

KEYENCE TECHNICAL DOCUMENT

Product Data Sheet

LJ-X8080

01

PRODUCT IDENTIFICATION

Manufacturer	KEYENCE
Model	LJ-X8080
Family	LJ-X8000 Series
Product type	2D/3D laser profiler sensor head

02

VERIFIED TECHNICAL DATA

Reference distance	73 mm
Z-axis measurement range	±20.5 mm; full scale 41 mm
X-axis width	30 mm near; 35 mm reference; 39 mm far
Light source	405 nm visible blue semiconductor laser
Laser class and output	Class 2M; 10 mW
Spot size	Approx. 44 mm × 72 µm at reference distance
Z-axis repeatability	0.5 µm under manufacturer test conditions
X-axis repeatability	1 µm under manufacturer test conditions

03 REMAINING TECHNICAL DATA

Z-axis linearity	±0.03% of full scale
Profile data interval	12.5 µm; configurable from 10 µm
Profile data count	3200 points
Enclosure rating	IP67 with the specified compatible head cable
Ambient temperature	0 to +45 °C; metal-plate mounting required
Housing material	Aluminum
Weight	Approx. 1100 g

04 TECHNICAL AND APPLICATION NOTES

KEYENCE LJ-X8080 is an LJ-X8000 Series sensor head for high-speed 2D profile and 3D surface measurement. Its 73 mm reference distance, 41 mm Z full scale and 35 mm reference-width field suit precision inline inspection when paired with a compatible controller and head cable.

05 APPLICATIONS

- Inspect weld profiles and flush-and-gap geometry in automated cells.
- Measure terminal pitch and height differences during assembly.
- Capture 360-degree surface profiles with coordinated part motion.
- Verify terminal height and coplanarity in electronic components.
- Evaluate material uniformity and detect surface-shape variation.

06 INSTALLATION CONTROL

Confirm the LJ-X8080 nameplate and compatible LJ-X8000 controller before installation. Commission the system with a traceable reference target and verify profile stability before production use.

Source: KEYENCE LJ-X8080 official model specifications and LJ-X8000 application literature.