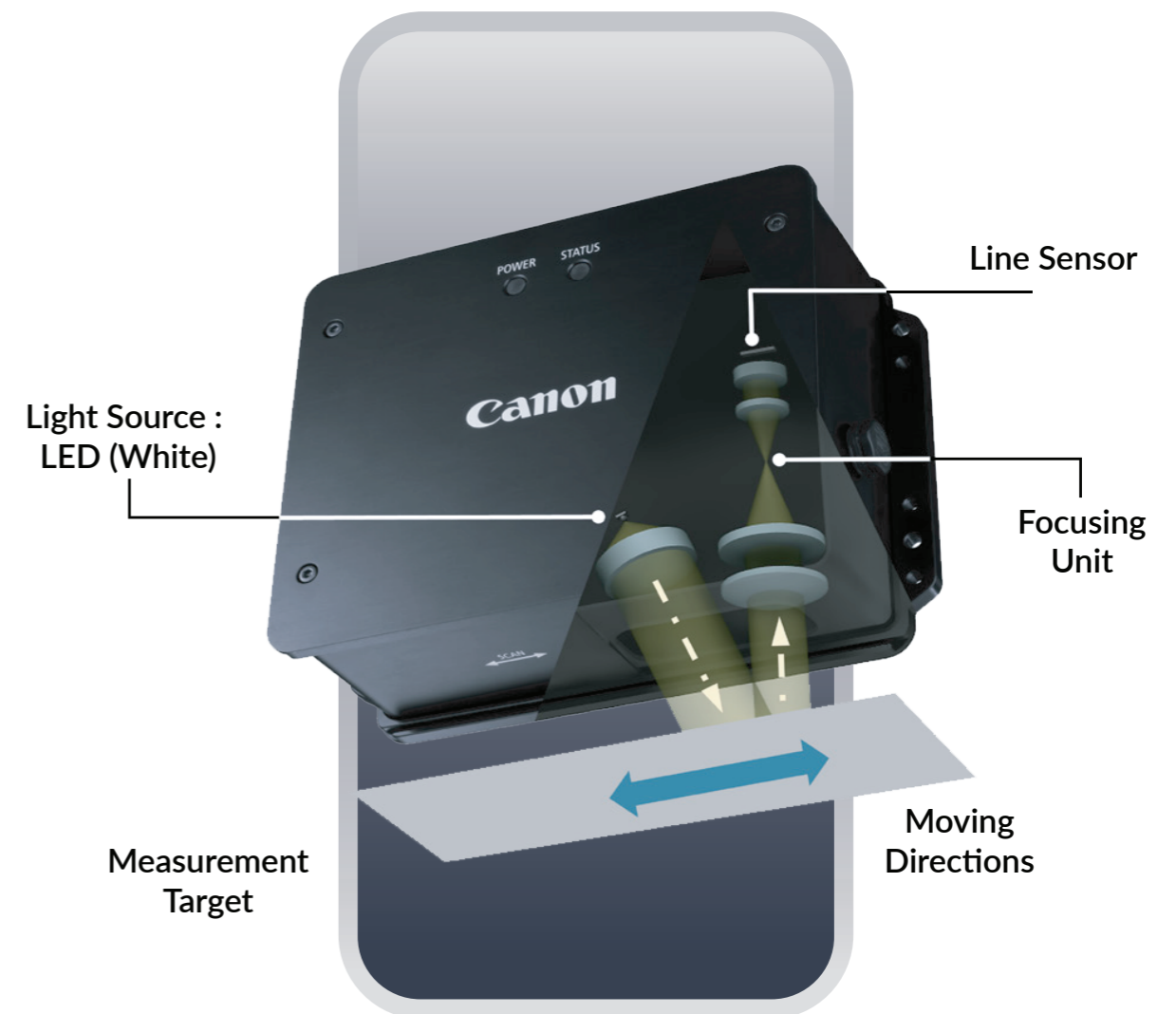
Space Saving (180mmx135mmx67mm) and easy to install with stand alone feature



MEASUREMENT ALGORITHM : PROFILE MATCHING

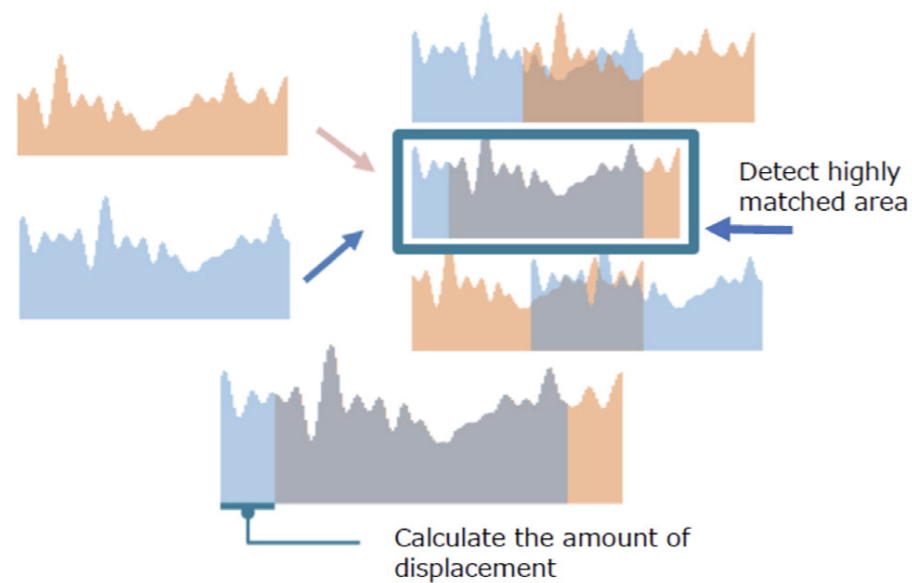
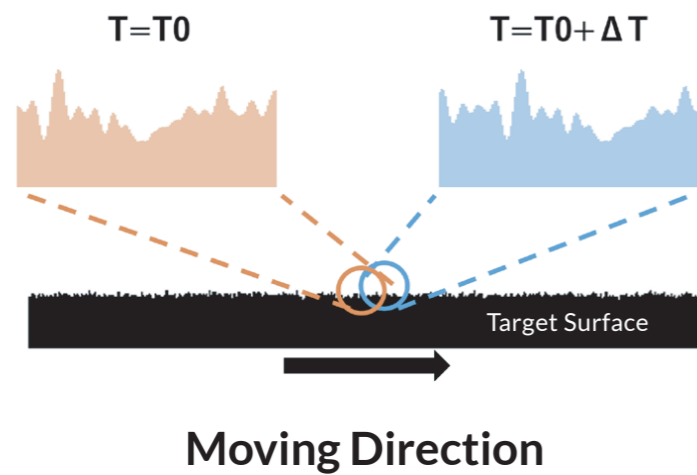
Profile matching method works by capturing consecutive images of an object and using these images (profiles) to search for correlations (matches). Based on the differences in position, the system calculates the distance and speed.

OPTICAL SYSTEM



PROFILE MATCHING METHOD

Line Sensor acquires target image at each sampling



PRODUCT PACKAGE

Standard Package

Main Unit



Power Cable



Waterproof Power Cable (5m)

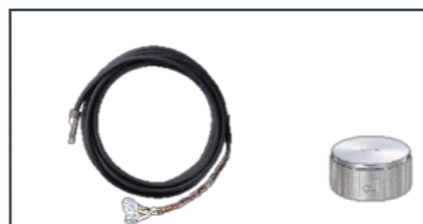
Software



Non-Contact Displacement Sensor Software
User's manual

Options

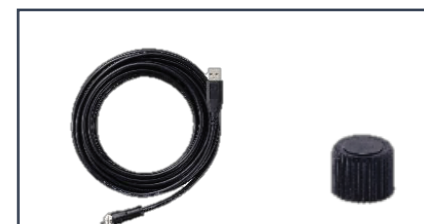
I/O Cable kit



I/O Cable (5m)

Waterproof Connector Cap

USB Cable kit



USB Cable (5m)

Waterproof I/O Connector Cap

Protection Cover



Protective Cover Unit
(to protect from water, dust)

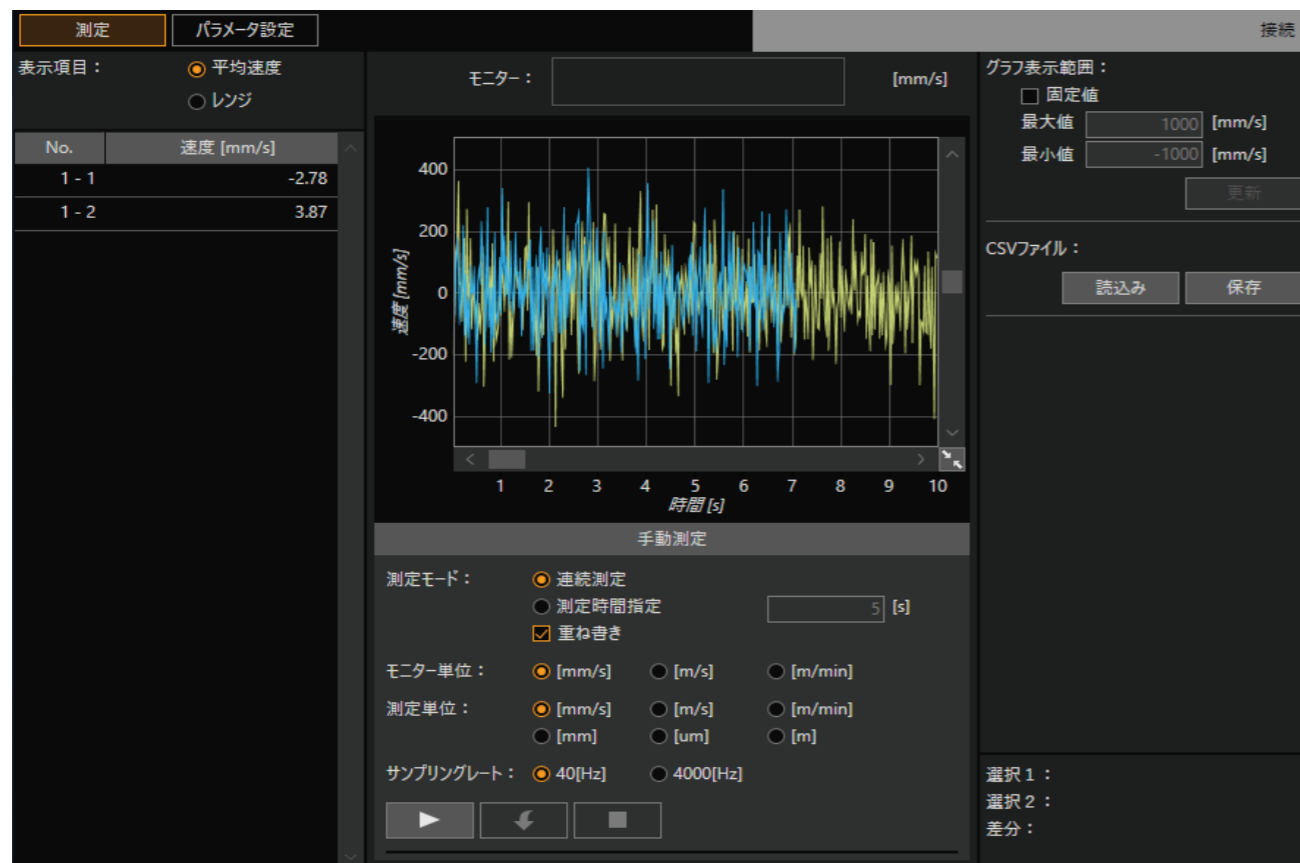
Alignment Tools



Alignment Tool for working distance to target

UTILITY SOFTWARE (STANDARD)

Measurement/Analyzing Software: (Non-Contact Displacement Sensor Software)



SPECIFICATIONS

	PD-704	PD-710
Measurement Method	Profile Matching Method	
Light source	LED	
Measurement distance (WD: Working Distance)	70mm	
Measurement range	±15mm	
Measurement speed range	-4,000mm/s to 4,000mm/s (Including the stop state)	-10,000mm/s ~ 10,000mm/s (Including a stationary state)
Maximum acceleration of target measurement object	100G	
Measurement resolution	1 μm	
Measurement accuracy ※1	WD:70mm ±5mm	±0.2% or 100 μm
	WD:70mm ±15mm	±0.5% or 100 μm
Measurement repeatability ※2	0.02% or 20 μm	
Light source	LED	
Sampling rate	4kHz	
Pulse output	1 μm to 1,000 μm (Set on application software) Phase A/B (RS422-compliant line driver)	
Other input/output	Trigger input	Photo coupler insulation : 5 to 24V
	Error output	Open collector output (Photo coupler insulation): 5 to 24V
USB interface	USB 2.0 Full Speed (Compatible with USB 1.1) compliant	
Operating temperature	0°C to 50°C	
Storage temperature	-30°C to 50°C	
Humidity	90%RH or lower	
Vibration	Bare vibration Evaluated in vibrating environment Frequency: 10 to 500Hz 5G sin wave 2 hours for XYZ directions	
Protection class ※3	IP65	
Power voltage	DC12V to 24V	
Power consumption	8W	
Weight	1.2kg	
Dimensions	180x135x67	
Materials	Aluminium, Window(Stainproof coating)	
Cable length	Power cable	5m
	I/O cable	5m
	USB cable	5m

CALIBRATION CERTIFICATE SERVICE

Calibration Certificate is available upon request. Annual Calibration is recommended for this product.

- ※1 When measured in our environment.
- ※2 When measured in our conditions.
- ※3 When used the optional kit.
- ※4 A glossy surface similar to a mirror may not be measured.

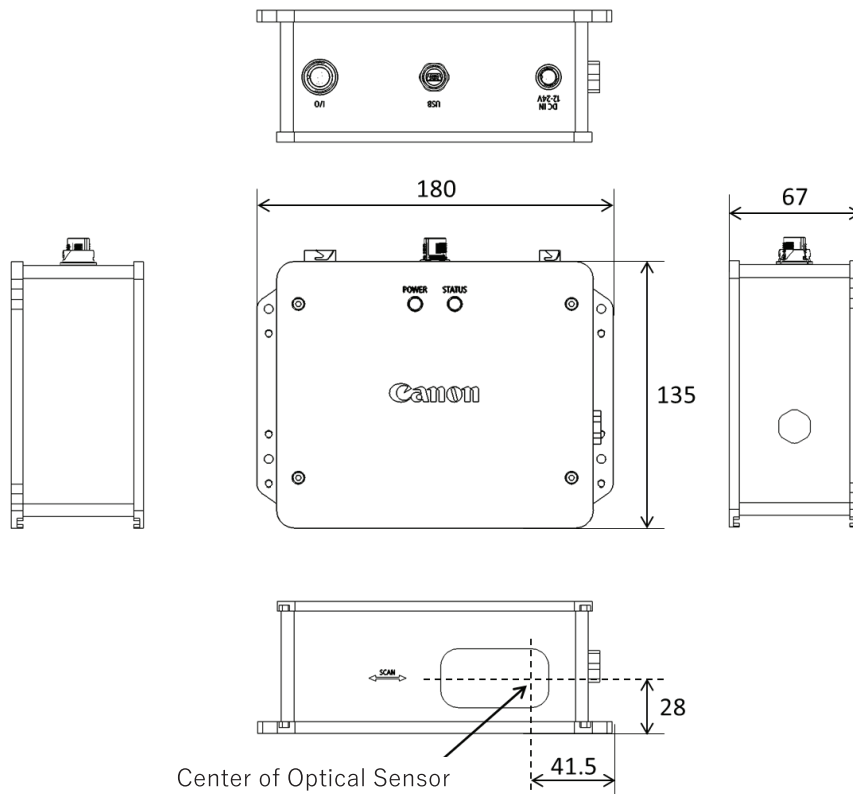


DIMENSION

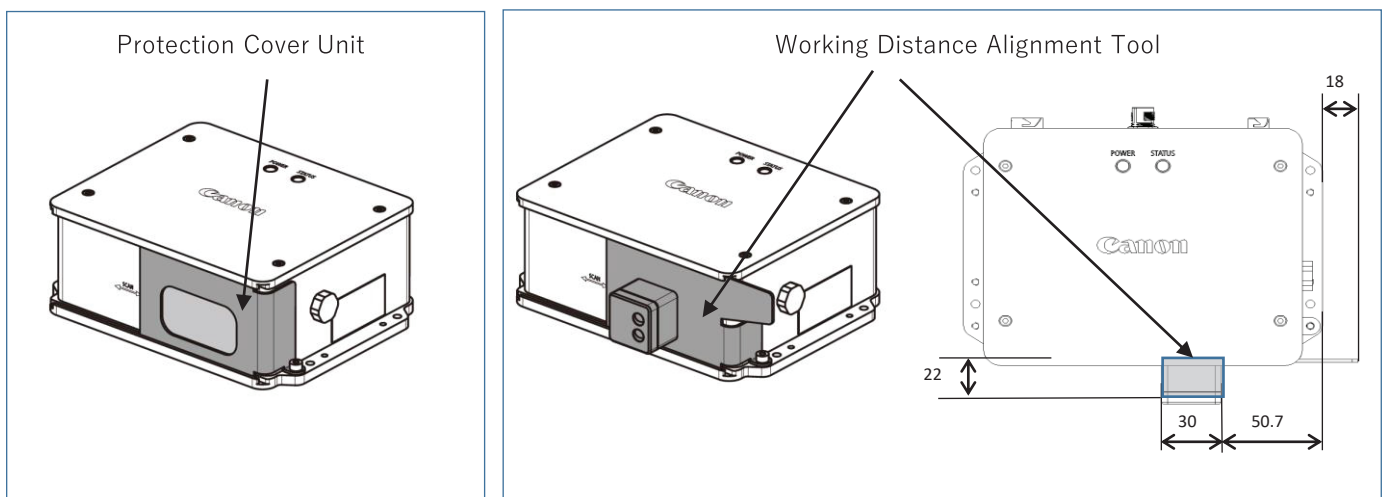
Main Unit

PD-704

(unit: mm)



Options



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