

Laser Ultrasonic Visualizing Inspector

LUVI-SP3



Detecting internal defects of objects from various industries, such as automobile, aerospace, powerplant, shipbuilding, steel, electronic parts and infrastructure

- Noncontact laser scanning & Visualized ultrasonic propagation
- No water immersion is necessary
- Easy detection of defect echo from visualized moving images
- Easy inspection of curved surface, irregular shape and narrow space
- Rapid & efficient inspection of a wide range

LUVI-SP3

■ Features

[Ultrasonic visualization & defect inspection]

By laser scanning on an object, defects or flaws can be detected simultaneously through the propagation of ultrasonic waves on moving images.

[Available for complex-shaped object]

Non-contact scanning method enables inspection of complex shapes such as curved surface, non-consecutive and small parts.

[Available for high-speed wide range inspection]

The combination of laser and Galvano mirror allows high-speed inspection in a wide range.

[Main applications]

LUVI is applied to inspect internal flaws, weld defects, CFRP delamination, and cracks from various industries including automobile, aerospace, steel, power plant, electronic parts, and infrastructure.

It is also applied to researches on the propagation mechanism of ultrasonic waves, performance evaluation of ultrasonic probe, structure soundness evaluation and material validity assessment.

■ Specifications

Visualization area :	View angle $\approx 50^\circ$
Number of channels :	2 channels
Distance to object :	0.1(4.0") - 2.0(78.7") m(inches)
Laser scanning speed :	Max. 1kHz
Laser power :	Max. 2mJ@1kHz (pulse YAG Laser / wave length 1064nm)
Laser pulse width :	2ns
Moving image :	Propagation image of ultrasonic waves
Other images :	Maximum amplitude(2D, 3D) B-scope(velocity graph), A-scope, Test sample picture (with laser scanning area guide light)
Operation display :	Touch panel (640×480)

■ Power consumption

- Max. : AC100V/350W
(Average 250W)

■ Software specifications

- Excel report (image and wave data)
- Web camera superimpose function
- Other result image analysis function

■ Option

- 8 channels

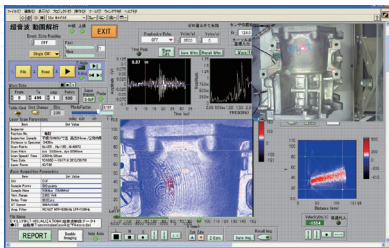
■ Size & Weight

- Laser unit Weight : 17.5Kg(38.6lb)
- Power unit Weight : 3.1Kg(6.8lb)
- Scan unit Weight : 7.0Kg(15.4lb)

- Size : W270(10.6")×H200(7.9")×D450(17.7")mm (inches)
- Size : W323(12.7")×H160(6.3")×D94(3.7")mm(inches)
- Size : W240(9.4")×H145(5.7")×D340(13.4")mm(inches)

■ Configuration

Moving image analysis window



Internal defects of an object can be detected by means of monitoring propagation of ultrasonic waves via moving images

Picture analysis window

