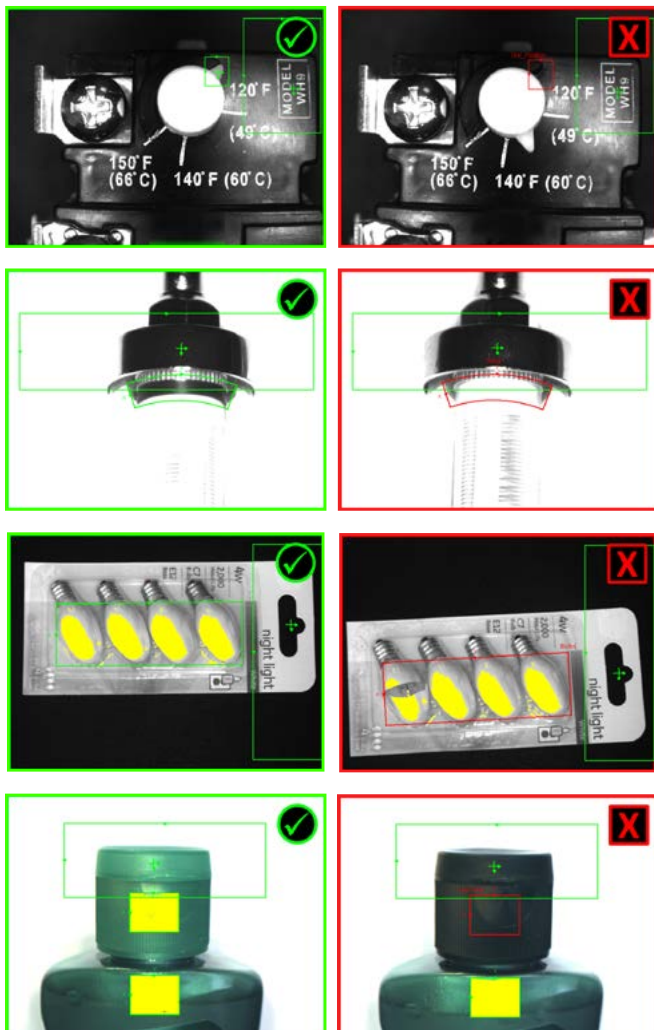


IN-SIGHT 2000 SERIES VISION SENSORS

In-Sight® 2000 series vision sensors combine the power of an In-Sight vision system with the simplicity and affordability of a vision sensor. Ideal for solving error-proofing applications, these vision sensors set new standards for value, ease of use and flexibility thanks to a powerful combination of proven In-Sight vision tools, simple setup, and a modular design featuring field-changeable lighting and optics.

Together with the In-Sight Explorer™ EasyBuilder® interface, which provides fast, step-by-step application setup, these vision sensors allow even novice users to achieve extremely reliable inspection performance in nearly any production environment.

In-Sight 2000 series vision sensors can also be configured for in-line and right-angle installation and are available in two form factors. This modular body design provides maximum flexibility to mount in tight spaces, allows for customized wiring and optical paths, and minimizes the need to design new mechanical fixtures.



Benefits at-a-glance

- Affordable vision sensor powered by In-Sight Explorer software and EasyBuilder—the same interface used for all In-Sight vision systems
- Simple for both new and existing users to meet their automated inspection challenges
- Monochrome and color sensor models solve presence/absence applications, including color verification
- Proven, reliable Cognex In-Sight vision tools
- Compact, modular design with field-changeable, integrated optics and lighting
- Autofocus lens eliminates the need to manually refocus or adjust the mounting height of the sensor during line changeovers
- Fully compatible with Cognex VisionView® PC software and VisionView 900 HMI touchscreen panel

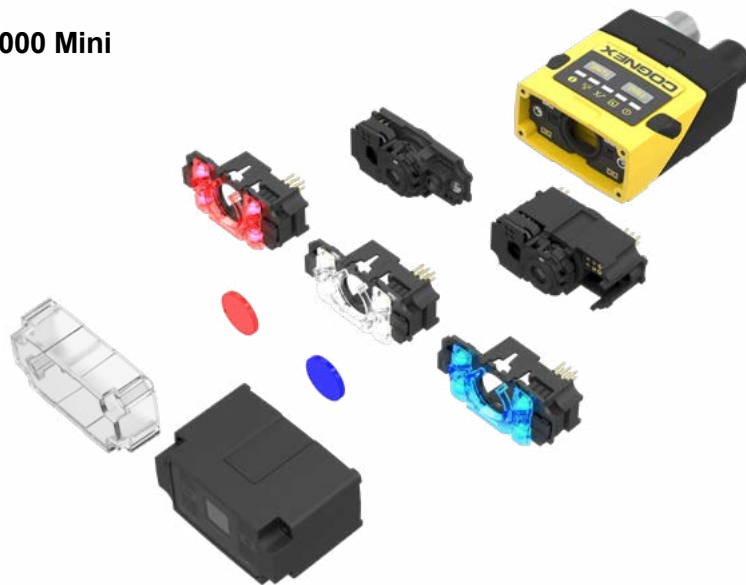
Choice of lighting and optics for different application requirements

In-Sight 2000 series models include an integrated lens and LED illumination that eliminates the need for costly external lighting. Lenses and lighting are field-interchangeable to adjust to different application requirements. The In-Sight 2000 Mini has a smaller form factor making it ideal for mounting in tight spaces.

In-Sight 2000



In-Sight 2000 Mini



A model for any application

Available in both monochrome and color image models, and with three different combinations of vision tools, the In-Sight 2000 series lets you choose the level of capability you need. Many applications require only the simple pattern matching of the 2000-110 models. The 2000-120 and 2000-130 models offer larger tool sets for solving a wider range of applications, including a 2x magnification mode that delivers greater image detail for inspecting smaller features on parts. Whatever your inspection application, there's an In-Sight 2000 vision sensor model that's right for the job.

Fast, intuitive setup with EasyBuilder

With its intuitive, point-and-click presence/absence tools, the EasyBuilder interface is ideal for setting up simple pass/fail inspections. When more complex inspections are required, users can build on their experience to create vision applications using more advanced In-Sight vision systems—in the same In-Sight Explorer interface.

Simple steps guide you through configuring and deploying your application

Choose tools from the list to add them to your inspection

Name	Pass	Result	Type
Flavor	Pass		Pattern
DateOfCode	Pass		Pixel Count
Straw	Pass		Brightness
Seal	Pass		Brightness
LeftFlap	Pass		Contrast
RightFlap	Pass		Contrast

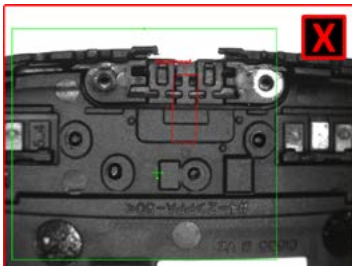
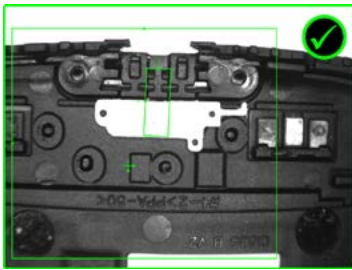
See inspection results at a glance

Point and click controls make it quick and easy to set up any tool to achieve reliable results

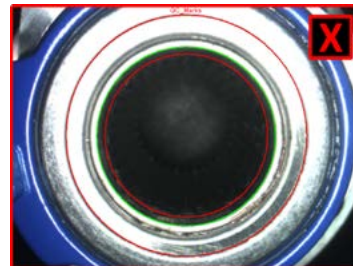
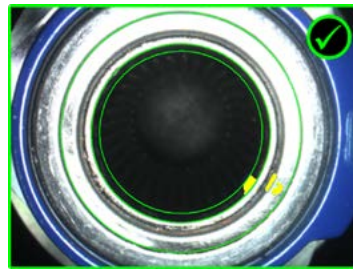
A solution for any industry

In-Sight 2000 series vision sensors deliver simple pass/fail results across a wide range of applications in multiple industries. Powerful vision tools deliver robust inspection results for parts in all shapes and sizes. Below, a contrast tool is used to detect the presence of a gasket in an electronics sub-assembly, a pixel count tool is used to identify QA marks on an automotive part, and a color pixel count tool is used to inspect the proper packaging for a fruit snack.

Electronics



Automotive



Food and Beverage

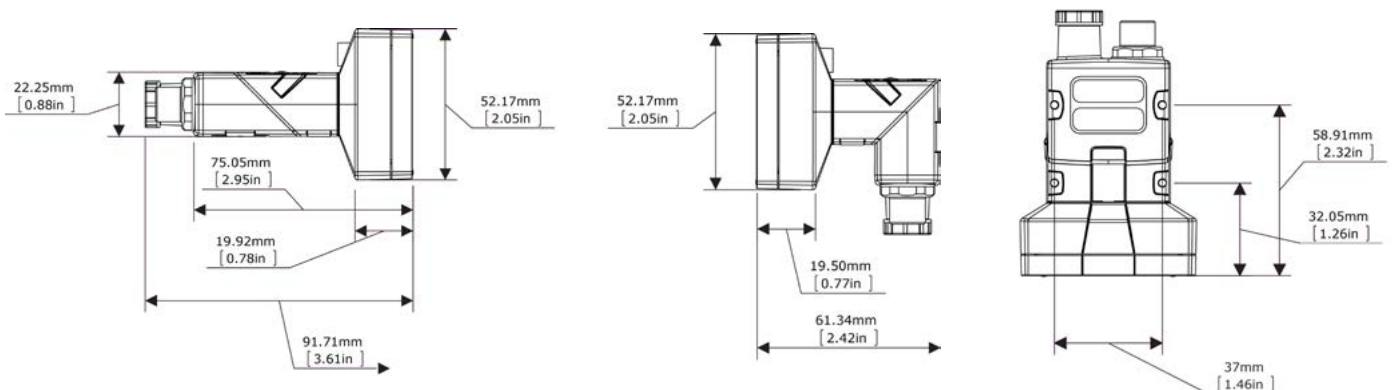


IN-SIGHT 2000 MODELS

		2000-110	2000-120	2000-130	2000-23M	2000-120C	2000-130C
User Interface		In-Sight Explorer EasyBuilder, Cognex VisionView PC Software and VisionView 900 HMI touchscreen panel					
1/3" CMOS Imager		Monochrome	Monochrome	Monochrome	Monochrome	Color	Color
S-Mount/M12 Lenses		Standard: Autofocus (liquid lens) 6.2 mm or manual focus 8 mm Optional: Manual focus 3.6 mm, 6 mm, 12 mm, 16 mm, 25 mm					
Image Modes	640 x 480 (standard)	✓	✓	✓	✓	✓	✓
	640 x 480 (2x magnification)	✗	✓	✓	✓	✓	✓
	800 x 600 (2x magnification)	✗	✗	✓	✓	✗	✓
Lighting	Standard	Diffuse white LED ring light					
	Options	Red, blue and IR LED ring lights and lens filters, and polarized light cover				Polarized light cover	
Maximum Acquisition Speed ¹		40 fps	75 fps	75 fps	75 fps	55 fps	55 fps
Relative Processing Speed		1x	2x	2x	2x	2x	2x
Location Tools	Pattern	✓	✓	✓	✓	✓	✓
	Edge, Circle	✗	✗	✓	✓	✗	✓
Inspection Tools	Pattern	✓	✓	✓	✓	✓	✓
	Pixel Count	✗	Grayscale	Grayscale	Grayscale	Color	Color
	Brightness & Contrast	✗	✓	✓	✓	✓	✓
	Edges	✗	✗	✓	✓	✗	✓
Measurement & Counting Tools	Distance, Angle & Diameter	✗	✗	✓	✓	✗	✓
	Patterns & Edges	✗	✗	✓	✓	✗	✓
Geometry, Math and Plot Tools		✗	✗	✗	✓	✗	✗
Communications & I/O	Protocols	EtherNet/IP, PROFINET, SLMP, SLMP Scanner, Modbus TCP, TCP/IP, UDP, FTP, Telnet (Native Mode), RS-232					
	Connectors	(1) Industrial M12 Ethernet, (1) M12 Power & I/O					
	Inputs & Outputs	(1) Acquisition trigger, (1) General purpose input ² , (4) General purpose outputs ²					
Mechanical	Dimensions	In-line configuration: 92 mm (3.61 in) x 60 mm (2.38 in) x 52 mm (2.05 in) Right-angle configuration: 61 mm (2.42 in) x 60 mm (2.38 in) x 52 mm (2.05 in)					
	Weight	200 g (7.05 oz)					
	Material and Protection	Painted aluminum, IP65-rated housing					
Operating	Power	24 VDC ±10%, 48 W (2.0 A) maximum when the illumination is on					
	Temperature	0 °C to 40 °C (32 °F to 104 °F)					

¹ Maximum framerate with minimum exposure; no vision tools; and 640 x 480 image with 2x Image Magnification enabled (for 2000-120/130 models)

² (7) general purpose inputs and (8) general purpose outputs when using optional CIO-1400 I/O Expansion Module.

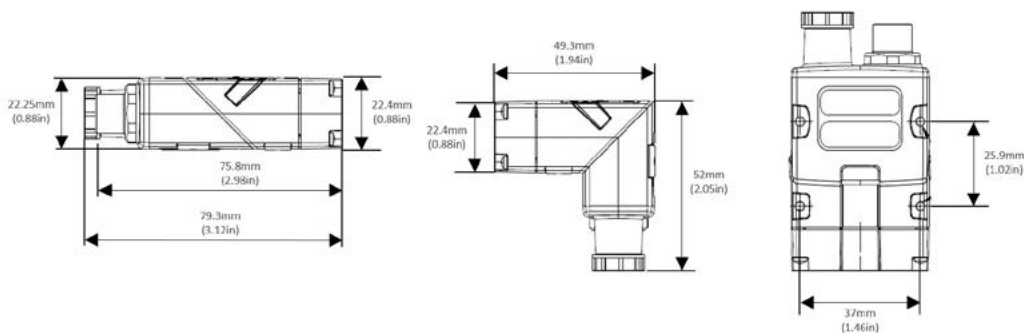


IN-SIGHT 2000 MINI MODELS

		2000-110 Mini	2000-120 Mini	2000-130 Mini	2000-120C Mini	2000-130C Mini
User Interface		In-Sight Explorer EasyBuilder, Cognex VisionView PC Software and VisionView 900 HMI touchscreen panel				
1/3" CMOS Imager		Monochrome	Monochrome	Monochrome	Color	Color
S-Mount/M12 Lenses		Standard: Autofocus (liquid lens) 6.2 mm or 16 mm				
Image Modes	640 x 480 (standard)	✓	✓	✓	✓	✓
	640 x 480 (2x magnification)	✗	✓	✓	✓	✓
	800 x 600 (2x magnification)	✗	✗	✓	✗	✓
Lighting	Standard	Modular red LEDs			Modular white LEDs	
	Options	White, blue & IR LED lights, band-pass filters & polarizing filter			Polarized light cover	
Maximum Acquisition Speed ¹		40 fps	75 fps	75 fps	55 fps	55 fps
Relative Processing Speed		1x	2x	2x	2x	2x
Location Tools	Pattern	✓	✓	✓	✓	✓
	Edge, Circle	✗	✗	✓	✗	✓
Inspection Tools	Pattern	✓	✓	✓	✓	✓
	Pixel Count	✗	Grayscale	Grayscale	Color	Color
	Brightness & Contrast	✗	✓	✓	✓	✓
	Edges	✗	✗	✓	✗	✓
Measurement & Counting Tools	Distance, Angle & Diameter	✗	✗	✓	✗	✓
	Patterns & Edges	✗	✗	✓	✗	✓
Communications & I/O	Protocols	EtherNet/IP, PROFINET, SLMP, SLMP Scanner, Modbus TCP, TCP/IP, UDP, FTP, Telnet (Native Mode), RS-232				
	Connectors	(1) Industrial M12 Ethernet, (1) M12 Power & I/O				
	Inputs & Outputs	(1) Acquisition trigger, (1) General purpose input ² , (4) General purpose outputs ²				
Mechanical	Dimensions	In-line configuration: 43.1 mm (1.69 in) x 22.4 mm (0.88 in) x 64 mm (2.51 in) Right-angle configuration: 43.1 mm (1.69 in) x 35.8 mm (1.40 in) x 49.3 mm (1.94 in)				
	Weight	142 g (5 oz)				
	Material and Protection	Painted aluminum, IP65-rated housing				
Operating	Power	<3.0 W				
	Temperature	0 °C to 40 °C (32 °F to 104 °F)				

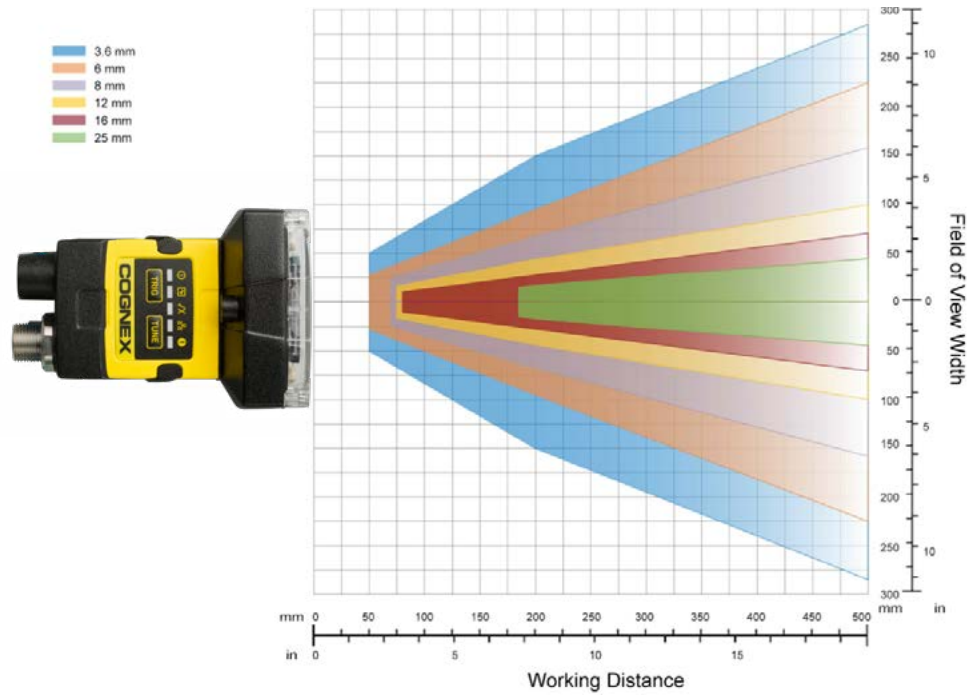
¹ Maximum framerate with minimum exposure; no vision tools; and 640 x 480 image with 2x Image Magnification enabled (for 2000-120/130 models)

² (7) general purpose inputs and (8) general purpose outputs when using optional CIO-1400 I/O Expansion Module.

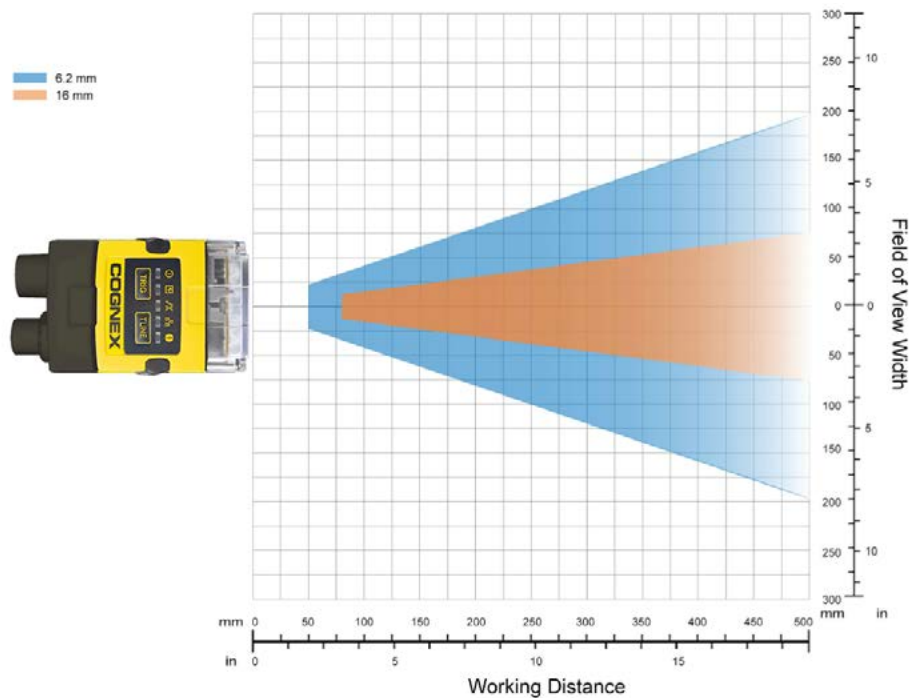


Field of View Diagrams

In-Sight 2000



In-Sight 2000 Mini



COGNEX

Companies around the world rely on Cognex vision and barcode reading solutions to optimize quality, drive down costs and control traceability.

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