



NATIONAL MODEL DC4-156-S COMPOUND BIOLOGICAL MICROSCOPE WITH BUILT-IN HIGH RESOLUTION 1.3 MEGA PIXEL DIGITAL CAMERA

See illustration on page 4.

THE MICROSCOPE

Featuring precision optics and rugged construction with a built in high resolution 1.3 Mega Pixel digital camera. this microscope is enhanced with the addition of 100x oil immersion lens, 1.25 N.A. Abbe condenser, and professional quality built-in mechanical specimen holder. A truly full-featured microscope for optimum image quality and detail.

OPTICAL SYSTEM

- Widefield 10x eyepiece with pointer. Accepts optional #965-160 eyepiece reticle.
- 45° inclined monocular viewing head.
- DIN standard 4x (0.10 N.A.), 10x (0.25 N.A.) and 40xR (0.65 N.A.) objectives are supplied for 40x, 100x and 400x magnification. Model 156-S also includes 100xR (1.25 N.A.) oil immersion lens. All are achromatic, parfocalled, parcentered and color-coded.
- 4-hole objective turret, reverse position, ball-bearing mounted for smooth, precise changes in magnification.

ILLUMINATION

- Built-in 12v 20 watt halogen with rheostat intensity control.
- Base mounted on/off switch, heavy-duty 3-wire grounded electrical system and plug.

FOCUSING

- Separate low position coarse and fine focusing controls.
- Stage moves up or down, eyepiece and body remain fixed.
- Slip clutch prevents damage to focusing system.
- Tension adjustment eliminates stage drift.
- Safety rack stop prevents damage to slides and objective lenses.

STAGE

- Large 135mm x 135mm (5-1/4 in. x 5-1/4 in.) stage, with professional quality, low profile mechanical specimen holder with low-position coaxial x-y controls.
- 1.25 N.A. Abbe condenser with spiral focusing mount, iris diaphragm, swing-out filter holder, blue filter supplied.

FRAME

- Rugged cast metal, gray enamel finish.
- Height 380mm (15 in.). Net wt. 4.7 kgs (10.4 lbs).

PACKING

- Molded styrofoam container with instruction brochure and vinyl dustcover.
- Individual: Ship wt. 7.7 kgs (17 lbs), Dimensions 550x375x375mm (22x15x15 in.)
- Master carton pack 2 each: Ship wt. 14.5 kgs (32 lbs), Dimensions 550x400x500mm (22x16x20 in.)

WARRANTY

- Lifetime limited warranty, excluding bulb and cords.

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MICROSCOPE PARTS & ACCESSORIES

- 610-160 WF10X Eyepiece
- 610-160R WF10X eyepiece w/reticle, 10mm/100div.
- 800-160 Replacement bulb, 12v 20 watt halogen bi-pin
- 965-160 Eyepiece reticle, 10mm/100 div
- 975-002 Carrying case, anodized aluminum, fabric lining, accessory pockets, Velcro straps, & keyed lock

THE CAMERA

This model permits hook-up to computer with supplied USB cable. Easy-to-use software for capturing microscope images, labeling, measuring, storing, and e-mailing. Requires a PC with Windows 98 or above.

SPECIFICATIONS – NATIONAL DIGITAL MICROSCOPE #DC4-156-S
 (USB 2.0 port, digital signal for use with computer only)

	USB 2.0 (digital signal)
Image device	½ inch CMOS
Effective pixels	1240x1024
Framed resolution	1240x1024 pixels
Electronic shutter	10fps @ 1240x1024, 30fps @ 640x480
Sync System	N/A
Audio output	Transmission across Image 2000 direct into memory of PC
S/N Ratio	N/A
Gamma Characteristic	N/A
White balance	Auto white balance
B.L.C.	Back light compensation (auto)
Minimum illumination	5 Lux (F:1.4)
Data transfer	480 MB/second
Color Image	Take-up time below one second
Color depth	24 bit (16.7 million colors)
Electronic shutter	--
Power supply	5v self powered from computer USB
Consumption	250mA
Data format	BMP, JPG, MIG (for recording)

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System Requirements

Operating System	Windows 98 or above. No Macintosh support
Computer Requirements	CPU 1 GHz or above, RAM 256 MB or above, Hard disk 1 G or above, CD-ROM drive, USB 2.0 plug, sound card, speaker and microphone for video and audio recording, a modem for e-mail, video conference and video mail.
Immediate Printout	On printer
Position and size of image on monitor	Freely definable
Menu on monitor	Pull-down menus for opening, storing, printing, print preview, regulator for brightness, color, gamma correction. Icons for recording, image interpolation, switching between large and small image, image quality, automatic and manual white balance.
Image data	Automatic reference number, date, time
Interactive adjustment	Color, brightness, contrast
Import of stored data	Possible

Environmental conditions

Operating temperature	-50°F to +150°F
Storage temperature	-50°F to +175°F
Relative humidity	40% to 95%

CAMERA WARRANTY:

- 1-year limited warranty

SOFTWARE WARRANTY:

- 90-day limited warranty.



NATIONAL MODEL #DC4-156-S



MODEL #DC4-156-S shown is use (computer not included)

Distributed by:
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Subject to changes in material and design, equal to or exceeding those described above.