



BANBROS ENGINEERING PVT. LTD.
The Precision Measurement

ADVANCED HIGH-DEFINITION PARALLEL OPTICS WELDING PENETRATION SYSTEMS

- **VALUE**
- **VERSATILITY**
- **PERFORMANCE**



WPS-0880T



DESCRIPTION:

BANBROS offers you the most advance system of weld penetration inspection with specially design high resolution microscope and USB digital microscopic camera to view and instantly capture a photograph and measure exact weld penetration depth in all type of weld sample with the help of user friendly software. The system can be used to measure all dimensional measurement (2D) like length distance radius diameter etc.

FEATURES:

- **Operating System:** Support to windows10.
- **Picture Element:** High-resolution CMOS chip.
- **Output:** USB is used to adapt with pc.
- **Power:** It is freely plugged and unplugged with no extra power.
- **Parallel optics system:** 0.8X~8X zoom body, standard outfits. 1X plane none aberrance 10X eyepiece, Working distance 91mm.
- Standard total magnification: 8X~80X, the biggest magnification: 360X.
- With plan, high eye point and wide field eyepieces (Φ22mm).
- Binocular eye tubes inclined 45°
- The range of adjusting the diopter is ±6
- Interpupillary distance adjustment range 50mm~76mm
- The range of adjusting the focus is 50mm(the square post is 100mm), the diameter of the center working stage is Φ95mm.
- The measurement to match between the support and the main body is Φ76mm
- The distance between from the post center to the main body center is 140mm
- The size of the round post is Φ25mm

WELDING PENETRATION SOFTWARE FEATURES:

- 1) **Weld Penetration:**
 - a) Penetration depth & percentage.
 - b) Leg measurement.
 - c) Throat measurement.
 - d) Thickness measurement.
 - e) Can set tolerances for each parameters.
 - f) Can feed sample information in Report.
 - g) Automatic pass/fail status identification based on observed value and tolerances.
- 2) **Calibration:** This tool is used for calibrating through calibration scale.
- 3) **Dimensional Measurement:**
 - a) Line
 - b) Length (Linear, Horizontal, Vertical)
 - c) Angle (two-line angle, three-line angle)
 - d) Distance (two point)
 - e) Radius (three point)
 - f) Diameter (three point)
- 4) **Report:**
 - a) PDF & M.S. Excel
 - b) Printout with Processed imaged and results.



TECHNICAL SPECIFICATIONS:

Model No.	WPS-0880T
Magnification Range	8X to 80X
Objectives Range if Zoom Magnification	0.8X-8X
Eyepieces Field is wide and clear	10X (field size: Φ 22mm)
Optical System	Parallel Optical
Power Supply is out of the base of instrument	
The mode of illumination selection and brightness adjusting are very easy, has three modes: transmitted light, reflected light and mixed light illumination.	

HIGH DEFINITION INDUSTRIAL USB DIGITAL CAMERA:

It looks like an eyepiece. It can be easily inserted into eyepiece tube of microscope. The Digital Micro-Image Displays Immediately on computer or notebook PC. It is used in the field of image demonstration and analysis/application.

BMEX-Series can be easily inserted into eyepiece tube of microscope. The Digital Micro-Image Displays Immediately on computer or notebook PC. This camera ranges is an ultra-high performance CMOS camera and it adopts ultra-high performance CMOS sensor as the image-picking device. USB2.0 is used as the data transfer interface. The camera hardware resolutions range from 2M.P, 5M.P, 12M.P and comes with the integrated zinc aluminium alloy compact housing. It comes with advanced video & image processing application ultracam; providing Windows/Linux/OSX multiple platform SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API. It can be widely used in bright-field light environment and microscope image capture and with moderate frame rate.





It can provide support for detail image demonstration and analysis/application, including following function:

- Take Photo and Save Picture into Computer
- Take Video and Save Video into Computer

TECHNICAL SPECIFICATIONS:

Parameters	BMEX-2F	BMEX-5F	BMEX-12F
Sensor	CMOS 1/2.9 inch	CMOS 1/2.8 inch	CMOS 1/2.3 inch
Pixels	1920 x 1080 pixels, 2.0 MP	2560 x 1920 pixels, 5.0 MP	4000 x 3000 pixels, 12.0 MP
Scan Mode	Progressive, rolling shutter	Progressive, rolling shutter	Progressive, rolling shutter
Pixel Size	2.8 μm x 2.8 μm	2.0 μm x 2.0 μm	1.33 μm x 1.33 μm
Max Fps	Up to 30 FPS (1920x 1080 pixels)	Up to 30 FPS (2560 x 1920 pixels) Up to 50 FPS(1600 x 1200 pixels)	Up to 15 FPS (4000x 3000 pixels)
Filter	RGB	RGB	RGB
Mount	C-mount	C-mount	C-mount
Grayscale Conversion	8 bits	8 bits	8 bits
Color Depth	24 bits	24 bits	24 bits
Exposure	Automatic or manual, from 1 ms to 2s	Automatic or manual, from 1 ms to 2s	Automatic or manual, from 1 ms to 2s
White Balance	Automatic/manual	Automatic/manual	Automatic/manual
Dynamic Range	72 db	72 db	60 db
Sensitivity V/Lux-Sec	(at 550 nm) 0.51	(at 550 nm) 2.0	(at 550 nm) 1.5
Data Interface	USB 2.0 at 480 Mb/s	USB 2.0 at 480 Mb/s	USB 2.0 at 480 Mb/s
Operation Humidity	10-85 % humidity	10-85 % humidity	10-85 % humidity
Operating Temperature	0 to 60°C	0 to 60°C	0 to 60°C
Supplied With	0.45x objective with C-mount, USB 2.0 cable, 30 and 30.5 mm adapters for stereo microscopes, 76x 24 mm calibration slide, CD ROM with Image Focus Plus software, carton box		
Software	Windows 7 and higher (32 and 64 bit configurations). A Mac OS software version is also supplied		

* Due to continuous product development, Image & specification can be upgrade.