



# 2018 NEW PRODUCTS



Super-Scope® AF+

MicroZoom VZ Inspection

Ergo-Zoom® EPZ Microscope

ProZoom® PZE Microscope

Micro-Lite® LED Lighting

# SUPER-SCOPE® AF+

#### **INTEGRATED INSPECTION SYSTEM FEATURES:**

- Infinite Focal Length (Inspect from 6" Working Distance to Infinity)
- Auto Focus Hybrid HDMI/USB Camera
- Exclusive Design Works Without a PC
- ▶ 1-80x Standard Magnification
- 24" Tall HD Double Ball Bearing Base
- ► No Light Needed; Industry-Leading Low Light Sensitivity
- Split Screen Displays Captured vs. Live Image



#### ${\bf Standard\ Onboard\ Image\ Controls\ Including:}$









Real Time Compare Ultra-High Sensitivity



TKSS-AF-LV2

	O.C. White Super-Scope® AF+ (TKSS-AF)	Vision Engineering EVO Cam (ECO514)	Unitron® Inspex HD 1080p (UN14800)	<b>Tagarno FHD Trend</b> (000003-1)	Aven SharpVue (26700-135)
Price	\$3,996.00	\$6,545.00	\$4,995.00	\$7,230.00	\$3,495.00
Magnification	80x Optical 10x Digital	30x Optical 2x Digital	50x Optical 2x Digital	30x Optical 10x Digital	30X Optical 10x Digital
Fixed or Adjustable Focal Length	Adjustable from 6" – Infinity	Fixed by Lens	Fixed by Lens	Fixed by Lens	Fixed by Lens
Onboard Image & Video Capture	✓	Still Image	Still Image	Still Image	Still Image
Calibrated Measurement Without A PC	✓	✓	✓	✓	Х
Full HD1080 Resolution Over HDMI & USB	✓	✓	✓	✓	1080 HDMI/ 720 USB
Wide Dynamic Range	✓	✓	✓	X	X
Monitor Included Standard	✓	X	X	X	X
Moveable Auto Focus Region	✓	X	X	X	X
Wi-Fi Real Time Streaming	Optional	Х	X	Х	Х

EVO Cam, Inspex HD 1080p, FHD Trend, and SharpVue are trademarks of Vision Engineering Inc., UNITRON®, TAGARNO A/S, and AVEN respectively. All information listed above is from the individual manufacturer's websites, and was current as of 2/19/2018. O.C. White does not claim any association with any of the companies listed above.

#### **Measurement & Export**

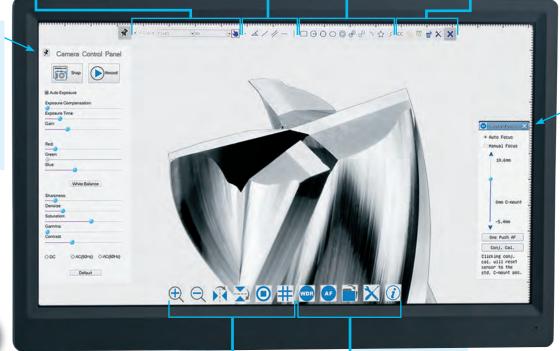
**Change unit of measurement:** (Pixels, nanometers, micrometers, millimeters, centimeters, meters, and inches)

Point Angle Arbitrary Line Parallel Horizontal Line Vertical Line Rectangle
Center & Radius
Three Points
Ellipse
Annulus
Concentric Circles
Three Point Con. Circles
Arc
Polygon
Curve

Conj. Calibration Calibration Export to CSV Delete All Objects Settings Close

#### **Camera Control**

Take a snap shot or video while using auto exposure, or control all image capture features yourself, including exposure time, color balance, white balance and more



#### **Auto Focus**

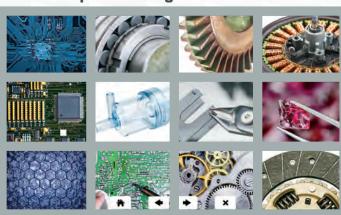
Choose Auto Focus or Manual as well as One Push AF



Zoom In Zoom Out Horizontal Flip Vertical Flip Freeze Cross Line Wide Dynamic Range Auto Focus Compare Image Browser Settings

Optional secure Wi-Fi enabled video stream service to your smart phone or tablet!

#### **Browse Captured Images**



#### **Image Compare**



**Captured Image** 

Live Image



# **Unrivaled Modular Configurations**

In a world of 'one size fits all' solutions, let MicroZoom show you there is a better way! This ultra high magnification inspection family can be configured literally hundreds of ways, to your exact magnification and working distance requirements. Featuring a wide selection of CCD adapters, right angle adapters, auxiliary

lenses, and specialized adjustable focal length design, there is certain to be a configuration to meet your specific inspection challenge.



#### **Ultra High Resolution Magnification**

Let's face it... components are not getting bigger any time soon. You need a next generation inspection system that has the ability to handle today's production & QA tasks, as well as be able to be scaled for future higher magnification requirements. Unlike every other inspection solution currently on the market, MicroZoom gives you the best of all worlds. With the highest resolution lenses, the largest available optical magnification range in the industry (up to 445x), and biggest selection of accessories, you can future-proof your



#### **Specialized Fine Focus Adjustment**

If you are inspecting products under a traditional microscope, you have to constantly raise and lower the unit to see components at different heights. With MicroZoom, and its specialized fine focus adjustment feature, that is a thing of the past! At the bottom of the main lens is a special knurled adjustment which allows for fine refocusing both upwards and downwards, without ever changing the height of the inspection system! Especially convenient when working at high magnification, this adjustment allows for precision refocusing without any loss of image fidelity.

- ESD Safe
- ► Magnification Up To 445x
- Made in the USA with Domestic & Global Parts
- ► 5MP Hybrid HDMI/USB Camera
- Exclusive Design Works Without a PC
- Onboard Imaging Tools Include Capture, Calibrated Measurement, Split Screen, & More
- Available as Camera Only, or with Choice of 12.1" or 22" LCD Screen
- Ultra High Image Resolution for Mission-Critical Applications
- 5 Year Mechanical Warranty

# ADVANCED IMAGING & MEASUREMENT SUITE

#### INTEGRATED SOFTWARE FUNCTIONS FOR ALL CAMERA BASED SYSTEMS

All MicroZoom inspection packages ship with our exclusive 5MP Hybrid HDMI/USB Camera. This exceptional smart camera pulls double duty for both production and quality assurance needs. It features both HDMI and USB outputs, and has integrated smart camera controls with a host of onboard software features including:

#### Standard Onboard Image Controls Including:



Image Capture

Quickly capture image and videos while inspecting directly to the 8GB SD card. Sort and archive to a PC.



Real Time Compare

Compare live video feed with previous captured images. Search and sort for instant comparison.



Calibrated Measure

An entire array of **Measurement Tools** for high precision and repeatable measurements without a PC!



Ultra-Hiah Sensitivity

Industry leading low light sensitivity allows for crystal clear images where competitors cameras fail. The result means less glare!

#### 9 Languages Supported



Lanauaae Support

Currently, 9 languages are supported, including: English, Spanish, German, French, Japanese, Italian, Korean, & both traditional and modern Chinese.

#### Exclusive PC Suite Features:



Extended Depth of Focus

This specialized tool allows for 'stacking' of multiple images of tall objects taken at various focal lengths, into a single super high clarity image.



Image Stitching

Inspecting something that is just too big to view all at once? Capture multiple images of the object, then 'stitch' them together digitally to create a single extra-large image.



#### **Browse Captured Images**

Quickly scan through previously saved image and video captures. This full field archive allows for quick image pull-up and the ability to sort and delete images no longer needed. An 8GB SD card is included with every system to transfer images and videos from system to remote PC for archiving, emailing, etc.



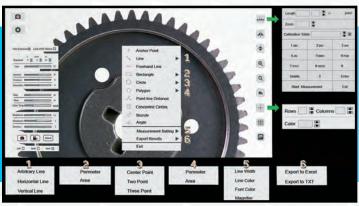
#### **Compare While Working**

Upper Right-hand window features the live video feed, while all previously captured images are tiled around it. This feature allows for real-time searching of previously captured good (or bad) examples for instant comparison.



#### **Split Screen Viewing**

Excellent training tool! Pull up a previously saved capture (left pane) and compare with live image on the right! This interactive screen is excellent for showcasing pass/fail to multiple people at once. Ever have to train a group of new employees all at once? It has never been easier for all employees to see the same details, at the same time.



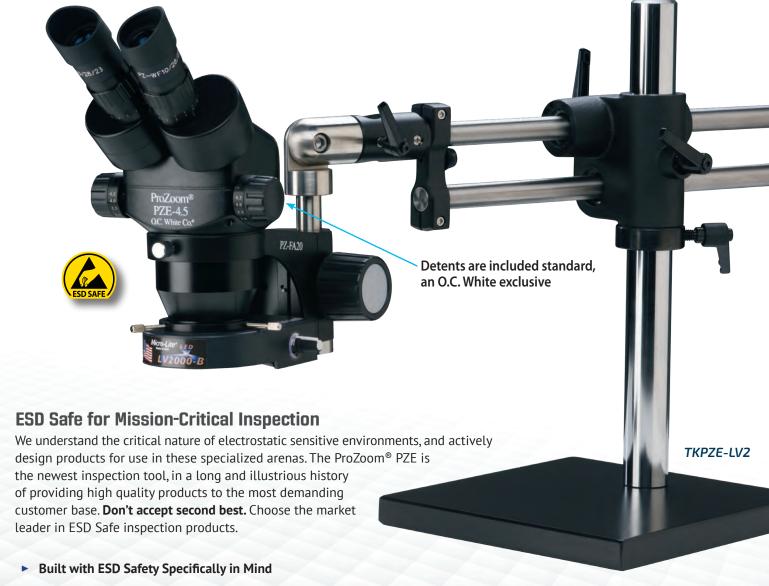
#### Full Functionality Without Using a PC!

Calibrated On-board Measurement Couldn't be Easier.

This built-in Advanced Imaging & Measurement Suite comes out-of-the-box, ready for Bench Production. Complete with an entire array of Measurement Tools for High Precision, Repeatable Measurements.

# Prozoom® PZE-4.5

EXTENDED WORKING DISTANCE MICROSCOPE



- ► 7-45x Standard Magnification Range (up to 270x with options)
- Super-Wide 28mm High Eyepoint Wide Field Eyepieces
- ▶ 45\* Eyepiece Angle with 360\* Rotation in Focusing Arm
- ▶ 190mm of Working Distance with .5x Aux Lens (standard)
- +/- 6 Diopter Eyepiece Adjustment Range
- ► Interpupillary Distance Adjustment on Eyepiece Tubes
- Double Ball Bearing Arm Base Assembly for Precision Movement
- 5 Year Mechanical Warranty



Need a trinocular? See our ProZoom® 6.5 Series

# The Standard Has Been Upgraded

The most common microscope you will find across all factory floors are 7-45x models. These have always been the workhorse of industry, and there are no signs that this will change. We are proud to offer our ProZoom® PZE model as the New Standard in production microscopy. With the largest standard working distance & largest standard eyepieces available, next level performance meets budget-friendly price.



#### PROZOOM® PZE-4.5 TECHNICAL DATA:

Еу	epiece	Main Body	0.37x PZ-OB-037	0.5x PZ-OB-050	0.7x PZ-OB-070	1.5x PZ-OB-150	2x PZ-OB-200
107	MAG:	7x~45x	2.59x~16.65x	3.5x~22.5x	4.9x~31.5x	10.5X~67.5x	14x~90x
10x	FOV: (mm)	Ф32.8~Ф5.1	Ф88.8~Ф13.8	Ф65.7~Ф10.2	Ф46.9~Ф7.3	Ф21.9~Ф3.4	Ф16.4~Ф2.6
1 <i>E</i> <sub>1</sub> /	MAG:	10.5x~67.5x	3.89x~25x	5.3x~33.8x	7.4x~47.2x	15.8x~101.3x	21x~135x
15x	FOV: (mm)	Ф24.3~Ф3.8	Ф65.6~Ф10.2	Ф48.6~Ф7.6	Ф34.7~Ф5.4	Ф16.2~Ф2.5	Ф12.1~Ф1.9
2014	MAG:	14x~90x	5.18x~33.3x	7x~45x	9.8x~63x	21x~135x	28x~180x
20x	FOV: (mm)	Ф20~Ф3.1	Ф54.1~Ф8.4	Ф40~Ф6.2	Ф28.6~Ф4.4	Ф13.3~Ф2.1	Ф10~Ф1.6
201	MAG:	21x~135x	7.77x~50x	10.5x~67.5x	14.7x~94.5x	31.5x~202.5x	42x~270x
30x	FOV: (mm)	Ф12.9~Ф2	Ф34.7~Ф5.4	Ф25.7~Ф4	Ф18.4~Ф2.9	Ф8.6~Ф1.6	Ф6.4~Ф1
	orking ince (mm)	110	275	195	145	50	35

# EFGO-ZOOM® EPZ ERGONOMIC POSITION ZOOM

**Excellence in Ergonomics** 

With so much attention being put into the study of ergonomics in the workplace, and the true cost of inefficient processes, companies would be remiss to overlook their inspection processes. Our Ergo-Zoom® EPZ provides an amazing eyepiece adjustment range from 0 – 30°. No matter your process, or operator height, the eyepieces feature a special adjustable design so any operator can find the angle that best suits their comfort. **Neck fatigue and eye strain are a thing of the past.** A comfortable operator is a productive one!



#### Repeatable Performance

Does your process call for a specific magnification? Are you sure you are at 10x? All Ergo-Zoom® microscopes feature detented zoom knobs. This feature is not found standard in any other competitive microscope, it's **an O.C. White exclusive!** Each full magnification step (1x, 2x, 3x, etc) feature a positive detented stop, so you can reliably say "YES", you are meeting spec.



#### **Multiple Magnification Choices**

With Ergo-Zoom®, the choice is yours. We are proud to offer (2) standard microscope zoom ranges. Our most popular model features .8–5x zooming, with the next level option having .8–8x zoom. This allows you to not have to sacrifice working distance for magnification, as both models use the same auxiliary lenses (up to 186mm).

- ESD Safe
- ► All Packages Include Super-Wide 28mm 10x Eyepieces
- .5x Auxiliary Lens Also Included (186mm)
- ► Adjustable 0-30° Eyepiece Angle for Operator Comfort
- Modular Designed System for Expandable Performance
- 5 Year Mechanical Warranty









# **PROZOOM® EPZ-850 TECHNICAL DATA:**

Eyepiece		0.5x EPZ-OB-050	0.7x EPZ-OB-070	1x EPZ-OB-100	1.5x EPZ-OB-150
10x	Total Mag.	4x~25x	5.6x~35x	8x~50x	12x~75x
	FOV: (mm)	Ф55~Ф8.8	Ф39.3~Ф6.3	Ф27.5~Ф4.4	Ф18.33~Ф2.93
154	Total Mag.	6x~37.5x	8.4x~52.5x	12x~75x	18x~112.5x
15x	FOV: (mm)	Ф42.5~Ф6.8	Ф30.36~Ф4.86	Ф21.25~Ф3.4	Ф14.17~Ф2.27
20x	Total Mag.	8x~50x	11.2x~70x	16x~100x	24x~150x
	FOV: (mm)	Ф35~Ф5.6	Ф25~Ф4	Ф17.5~Ф2.8	Ф11.67~Ф1.87
30x	Total Mag.	12x~75x	16.8x~105x	24x~150x	36x~225x
	FOV: (mm)	Ф22.5~Ф3.6	Ф16.1~Ф2.57	Ф11.25~Ф1.8	Ф7.5~Ф1.2
	Vorking ance (mm)	186	135	91	40

### PROZOOM® EPZ-880 TECHNICAL DATA:

Е	yepiece	0.5X EPZ-OB-050	0.7X EPZ-OB-070	1X EPZ-OB-100	1.5X EPZ-OB-150
10x	Total Mag.	4x~40x	5.6xX~56x	8x~80x	12x~120x
	FOV: (mm)	Ф55~Ф5.5	Ф39.3~Ф3.93	Ф27.5~Ф2.75	Ф18.33~Ф1.83
15x	Total Mag.	6x~60x	8.4x~84x	12x~120x	18x~180x
	FOV: (mm)	Ф42.5~Ф4.25	Ф30.36~Ф3.04	Ф21.25~Ф2.13	Ф14.17~Ф1.42
20x	Total Mag.	8x~80x	11.2x~112x	16x~160x	24x~240x
	FOV: (mm)	Ф35~Ф3.5	Ф25~Ф2.5	Ф17.5~Ф1.75	Ф11.67~Ф1.17
30x	Total Mag.	12x~120x	16.8x~168x	24x~240x	36x~360x
	FOV: (mm)	Ф22.5~Ф2.25	Ф16.1~Ф1.61	Ф11.25~Ф1.13	Ф7.5~Ф0.75
	Working tance (mm)	186	135	91	40





# Micro-Lite® LED5000 Series

# Precision Focus Ring Lights

Having found international success with our industry standard LV2000 series, our newest offerings are custom manufactured for customers who require precision focused lighting, for lower working distance applications. Designed and manufactured to exacting standards, the LED5000 delivers powerful, precision focused light for any industry. The precision aligned array features 40 high-flux white LEDs, housed in a rugged metal & polymer shade. The LED5000-B provides outstanding focused illumination in a compact, **ESD safe** package.

The onboard dimming switch utilizes a proprietary design to maximize light output, with no color shift. This key feature is standard on all models, at no extra charge. We also include a 100–240V (50/60hz) transformer for worldwide use. This allows for standardization at factories who have footprints all across the world. There is no better quality control measure than to know your inspection process is as standardized as possible! We are also offering our specialized model featuring **Polarization**! This version excels in applications that encounter high reflective glare (precision machined parts, medical devices, sensor contact testing, etc.).

Manufactured in the USA, the LED5000 Series provides customers with additional product choices to cover applications far outside of the electronics industry. When your mission-critical inspection task cannot accept second best, *the pros look to Micro-Lite®*.

#### **LED5000 Series**

- Precision Focused LEDs
- ► ESD Safe (LED5000-B-ESD)
- Soft Tip Mounting Fasteners
- ► Fits up to 66mm Objectives
- Silent, Vibration Free Operation
- ► 100-240V (50/60hz) Worldwide Use
- Rugged Polymer Shade
- Polarizer Option for High Glare Inspection
- Dimmable With No Color Shifting
- Slim Design for Maximum Working Distance
- Many Microscope Adapters Available



**Quadrant Control High Output 80 LED Ring Light** 

For customers who require lighting as rugged as the environment being used in, our H/O 80 LED Ring Light fits the bill. Featuring a precision CNC machined housing with black anodized finish,

this illuminator offers two precision angled rows

of LEDs with complete quadrant control. You can choose any combination of 10 LED quadrants to turn on and off, offering the ultimate contrast-lit choices. This light is also fully dimmable, with independent dimming choice for each row of LEDs.

This item is also available in a combination White light/Ultraviolet light model, with same dimming and quadrant functionally as the White light model.





Symmetric (All LED Quadrants turned on)



Asymmetric (Opposing Quadrants)



Symmetric (Opposing Halves)



Symmetric (Inner or Outer Quadrants)

## **Next Generation Fiber Optic LED**

Finally a modern solution to replace the 150W Halogen lightbox! This LED lightbox features the industry's highest performing high-output LED's, making it a viable alternative to the traditional hot & energy inefficient halogen light sources. Designed for maximum thermal dissipation to ensure long life, this light source also maintains perfect light uniformity, consistent color temperature, and has a long 25,000+ hour life span.



- Made in the USA
- Superior, Precision Engineered Cooling **Sytem for Quiet Operation**
- Offered in Multiple Nosepiece Diameters for any Standard or Custom Fiber Optic
- Only Uses HALF the Energy of Halogen
- No More Replacement Bulbs = **Real Documented Cost Savings**
- 100-240V (50/60hz) Design for Worldwide Use



LB5000-A-B



MAGNIFIERS | MACHINE LITES | MICROSCOPES | VIDEO INSPECTION | FANS | TASK LIGHTING | MONITOR SUPPORT | BROADCAST | MICRO-LITE® | BONKOTE™ Bondline Static Control Solutions Pty Ltd - www.bondline.com.au - info@bondline.com.au - (02) 9757 3590