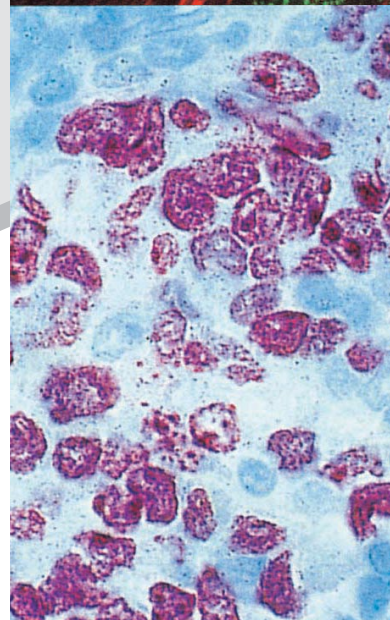
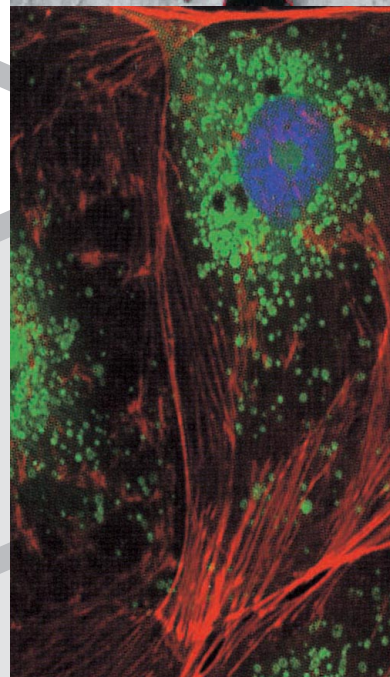
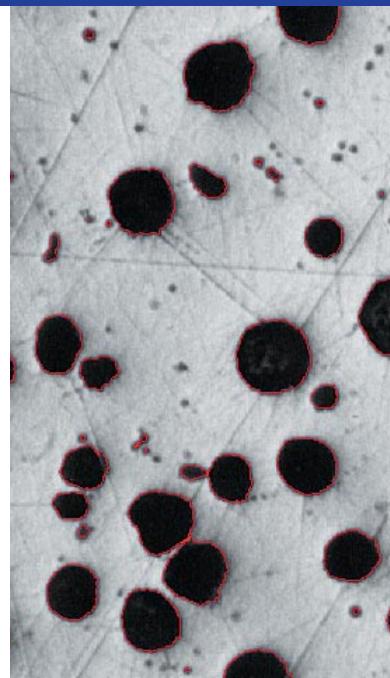


Measuring and Analyzing with Ease

Image processing, measurement
and analysis software.

Features a 32-bit / 64-bit COM-based
application for MS Windows which is easily
expanded through plug-in components.



The iSolution family of software helps you keep pace with today's rapidly changing digital technology. This exceptional software technology and leading image analysis tool will streamline image capture, measurement and enhancement, while improving the accuracy of your results.

All versions combine revolutionary measurement and analysis technology with an exceptional, user-friendly interface. Become an expert in image analysis and optimize your work environment with this imaging software suite.

iSolution DT:

IMT's premium software program includes all of the functions found in i-Solution, iSolution Chameleon, and iSolution Lite. Customized modules also available.

i-Solution:

This series is ideal for image analysis.

iSolution Chameleon:

Designed for advanced image processing and enhancement.

iSolution Lite:

The perfect solution for manual measurement, including moderate image processing functions.

Image Acquisition

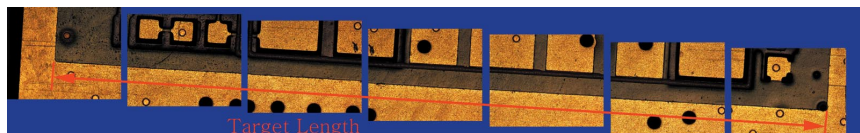
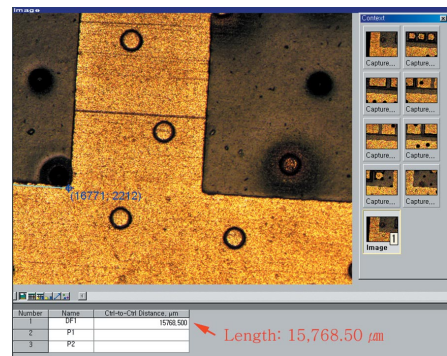
- iSolution DT / i-Solution / iSolution Chameleon / iSolution Lite are designed to receive images directly from various hardware sources. Keeping in tune with today's rapidly changing digital camera technology, you can directly control digital cameras such as Nikon, Olympus and other popular models. In addition, IMT software supports TWAIN and WDM Drivers along with a wide variety of framegrabbers. For faster processing times and crisper images, custom drivers for cameras such as the Lumenera INFINITY series, Optronics, Jenoptik, Nikon, Olympus, DI Spot, Qimaging, Pixelink, and other TWAIN compatible cameras are also provided. Our WDM Driver also offers superior integration, supporting most USB 2.0 and IEEE1394 input devices.
- The Time Lapse Capture tool offers accurate time interval analysis for video production for both analog and digital cameras. Movie recordings can be saved in AVI, MPG, MPEG, and MOV file formats. The time is also captured during recording.

Live Measurement

- Measuring and analyzing high volumes of images can take a long time. With live measurement you don't need to capture images in order to perform measurements. This will allow you to measure, analyze, sort and manage image statistics all from a Live Preview window. In addition, you can import measured data, images, statistical tables and diagrams into MS Excel in real time. You can perform these high-speed live measurements using both CCD and high resolution digital cameras. Crosshair generation and grid mask on the live preview window according to the calibrated scale are also available.

Large Size Object Measurement

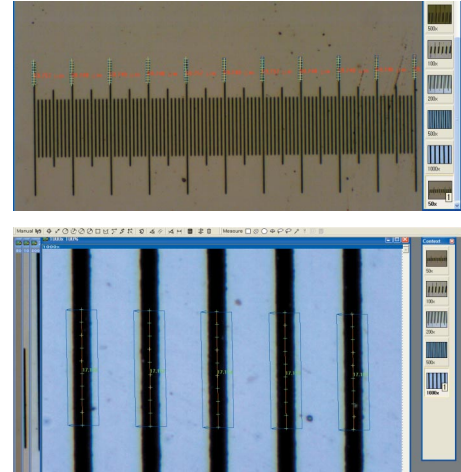
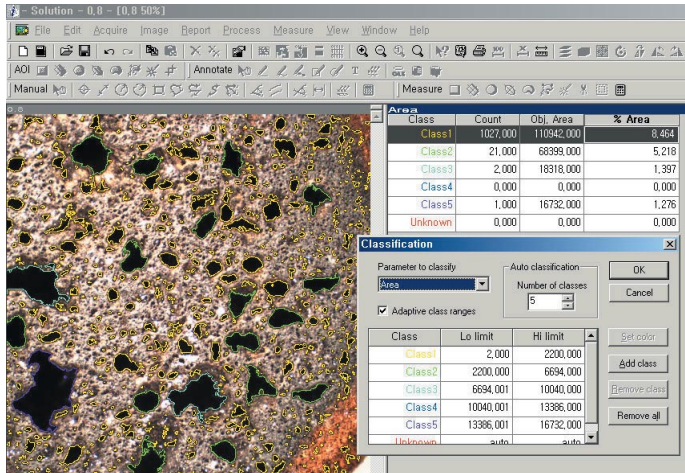
- Until now, users could only measure images within the Field of View (FOV). To measure outside the FOV various measurement stages (including linear scale) were needed. The iSolution DT Image Analyzer overcomes this limitation and offers new, advanced tools for image measurement. The Image Analyzer software tracks an objects movements within the image at high-speeds, then uses the results to automatically extrapolate the distance between the two objects. Expensive, time-consuming measurement stages previously used to measure samples exceeding the full screen size are no longer required. IMT (Image & Microscope Technology) has patent in this technology.





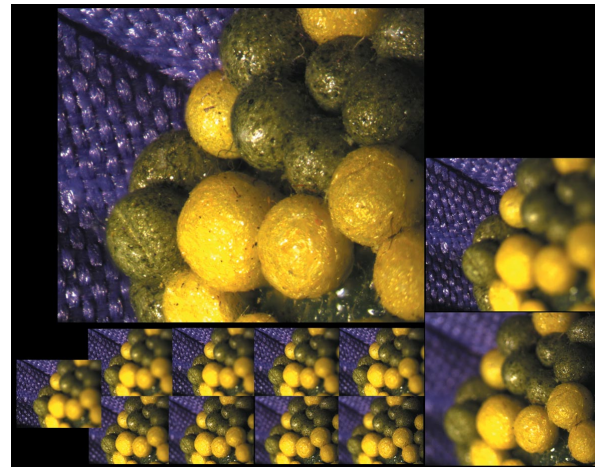
Auto Calibration

- Typically, image analyzers require a calibration process. IMT software has an Auto Calibration function that eliminates this inconvenience while enhancing measurement precision, reliability and consistency. When capturing the calibration scale image the software automatically reads the scale and calculates the correct length of the scale image. In addition, you can use this function directly in the Live Preview Window, no image captures are required. This efficient, user-friendly feature streamlines work, while boosting the accuracy and consistency of your data.



Microscope Focus Enhancement

- Samples with curves or of varying heights are difficult to bring into focus under highly magnified conditions. IMT software combines many images using different levels of focus to provide one seamless image. This function leaves no trace of the composites and can even create perfectly focused images from Stereo Microscopes. In the case of Stereo Microscopes, two lenses positioned at different degree angles are used for observation. To set the focus for the camera image, the microscope's Z-axis needs to be manipulated and partially focused images are then taken continuously. This results in slightly crossed images. iSolution DT compensates for this by auto-correcting its location, resulting in a perfectly focused image every time.



Auto Edge Detector

- iSolution DT automatically detects the edge of any object being measured, including lines, points, circles, boxes, and arcs. iSolution DT's Auto-Detect feature simplifies the process of determining the beginning and end of the object being measured, further streamlining the task of image measurement and analysis.

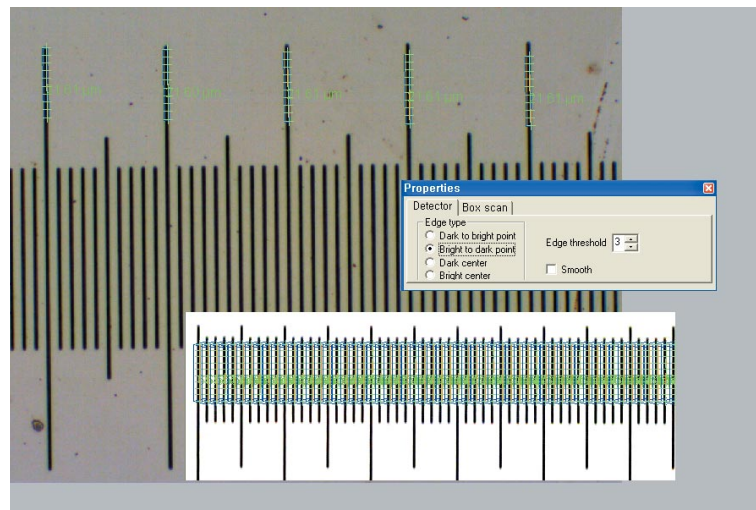
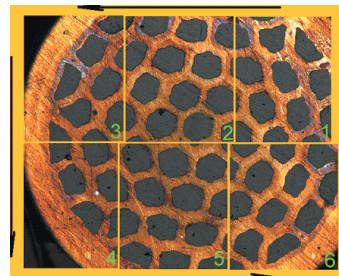
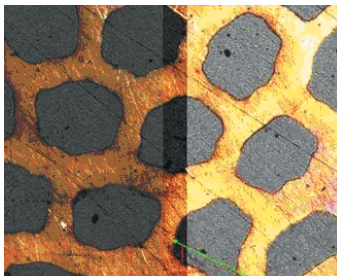




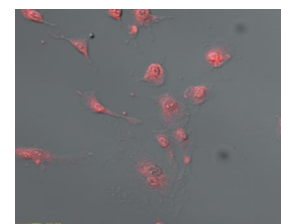
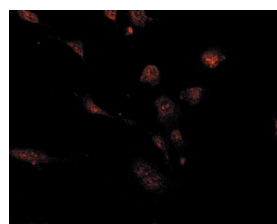
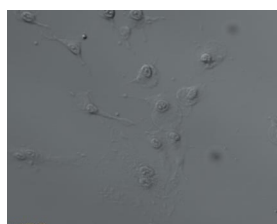
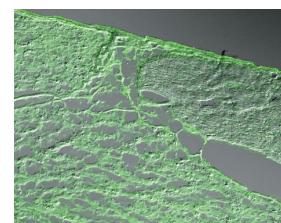
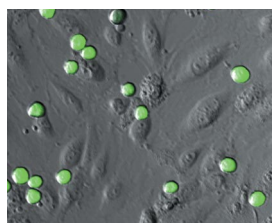
Image Stitching

- With IMT software you can create auto composites of continuously captured images in order to minimize the reduction in the FOV that typically comes with increased magnification. Combined images display no trace of former edges, and any irregularities in the brightness of the images are automatically corrected. Unlike other image analysis software packages, the i-Solution series automatically configures the various sizes of combined images in order to eliminate any discrepancies in the composite image size, and allows you to easily dissect magnified images without sacrificing resolution.



Fluorescent Image Composition

- iSolution DT, iSolution Chameleon, and i-Solution can create a perfect composite image of fluorescent images captured through mono channel filters and features a variety of methods, including Add, Mask, and Mean. This allows composites of colour images to create multi-channel image effects in addition to black and white images. With its exceptional quality, flexibility and speed, iSolution DT, iSolution Chameleon, and i-Solution's image composite technology for mono channel fluorescent filters is sure to impress even the most demanding users.



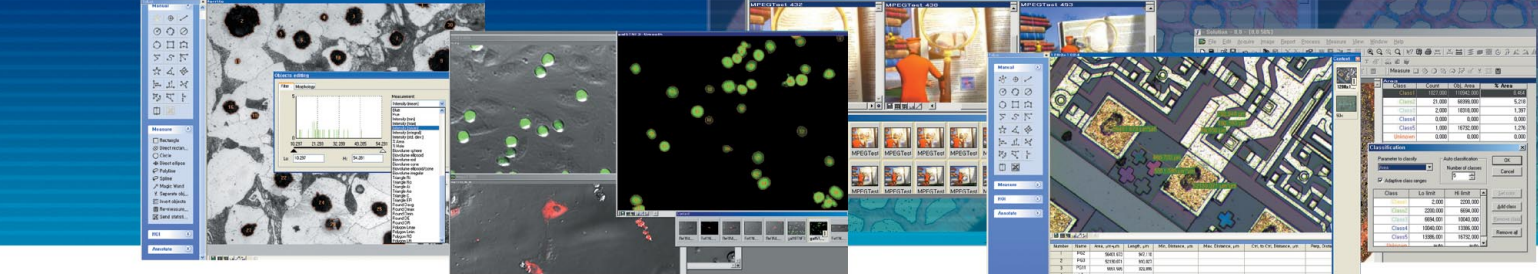
Movie File Production

- All versions feature a Time Lapse Capture function that supports CCD and digital cameras using TIF, BMP and JPG file formats. The Time Lapse Capture function also includes an Auto Save feature. You can save video movie recordings in AVI, MPG, MPEG, and MOV formats. When recording video, the time of the image is also captured so you can recheck the capture time when reproducing the video image.



Measurement

- IMT software features versatile measurement tools for measuring lengths, areas, and angles and can auto detect an object's outline and then make specified measurements. The software is equipped with all the measurement functions you will ever need, including 3-point circle functionality, N-point circle measurement functionality, parallel line distance measurement, perpendicular distance measurement, object distance measurement, as well as auto object outline trace. In addition, a zoom-in window can be used to determine the accurate measuring point of an object. Once you've measured a specimen, you can easily export all of the images, measurement data and statistics to an Excel file.

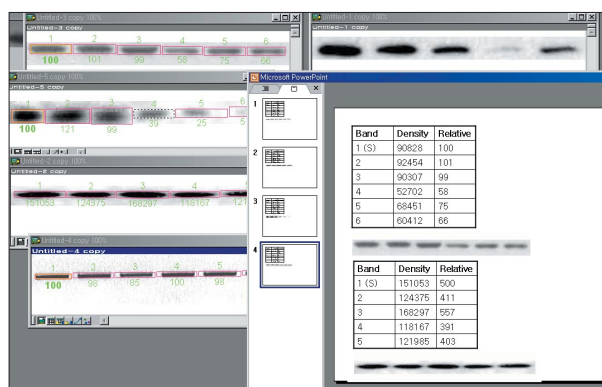


Count and Size

- With iSolution DT and i-Solution you can auto-detect specific objects within an image in order to find the total number of objects in the image and extract the data. By dragging the mouse, you can detect objects and generate a wide variety of data. With iSolution DT and i-Solution, the time-consuming Count function has been refined to a simple mouse click, with unparalleled speed and accuracy for data output. iSolution DT and i-Solution offer a variety of measurement tools that allow you to easily measure an object's area and perimeter. iSolution DT and i-Solution's measurement tools include equal circle diameter, ribbon length, line length, Circle SF and Ellipse SF. In addition, iSolution DT and i-Solution feature automatic output of statistics, sorting of measured data objects, creation of data tables for images, and auto revision of extracted objects, auto separation of composite objects, auto image and data import to Excel.

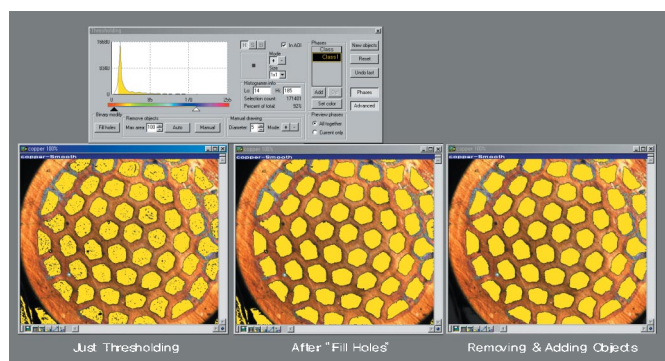
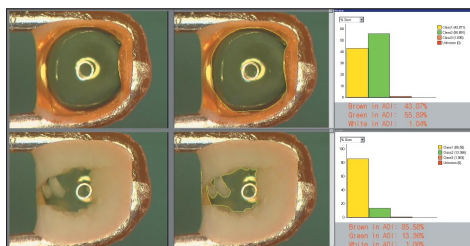
Densitometry

- iSolution DT automatically calculates Optical Density (OD) by absolute and relative figures, semiautomatically, or manually based on user configuration. Images and OD figures can then be exported directly to an MS PowerPoint file.



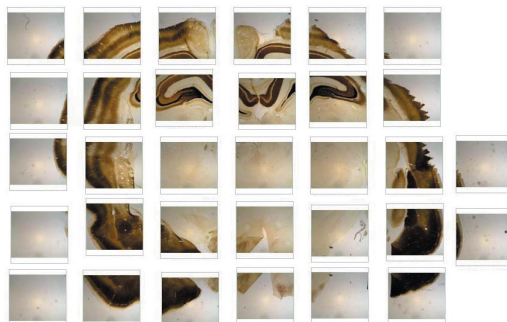
Phase Analysis & Advanced Threshold

- With iSolution DT you can conduct phase analysis on an entire image or within a specified Region of Interest (ROI) and you can sort images using Gray Scale, RGB, HSB or YUV. In addition, you can automatically or manually manipulate images using Fill Holes and a Removing & Adding Objects tool during the thresholding stage of phase analysis. Because you can manipulate images during the thresholding stage rather than after it, your phase analysis will be more accurate. All results of phase analysis are displayed simultaneously as statistical data and in chart form. You can also export images, object data, statistical data, and charts directly to an Excel file.



Automated Stage Control and Image Stitching(Perfect Auto Montage)

- iSolution DT Auto uses the Automated Stage function to transform partial images into high resolution automatically stitched images. This tool automatically adjusts the focus whenever the stage moves. However, image lighting might not be entirely uniform due to optical microscope specifications. When lighting is lopsided or biased to the middle, iSolution DT Auto automatically revises it and applies equal lighting to the image. i-Solution DT Auto can also perform image stitching on empty images that contain no actual individual objects.

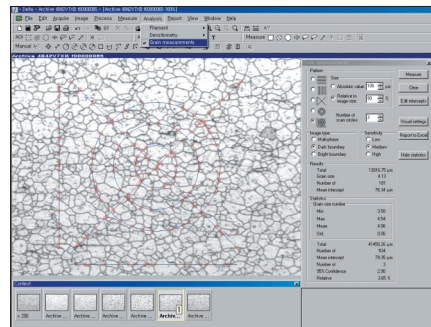




iSolution DT i-Solution™ iSolution Chameleon iSolution Lite

Grain Size Measurement

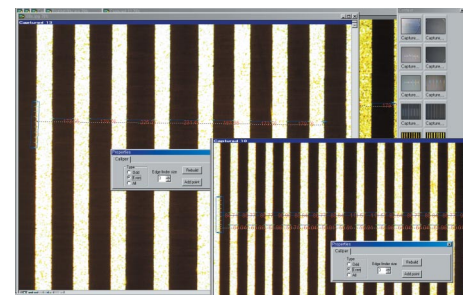
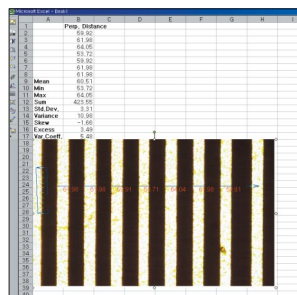
- iSolution DT provides the standard measurement environment in structure analysis of metal and materials. ASTM E112 provides the Grain Size measurement environment of various Intercept Line methods. Based on the accurate Edge Detect algorithm, iSolution DT provides both automatic and manual measurement environments and displays statistics of whole images with grain sized data.



	A	B	C	D
1	Total length, μm	Archive 4842V7 Archive 4842V7 Archive 4842V7X		
2	Grain size number	13916.75	13916.75	13916.75
3	Number of intercepts	3.50	4.54	4.13
4	Mean intercept length, μm	145.00	209.00	193.00
5	Statistical	95.29	66.43	76.34
6	Min grain size	3.50		
7	Max grain size	4.54		
8	Mean grain size	4.06		
9	Std. dev. grain size	0.06		
10	Total length, μm	41469.00		
11	Number of intercepts	534.00		
12	Mean intercept length, μm	79.36		
13	Number of fields	3.00		
14	95% Confidence Interval	2.90		
15	Relative accuracy, %	3.65		

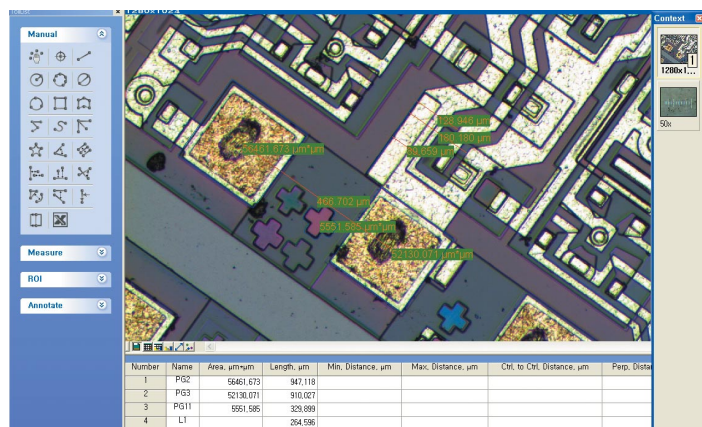
Caliper

- The Auto Edge Detector function automatically identifies lines and points and calculates each distance. This is a useful function for measuring objects with similar patterns, and the user-friendly design makes it simple to use.



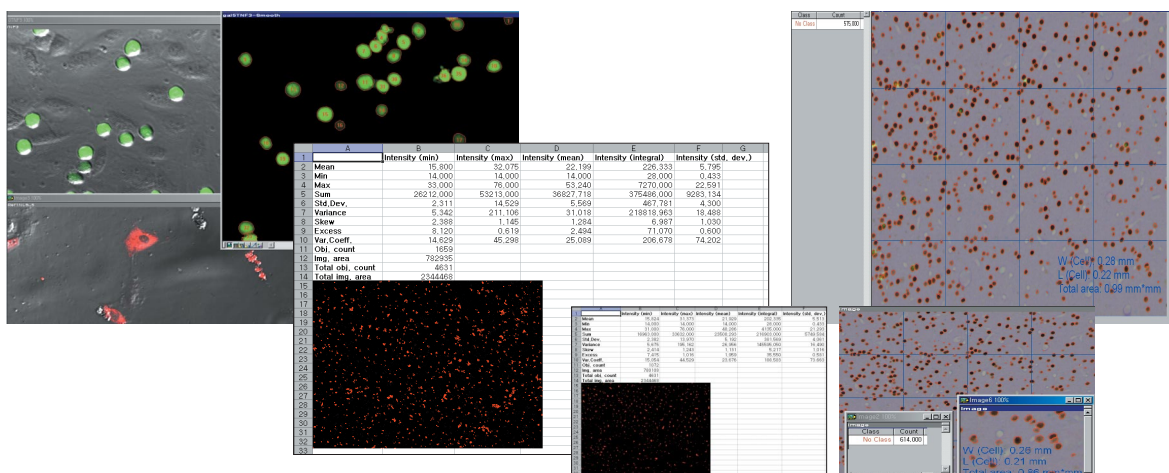
Unique Measurement Tools - Including Various Perpendicular Distance Measurements

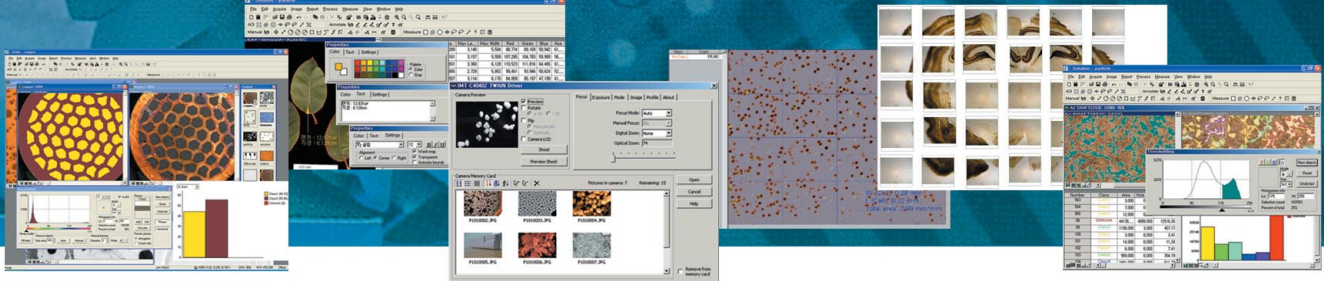
- A unique measuring tool allows the measurement of straight and curved lines, diameters, radius, distances, area, perpendicular distance, and much more. From the measuring point, the distance is always calculated perpendicularly making the measurement very accurate.



Cell Count and Intensity Analysis

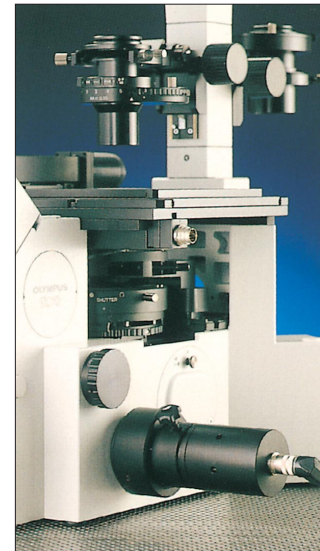
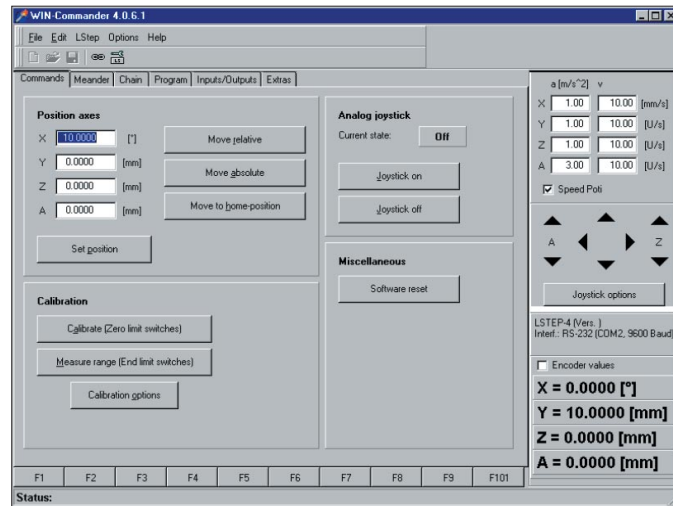
- iSolution DT and i-Solution provide automatic cell number counting per unit area. The volume of specific protein in a cell is calculated by the volume of intensity.





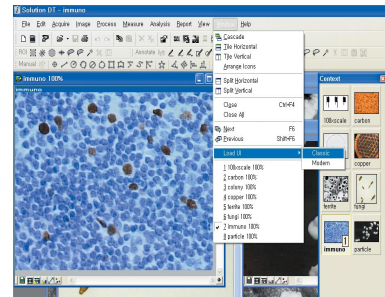
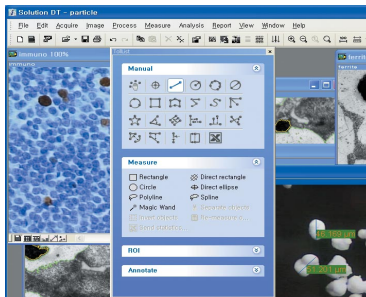
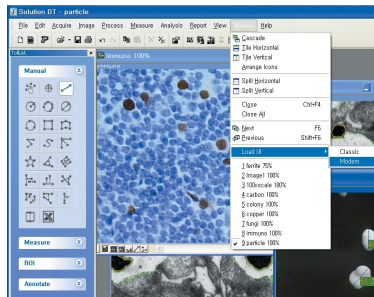
Motorized Stage Control

- iSolution DT Auto provides control function of a motorized stage. The X, Y and Z axis can be controlled in iSolution DT Auto. The Motorized Stage Control function provides continuous automatic measurement, image stitching, focus revision, automatic analysis and comparison between images.



Dynamic User Interface (UI)

- Dynamic UI allows the selection of a different UI by application.

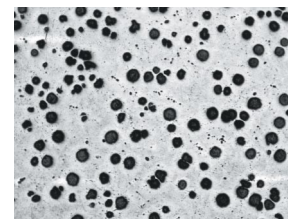
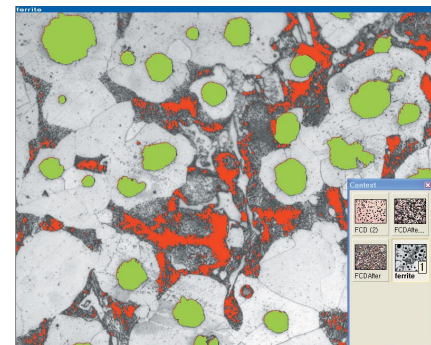


Ferrite in Cast Iron

- Percent Ferrite is calculated by excluding the graphite area. Graphite can be sorted for calculation including portions with the same gray intensity value of the background pearlite.

	A	B	C	D	E	F	G	H	I	J
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
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18										
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20										
21										
22										
23										
24										
25										
26										

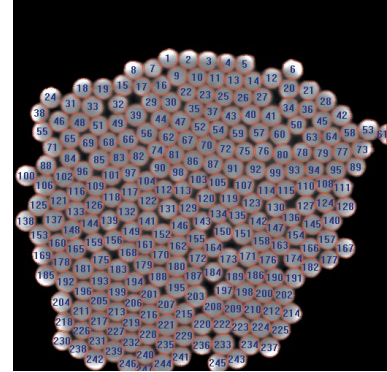
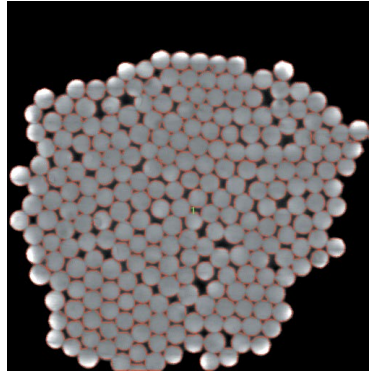
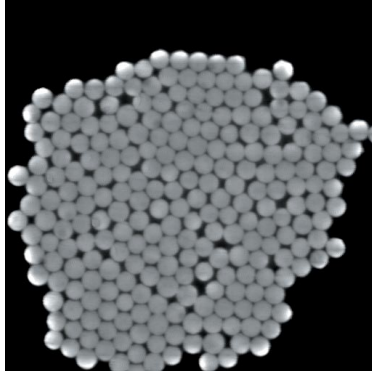
%Ferrite: 52.77%
 %Pearlite: 47.23%
 %Graphite: 15.98%





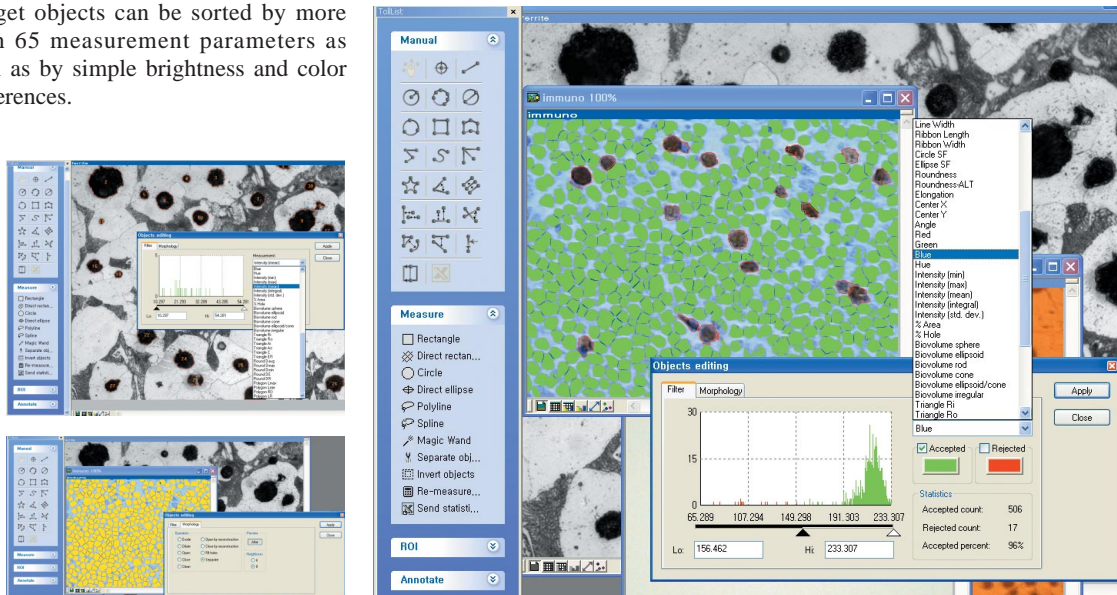
Auto segmentation

- Objects are segmented automatically by a simple mouse click.



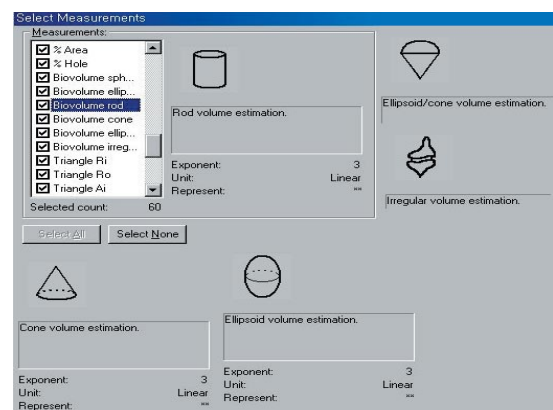
Object Editing

- Target objects can be sorted by more than 65 measurement parameters as well as by simple brightness and color differences.



Stereometry for Biovolume

- The 3D volume of an object is calculated by using 2D measuring parameters.



Software Enhancement and Development

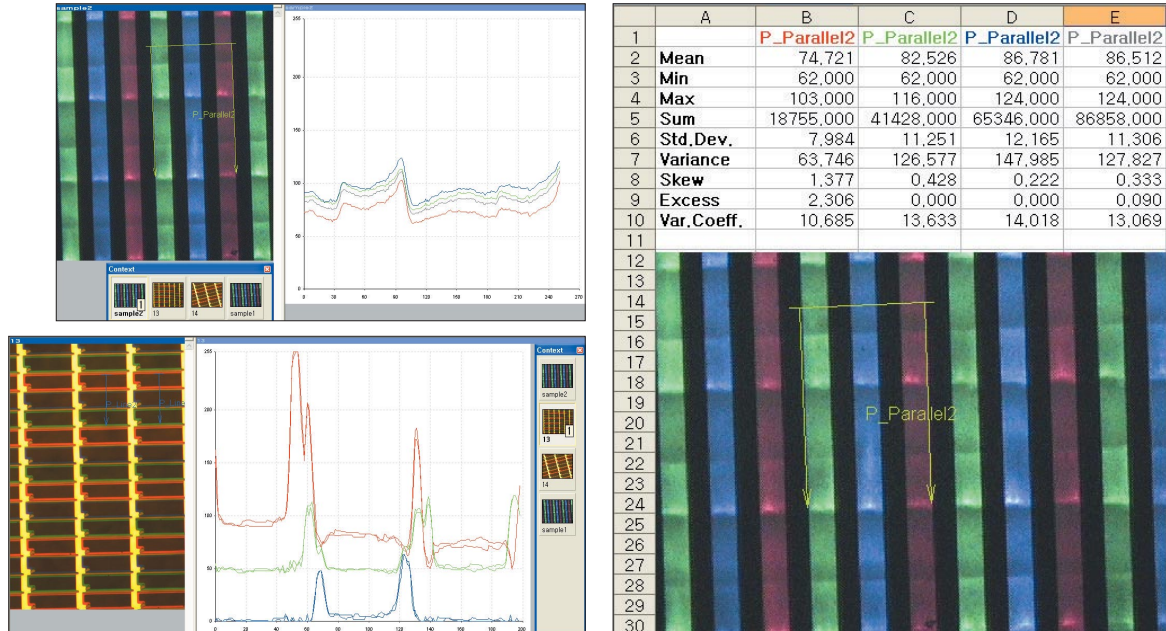
- All images have their own unique attributes. It is not possible to satisfy all analysis objectives with limited options. iSolution DT can be customized to provide the most appropriate algorithm depending on the user request. A unique algorithm is created for each application.





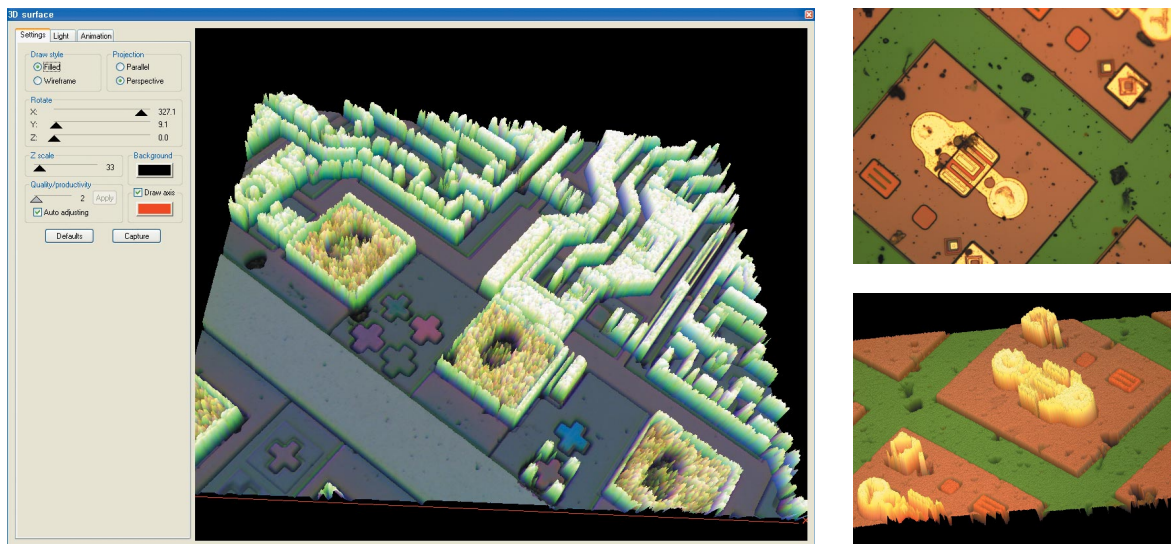
Line and Box Profile

- Red, green, blue, and gray values are extracted in both profile and data.



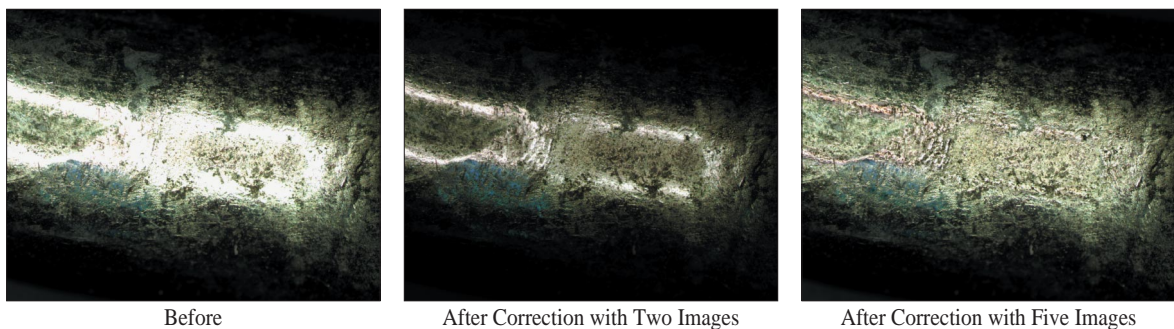
3D Visualization

- Three-dimensional pictures are created based on the brightness of normal images. This creates a better visualization of the surface through the realization of 3D images and rotating observation of 360 degrees on the XYZ axis.



Removing the Reflected Light

- Clear detailed images are created by removing the reflected light from a metal's surface.



Before

After Correction with Two Images

After Correction with Five Images



Specification	iSolution DT	i-Solution	iSolution Lite	iSolution Chameleon
Acquire	●	●	●	●
Input Device				
1) All TWAIN Support Devices				
2) All WDM Support Devices				
3) Optronics digital cameras				
4) Lumenera digital cameras				
5) Jenoptik digital cameras				
6) Nikon digital cameras				
7) Olympus digital cameras direct control driver				
8) Qimaging digital cameras				
9) Pixelink digital cameras				
10) Spot Insight				
11) FlashBus frame grabbers				
Image Capture				
1) Time Lapse Capture				
2) Movie Recordings in AVI, MPG, MPEG, MOV				
3) Crosshair Generation on Live Preview Window				
4) Grid Mask on the Live Preview Window according to the Calibrated Scale				
5) Measurement on Live Preview Window				
Image File Format				
jpg, jpeg, jpe, tif, tiff, bmp, gif, pcx, tga, mpg, mpeg, avi, mov, img, rpt, txt and etc.				
Image	●	●	●	●
Mode Change, Clone, Crop, AOI, Resize Rotate Split, Combine Color Plane				
Image Mode Change				
Grayscale, RGB, HSB, YUV, 8bit and 16bit per Channel AOI Control				
1) Rectangle, Arbitrary Rectangle, Ellipse, Arbitrary Ellipse, Polygon, Spline Shape, Magic Wand				
2) Copy, Paste, Crop AOI				
Combine				
1) Split Color Plane RGB, HSB, YUV				
2) Combine Color Plane RGB, HSB, YUV				
3) Combine Color Images directly by Mean, RGB, Fluorescence Mask and Add				
Sequence Control				
1) Play Forward, Backward				
2) Making Movie File(mpg, avi, mov) with Still Images				
3) Split Single Image from Sequence File				
View	●	●	●	●
Zoom Tools				
1) Zoom In, Out, and 100%				
2) Zoom In Window for More Accurate Edge Detect				
3) Zoom 10% to 1600% User Defined Fit to Window or Image Status Bar Context Window to Manipulate Several Images				

Specification	iSolution DT	i-Solution	iSolution Lite	iSolution Chameleon
Edit	●	●	●	●
Undo, Redo, Copy, Paste, Paste New, Delete Delete All, Annotate, Image Information				
Annotate				
Line, Polyline, Spline, Rectangle, Ellipse, Text label				
Process				
Filter, BCG Control, Pseudo Color	●	●	●	●
Filter				
1) Edge : Gradient, Kirsch, Laplas, Sobel, Variance	●	●	●	●
2) Enhance : Auto Brightness and Contrast, Average, Background Correction, Equalize, Median, Sharping, Smooth	●	●	●	●
3) Morphology: Clean, Close, Dilate, Erode Fill Holes, Open, Split	●	●		●
4) Special : Emboss, Negative	●	●	●	●
Focus Enhancement (Multi Focus)				
1) Combine Individual Partly Focused Images into a Single In-Focus Composite Image	●	●	●	●
2) Combine without Trace	●	●	●	●
3) Auto Compensating Displaced Images from Stereo Microscopes	●			●
Image Stitching				
1) Perfect Auto Montage. Automatic Images Stitching by Automated Microscope Stage.	●			
2) Auto and Manual Image Stitching	●	●	●	●
3) Stitching without Trace and Correcting any Irregularities in Brightness	●	●	●	●
Calibration	●	●	●	●
Calibration				
1) Full Auto Calibration				
2) Semi-Auto Calibration				
3) Special Calibration X and Y				
4) Insert Calibration Marker				
5) Split Calibration Marker 4 and 16				
6) Save and Open Calibration				
Large Size Object Measurement	●			
1) Auto Objects Movement Tracking				
2) Semi-Auto Objects Movement Scan				
3) Manual Objects Movement Scan				
4) Graphic Window				
5) Generation of the Secondly Measurement Data from the First Measurement Data				
Development	●			
Customized Modules and Application				

iSolution DT i-Solution™ iSolution Chameleon iSolution Lite

Specification	iSolution DT	i-Solution	iSolution Lite	iSolution Chameleon
Auto Edge Detector	●			
1) Auto Line Edge Detector				
2) Auto Point Detector				
3) Auto Circle and Arc Edge Detector				
4) Auto Angle Detector				
Grid Mark	●	●	●	●
1) Grid Mark on the Live Preview Window according to the Calibrated Value				
2) Scale Marker on the Live Preview Window				
3) Grid Mark on the Captured Image according to the Calibrated Value				
4) Crosshair Generation on the Live Preview Window				
Measurement	●	●	●	●
1) Point, Straight Line, Spline, Polyline, Polygon Rectangle, Circle, Best Fit Circle, Circle By 3 Points, Angle, Angle Between 2 Lines, Distance, Parallel Line Width, Lines From Common Reference Point, Perpendicular Line Length				
2) Auto Tracing Objects				
3) Select Tool for Edit Measurements				
4) Measurement Data				
5) Measurement Statistics				
Export to Excel	●	●	●	●
1) Export to Excel Gray Image Data				
2) Export to Excel Overlay and Original Image Measurement Data, Statistics, and Chart				
Save	●	●	●	●
1) Saving Data with TXT File Format				
2) Saving all the image and the measurement data together with img File Format				
Report	●	●	●	●
Report Generator				
1) Create Report				
2) Insert Image and Data				
3) Insert other OLE Objects				
Window	●	●	●	●
Split Horizontal, Split Vertical, Cascade Tile Horizontal, Tile Vertical, Arrange icons				
Dynamic User Interface (UI)				
1) Classic				
2) Modern				

Specification	iSolution DT	i-Solution	iSolution Lite	iSolution Chameleon
Count and Size				
Auto Count Objects	●	●		●
1) Auto Detect Objects				
2) Edit the Counted Objects by Add, Subtract, Cut, Split, and Morphological Filters				
3) Set the Measurement Range				
Manual Objects Count	●	●		
1) Rectangle, Arbitrary Rectangle, Ellipse, Arbitrary Ellipse, Polygon, Spline Shape, Magic Wand				
2) Invert Objects, Separate Object				
Measurement Parameters	●	●		
Area, Hole Area, Perimeter, Hole Perimeter, Max Length, Max Width, Average Dimension, Size by X, Size by Y, Average Chord, Min Feret Diameter, Max Feret Diameter, Average Feret Diameter, Equal Circle Diameter, Major Ellipse Diameter, Minor Ellipse Diameter, Line Length, Line Width, Ribbon Length, Ribbon Width, Circle SF, Ellipse SF, Roundness, Roundness-ALT, Elongation, Center X, Center Y, Angle, Red Color, Green Color, Blue Color, Hue, Intensity(Min), Intensity(Max), Intensity(Mean), Intensity(Integral), Intensity(Standard Deviation), %Area, %Hole				
Measurement Data				
1) Measurement Data	●	●	●	●
2) Statistics Data from all Parameters	●	●		
3) Classification and Statistics for each Parameters	●	●		
4) Export to Excel Original Image, Overlay image Measurement Data, Statistics, and Chart in one step	●	●		
Objects Editing	●	●		
Target objects can be sorted by more than 65 measurement parameters as well as by the simple bright and color difference.				
Profile	●	●	●	●
1) Straight Line				
2) Polyline				
3) Parallel Line				
4) Select and Change				
Caliper	●			
Phase Analysis	●			
Densitometry	●			
Cast Iron Analysis	●			
Grain Size Measurement (ASTM E112)	●			
Motorized Stage Control	●			
SDK (Software Development Kit)	●			

iSolution DT
i-Solution™
iSolution Chameleon
iSolution Lite

