

Measurement technology

Keyence IM-7020

Initial start-up
February 2017

One machine in operation!



Keyence IM-7020	x-axis	y-axis	z-axis
Max. measurement range: image-based measurement	200 mm	200 mm	(4 x R50)
Max. measurement range: light sensor measurement	90 mm	90 mm	30 mm

Image sensor S7W-CMOS, 1",
6,6 Megapixel

Display resolution 0,1 μm

Measurement system resolution 0,2 μm

Max. allowable tool mass 5 kg

Image-based measurement

Repeatability (without/with measuring table displacement)	Standard Precision	$\pm 1 \mu\text{m} / \pm 2 \mu\text{m}$ $\pm 0,5 \mu\text{m} / \pm 1,5 \mu\text{m}$
Measurement accuracy (without/with measuring table displacement)	Standard Precision	$\pm 5 \mu\text{m} / (7 + 0,02l) \mu\text{m}$ $\pm 2 \mu\text{m} / (4 + 0,02l) \mu\text{m}$

Light sensor measurement

Diameter of the light sensor	$\varnothing 3 \text{ mm}$
Contact force	0,015 N
Repeatability	$\pm 2 \mu\text{m} + 5$
Measurement accuracy	$\pm(8 + 0,02 l) \mu\text{m}$