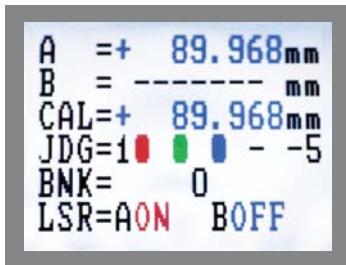


CCD Laser Displacement Sensor

- *High Speed 100 Microsecond Sampling Rate*
- *Highly Accurate +/- 0.1% F.S. Linearity*
- *Unaffected by Color and/or Surface Conditions*
- *RS232 serial interface*
- *Displacement measurement of transparent surfaces
CD4-L25 with CD4A-L(N/P) controller*



Innovative On-board Color LCD display makes setup quick and easy, it also provides a simple means for online confirmation of settings and operation.



Inspecting Tire Form

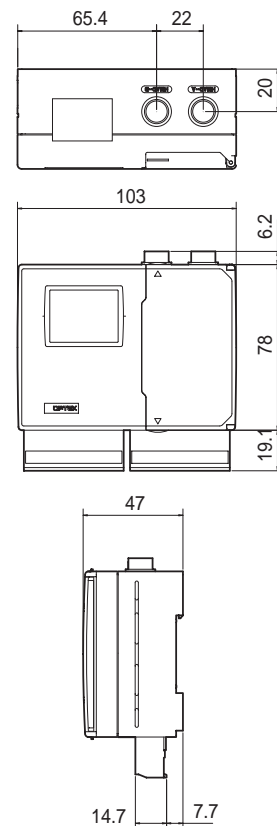
High precision measurement of surface irregularities on black rubber.

Measuring Thickness

One controller will operate two laser sensing heads to create a simple setup for thickness measurement.



Type	Optex CD4 Series Laser Displacement Sensor			
	25 mm Focus Distance Transparent Detection	30 mm Focus Distance	85 mm Focus Distance	350 mm Focus Distance
Model Number	CD4-L25	CD4-30	CD4-85	CD4-350
Meas. Center Dist.	25 mm (1.18 in.)	30 mm (1.18 in.)	85 mm (3.346 in.)	350 mm (13.78 in.)
Measurement Range	± 1 mm (0.197 in.)	± 5 mm (0.197 in.)	± 20 mm (0.787 in.)	± 100 mm (3.94 in.)
Projected Spot Size ¹	25 x 35 μm	30 x 100 μm	70 x 290 μm	300 x 700 μm
Resolution ²	0.1 μm (0.0039 mil)	1 μm (0.039 mil)	3 μm (0.118 mil)	40 μm (1.56 mil)
Linearity ³	± 0.1% Full Scale			
Light Source	Class II Red Laser Diode, 650 nm, max. output 1 mW			
Supply Voltage	Supplied from amplifier unit			
Indicators	Laser Emission Indicator Green: ON during laser emission			
	Distance Indicator Red (Near), Orange (Middle), Green (Far) Alternate Red / Green (Out of range)			
IP Protection Category	IP67			
Operating Temperature	-10°C to +45°C			
Operating Humidity	35 to 85% RH			
Temperature Drift	± 0.01% Full Scale / °C			
Ambient Light Immunity	Incandescent lamp 3,000 lux.			
Shock Resistance	50 G (500 m/s ²)			
Material	Sensor Head Housing: Diecast Aluminum Lens Cover of Emitting / Receiving opening: Glass			
Cable Extension	Max. 10 M with extension cable (optional)			
Weight	250 grams (including 50 cm cable)			

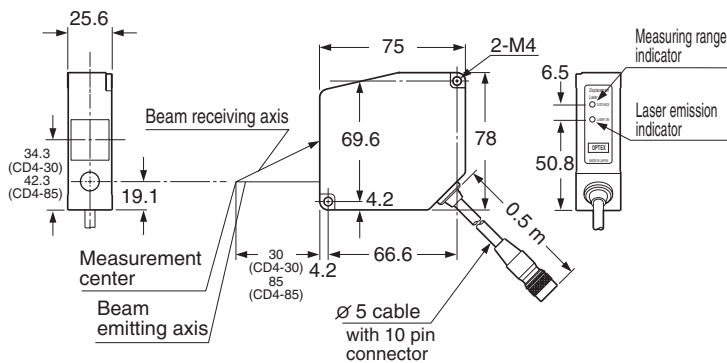


* 1 Defined with center strength 1/e²(13.5%) There may be leak light other than the specified Projected Spot Size.
The sensor may be affected when there is a highly reflective object close to the detection area.
* 2 Object: White Ceramic, averaged 256 times. The value is dependent upon the target surface.
* 3 Object: White Ceramic - Distance Range: Center of Range, averaged 256 times. The value is dependent upon the target surface.

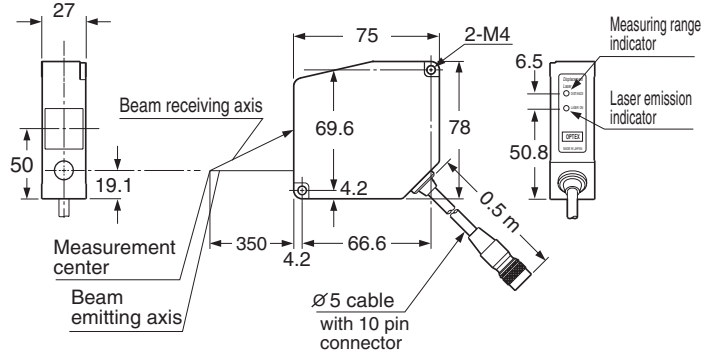
Type	Optex CD4 Series Amplifiers	
	Standard	Transparent Detection
Model Number	CD4A-(N/P)	CD4A-L(N/P)
Applicable Sensing Heads	CD4-30, CD4-85, CD4-350	CD4-L25
Laser Heads / Amplifier	Max. 2 sensing heads	
Sampling Frequency	100 μs	
Supply Voltage	12 to 24 VDC ± 10%	
Analog Output	Voltage	± 5 VDC / F.S.
	Current	4 to 20 mA / F.S.
Control Outputs	NPN	PNP
	5 ~ HH, HI, GO, LO, LL	
Features	Average Sampling Times	
	Filter Mode	
	Arithmetic Processing	
	Hold Setting	
	Output during Alarm	
	Shift Setting	
	Span Setting	
	Output Control	
IP Protection Category	Timer Function	
	Memory Function	
	Memory Bank Function	
	RS232 Communications	
IP Protection Category	IP20	

Dimensions

CD4-30 / CD4-85 Sensing Head



CD4-350 Sensing Head



Optex CD4 Extension Cables		
Model Number	CD4CN-S	CD4CN-5S
Length	2 meters	5 meters

* 1 Cables can be connected together to reach a maximum distance of 10 meters.
* 2 Robotic cable is available upon request.