Sensor Head

Sensor Heads for Various Applications-select the Range and Type of Beam

New Regular-reflective Sensor Head Designed for Optimal Wafer Measurement

ZX2-LD50L Line beam type
ZX2-LD50 Spot beam type

Measurement range	50mm±10mm	
Resolution	1.5μm	
Linearity	Line beam	±0.05%F.S.*1
	Spot beam	±0.10%F.S.*1
Beam size	Line beam	Approx.60μm×2.6mm
	Spot beam	Approx.60μm dia.

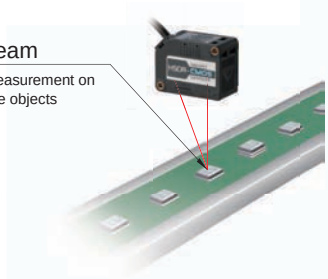
ZX2-LD50V Spot beam type (regular-reflective)

Measurement range	48mm±5mm	
Resolution	1.5μm	
Linearity	Spot beam	±0.3%F.S.
Beam size	Spot beam	Approx.60μm dia.

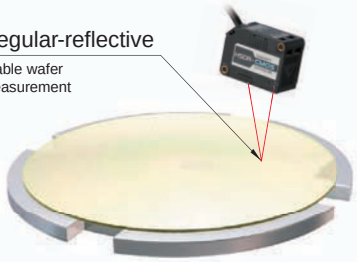
ZX2-LD100L Line beam type
ZX2-LD100 Spot beam type

Measurement range	100mm±35mm	
Resolution	5μm	
Linearity	Line beam	±0.05%F.S.*2
	Spot beam	±0.10%F.S.*2
Beam size	Line beam	Approx.110μm×2.7mm
	Spot beam	Approx.110μm dia.

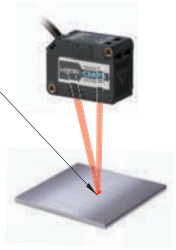
Spot beam
Precise measurement on micro-scale objects



Regular-reflective
Stable wafer measurement



Line beam
Stable measurement on rough-surfaced objects



*1 Using 40 to 50mm
*2 Using 65 to 100mm

Reliable measurements in harsh environments

IP67, robot cable & temperature characteristic 0.02% F.S./°C

IP67 protection class enables to use the sensor in harsh environments. A robot cable is used as standard between the head and amplifier, that the unit can be used reliably on moving parts. In addition, as 3D UV bond is used to fix the optical components rather than screws, stress can be controlled and a temperature characteristic 0.02% F.S./°C* is realized.

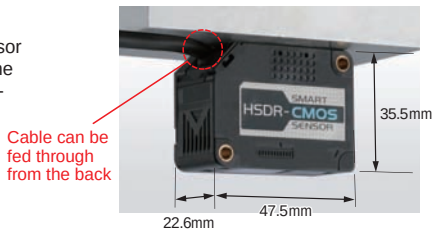
* If the room temperature varies 1°C, the measured value varies 0.02% F.S. (corresponding to 4μm for the Model ZX2-LD50)

Compact sensor for easy mounting

World smallest*

The world's smallest CMOS laser displacement sensor head is realized in a resin case. Enables to mount the sensor in smallest spaces and to minimize measurement errors arising from temperature fluctuations.

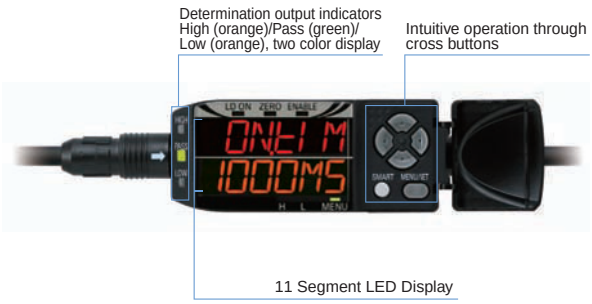
* According to OMRON investigation of CMOS laser displacement sensors performed in September 2010.



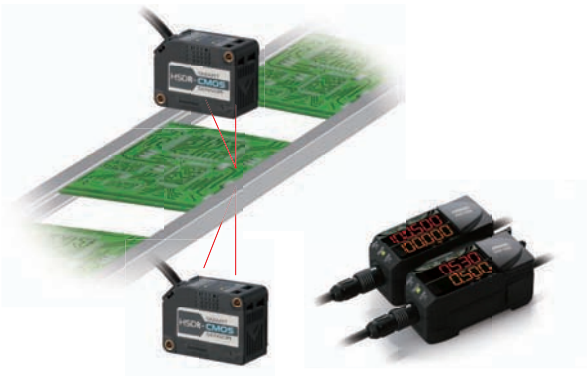
Amplifier and Calculating Unit

Ease of Use by “LED Display” and “Calculating Unit”

11-segment LED display for intuitive configuration



Easy calculations of measurements

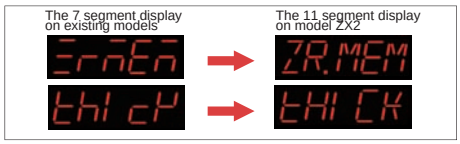


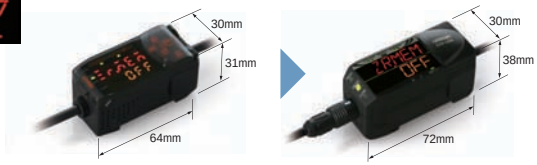
No need for a manual

11 Segment LED Display

An 11 segment LED display is integrated in the compact housing. Alphanumeric characters can be read with ease and there is no need to refer to a manual.

Comparison of the existing 7 segment LED display and the 11 segment LED display



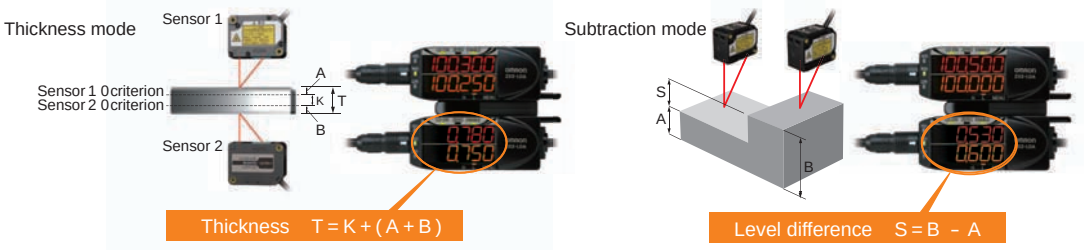


The compact housing stays just as it is

Perform two calculations with ease

Thickness + subtraction mode

The calculated results of two sensor heads are displayed on the amplifier unit by just connecting the calculating unit between the two amplifier units. The calculation function can be chosen from the two modes of thickness and subtraction. It is also possible to prevent mutual interference by coupling via the calculating units. (Up to five amplifier units can be connected.)



Easy change of setup

Equipped with 4 banks

The amplifier unit is equipped with four bank functions. Easy change of setup between four modes is supported by just switching between the bank functions.