#### **Dimensions**

Emitter

Sensor Heads

Two, 4.5 dia.

(Unit: mm)



# **ZX-LT030**



22.6 Vinyl insulated round cable, 4 dia., Standard length: 0.5 m Three, M4 x 25 + pan head screw 12,5 2.3 Connector Lens (8 x 36) 9.5 Two, M3. 35.9 depth: 5 Ţwo, M4 11.5 dia -0-



New Line-up of Wide-line-beam Sensors (30-mm Width)!

#### Sensor Head - Amplifier Connection Cable



Note: Do not use this document to	operate the Unit.	This document provides information mainly for selecting suitable models. Please read the Instruction Sheet carefully for information that the user must understand and accept before purchase, including information on warranty, limitations of liability, and precautions.		
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rubber sheets





#### ZX Series multi-point measurement and calculation functions further expand the application coverage.









## Technology Front APC nulls the effects of light reflections from workpieces with mirror surfaces

The output power of the semiconductor laser in conventional laser sensors has to be monitored and controlled. When reflections from the workpiece enter the built-in monitoring photodiode that is used for this purpose, the output power changes and adversely affects the measurement. The ZX-LT030 uses front APC technology to solve this problem.

#### Integrated APC Method (Conventional Laser Sensor)

Light reflected from the workpiece returns directly to the monitoring photodiode inside the laser diode, which reduces the output power and causes measurement errors.



\*APC: Auto Power Control

#### Front APC Method (ZX-LT030)

Light reflected from the workpiece does not return to the external monitoring photodiode, so there is no change in output power.



#### **Ordering Information**

Sensor Heads (Through-beam)					
Optical system	Measuring width	Sensing distance	Resolution (See note.)	Model	
	1 mm dia.	0 to 2000 mm		ZX-LT001	
Through-beam	5 mm		4 μm	ZX-LT005	
	10 mm	0 to 500 mm		ZX-LT010	
	30 mm		12 µm	ZX-LT030	

Note: For an average count of 64.

# Appearance Power supply Output type DC NPN

Note: Compatible connection with the Sensor Head.

#### Ratings

Iten	Model ZX-LT001		T001	ZX-LT005	ZX-LT010	ZX-LT030
App	licable Amplifier Units			ZX-LDA11(-N) or ZX-LDA41	(-N)	
Ligh	nt source		Visible-light semiconductor laser with a wavelength of 650 nm; class1			
N	faximum output	0.2 mW	max.	0.35 mW	0.2 mW max.	
Mea	asurement distance	0 to 500 mm 500 to 2000 mm				
Mea	asurement width	1-mm dia.	1- to 2.5-mm dia.	5 mm	10 mm	30 mm
Min	imum sensing object	8-μm dia. (opaque)	50-µm dia. (opaque)	0.05-mm dia. (opaque)	0.1-mm dia. (opaque)	0.3-mm dia. (opaque)
Res	solution (See note 1.)	4 µm (See note 2.)		4 µm (See note 3.)		12 µm (See note 4.)
Temperature characteristic ±0.2% FS/°C (FS =		C(FS = measurement range)		±0.3% FS/°C		
Am	bient illumination	Incandescent lamp: 10,000 lx max.				
Ambient temperature		Operating: 0 to 50 $^\circ\text{C}$ (with no icing or condensation) Storage: –25 to 70 $^\circ\text{C}$				
Am	bient humidity	Operating: 35% to 85% (with no condensation)				
als	Case	Polyether imide				Zine die eest
Iteria	Cover	Polycarbonate				Zinc die-cast
Ra	Front filter	Glass				
Deg	ree of protection IP40					
Wei	Weight (packed state) Approx. 220 g			Approx. 450 g		
Accessories Instruction manual, sensor head-a		ensor head-amplifier c	onnection cable			
Optical axis adjustment seal				Mounting Bracket		

Note 1. This value is obtained by converting the deviation (±3σ) in the linear output that results when the sensor head is connected to the amplifier unit, into the measurement width.
 2. For an average count of 64 with measurement distance of 0 to 500 mm. The value is 5 µm for an average count of 32.

2. For an average count of 64 with measurement distance of 0 to 500 mm. The value is 5 μm for an average count of 32. This is the value that results when a minimum sensing object blocks the light near the center of the 1-mm measurement width.

3. For an average count of 64. The value is 5  $\mu$ m for an average count of 32.

4. For an average count of 64. The value is 15  $\mu$ m for an average count of 32.

#### **Engineering Data**

Linearity Characteristic (WD: Distance from Receiver to workpiece) (Measurement distance: 500 mm)



(Unit: mm)

Model
ZX-LDA11-N
ZX-LDA41-N