

## Specifications

### Camera Models:

Insight Color: Color Camera  
Insight B/W: Monochrome Camera

### CCD Information:

Insight Color: Kodak KAI-2000  
Color Mosaic

Insight B/W: Kodak KAI-2000  
Monochrome

Imaging Area: 11.8mm x 8.9mm

Active Pixels: 1600 x 1200 (1.92 million)

Pixel Size: 7.4  $\mu$ m square pixels

Full Well Charge Capacity:  
35,000e

### Insight Color Image Resolution:

Live Mode: 800 x 600

Captured Image: 1600 x 1200

### Insight B/W Image Resolution:

Live Mode: 1600 x 1200

Captured Image: 1600 x 1200

### Bit Depth of Insight Color:

Sampled at: 30 bit RGB

Saved file formats: 24 bit RGB,  
36 bit RGB or 48 bit RGB

### Bit Depth of Insight B/W:

Sampled at: 10 bit Monochrome

Saved file formats: 8 bit mono,  
12 bit mono or 16 bit mono

### Pixel Readout Rate:

Live mode: 36 MHz  
(2 channels x 18 Mhz)

Captured Images: 18 MHz  
(1 channel x 18 Mhz)

### Live Image Frame Rate

(733 PIII w/810e Graphics):

Insight Color: 15 frames/s

Insight B/W: 15 frames/s

### Acquisition Time to Monitor

(processor dependent):

Insight Color: < 6 seconds

Insight B/W: < 1 second

### A/D Converter Full Scale Set to:

31,500 e (for Gain=1)

Signal to Noise Ratio: 58 dB

### Anti-blooming Factor:

300x(nominal), 100x (minimum)

Exposure: Auto and User Defined

Range: 1 ms- 536 seconds

(1 Saturated Hot Pixel @ 5 sec. typ.)

Lens Mount: "C"-mount

Flange to Rear Lens Clearance:  
0.46" (11.7 mm) maximum

### Computer Interface Card Supplied:

PCI Bus Card

### External Shutter Control:

BNC, TTL Level Output

### Power Requirements:

100-240 VAC, 47-63 Hz

Weight: Camera: 1.5 lbs.

Power Supply: 0.5 lbs.

Certifications: CE, FCC Class A

### Computer Requirements:

PC: Pentium 166 or greater  
Windows 95/98/00/NT

Mac: Power PC w/ PCI Bus, Mac OS 8.6  
or greater

RAM: 64 MB or greater

Video Card: Support of 24 bit RGB at  
desired resolution

### Software Features:

- Color Live Image Window
- Image Capture Window
- Predefined Image Types
- Auto Exposure
- Auto White Balance
- Flatfield Correction
- Zoom & Pan Window
- Image Enhancement Tools
- Annotation
- Calibration Mark
- Measure: Length,  
Perimeter Area, Angle
- Print Layout Dialog
- On line Help Menu
- Imaging Archiving Database
- Report Generator
- Sequential Imaging

### Image File Formats:

TIFF, TIFF-JPEG, JPEG, BMP, PICT

### File Size:

Insight Color:

24 bit / 5.49 MB

36 bit / 8.24 MB

48 bit / 10.99MB

Insight B/W:

8 Bit / 1.83 MB

12 bit / 2.75 MB

16 bit / 3.66 MB

### Drivers Included:

Twain for Windows 95/98/00/NT

AppleEvent for Mac OS

### Native Drivers for 3rd Party Software:

Call or visit our website

### Items Included:

Camera, PCI Plug-In Board, Power  
Supply, Power Cord, Power Supply Cable,  
Data Cable, Software Install CD  
(includes Windows Twain Driver  
and Mac AppleEvent), User Guide,  
1 Year Limited Warranty

### Suggested Couplers:

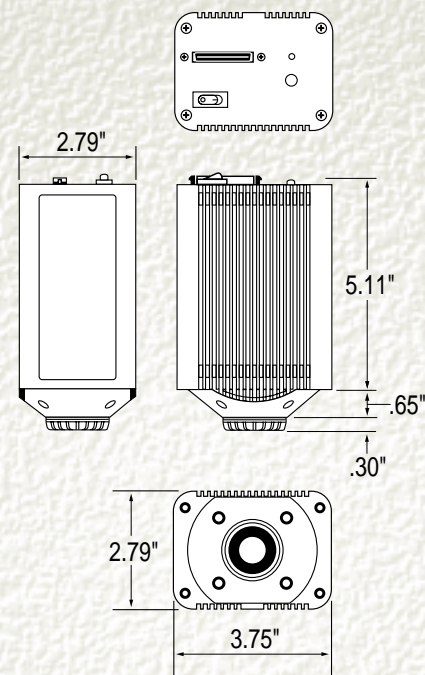
D10XXC: 1x C-Mount Coupler or

HRU060-CMT: 0.6x Ultra-Wide Field of  
View (25 FN) Plan Apochromat C-Mount  
Coupler

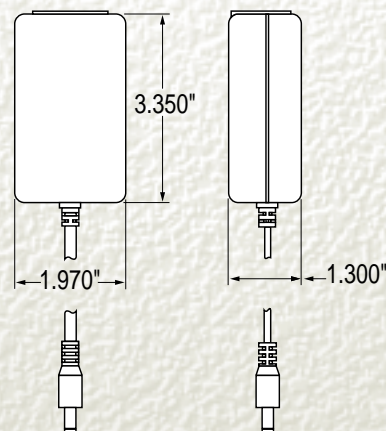
### Suggested Lens:

"C"- Mount Lens for 1" Format CCD

### Camera Dimensions



### Power Supply Dimensions



**DIAGNOSTIC**  
instruments, inc.

6540 Burroughs St.  
Sterling Heights, MI 48314-2133 USA  
Ph: 810-731-6000  
Fx: 810-731-6469  
E-mail: [Info@diaginc.com](mailto:Info@diaginc.com)  
Website: [www.diaginc.com](http://www.diaginc.com)

Don't Let Video Technology  
Limit Your Resolution ...

GET

**SPOT**  
**INSIGHT**

INSIGHT

Digital Cameras

provide real-time

viewing and

high resolution

digital images in an

easy to use

interface.

**DIAGNOSTIC**  
instruments, inc.



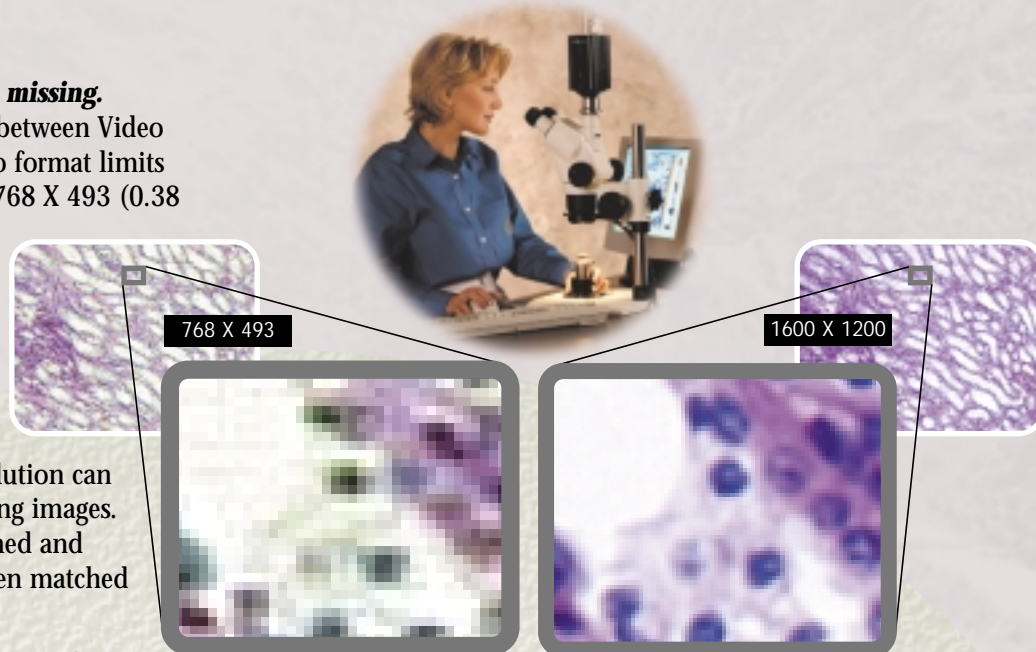
# SPOT INSIGHT

## Allows you to take the next step in...

### ... RESOLUTION

#### See what you've been missing.

What's the difference between Video and Digital? The video format limits camera resolution to 768 X 493 (0.38 mega pixels) while digital cameras have no such restrictions. Insight's 1600 x 1200 (1.92 mega pixel) image sensor easily outperforms video. The difference in resolution can be seen in the following images. (Photos are unretouched and fields of view have been matched for comparison)



VIDEO RESOLUTION  
768 columns/493 Rows

INSIGHT RESOLUTION  
1600 columns/1200 Rows

### ...REAL TIME VIEWING

**Stop fragmenting your work environment.** View and capture your images right on the computer screen. Don't use separate video monitors or small LCD screens to view your images, followed by cumbersome transfer of image data via memory cards to your computer.

### ... PRODUCTIVITY

**Stop wasting time and money with film cameras.** Can you imagine not having to take multiple pictures to get one good shot? Can you imagine not having to wait for film processing to see your results? With Insight what you see is what you get, and you get it right away!

### ...GREAT IMAGES

**Clean signals make a difference.** Where is the cleanest signal? Right at the CCD sensor. That's where Insight

digitizes its signal, not after conversion to the video format and a long trip down a frame grabber cable.

### ...DISTORTION FREE IMAGES

#### Direct mapping of square pixels.

Do you need an undistorted picture? Insight's square CCD pixels map directly to square image pixels. The perfect geometry of the CCD sensor is preserved in the final image. Video cameras are subject to distortion introduced by rectangular CCD pixels and conversion to the video format. With the Insight camera, the accuracy of your measurement is never in question.

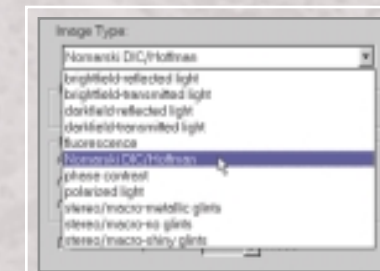
### ...VALUE

**Why pay the same price for a lower resolution video system?** Insight provides over 5 times more pixels than video technology.

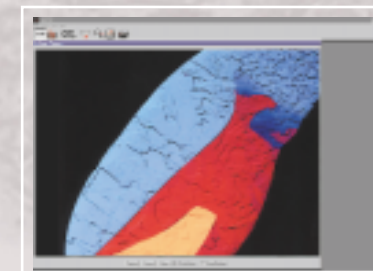


## EASE OF USE

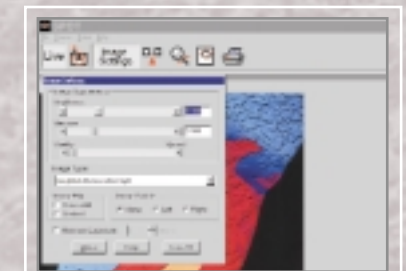
Designed from the ground up for microscope use, INSIGHT makes taking pictures easy.



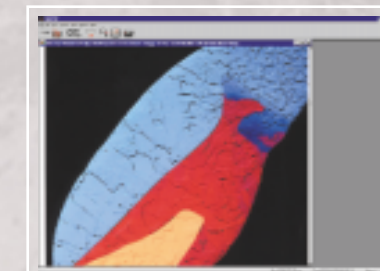
Pick Your technique



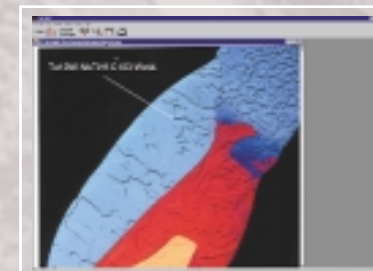
View In Real Time



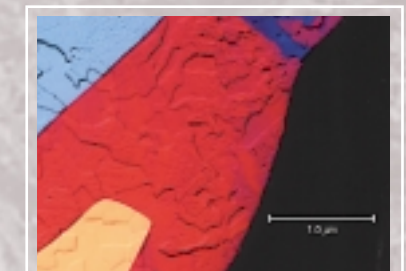
Tweak The Live Image



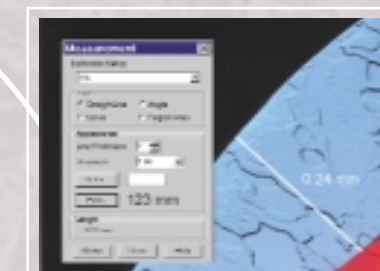
Capture What You See



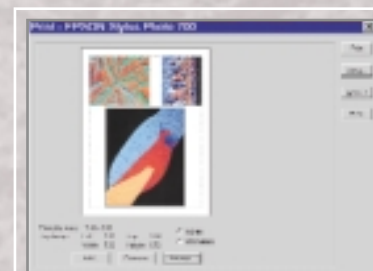
Write On The Image



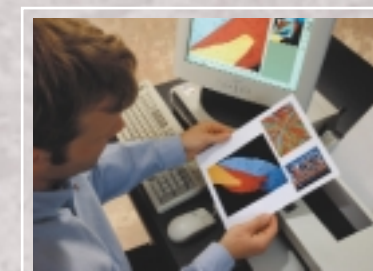
Add a Calibration Mark



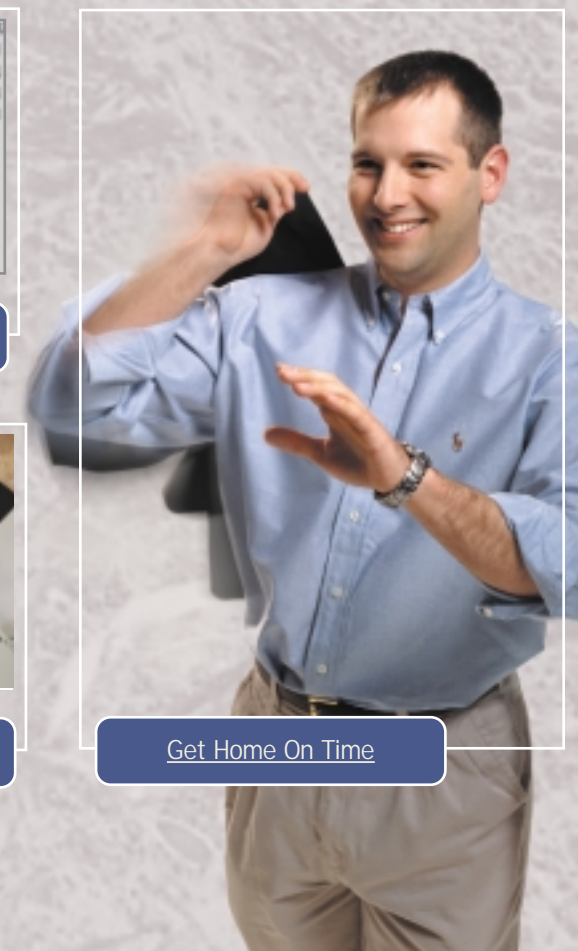
Measure Objects



Arrange Images For Printing



Print Them Out



Get Home On Time