



# NATIONAL

National Optical & Scientific Instruments, Inc.  
A Member of the Motic Group

## MODEL DC3-163, DC5-163 COMPOUND BIOLOGICAL MICROSCOPE WITH BUILT-IN CAMERA

Superior in design and in performance, the DC3-163 and DC5-163 incorporate a wide range of features designed for university and laboratory use with the enhancement of either a built-in 2MP digital or 0.4MP digital/500 tv lines analog camera. Superb optical clarity and reliable mechanical engineering assure years of top performance. Choose from four grades of objective lenses: Standard achromatic lenses deliver excellent clarity and normal flatness of field; ASC high contrast deliver extra image contrast; Plan achromatic for superior clarity and flatness of field, and phase contrast lenses for viewing live specimens which require additional background contrast..

### OPTICAL SYSTEM

- Widefield 10x eyepiece with revolving pointer. Accepts optional #965-160 eyepiece reticle.
- 30° inclined binocular head, eyepieces with dual diopters and interpupillary adjustment 54mm to 76mm
- 3-position sliding rod directs light 100% to binocular eyepieces, 100% to camera, 70% to camera or 30% to binocular eyepieces.
- DIN standard 4x (0.10 N.A.), 10x (0.25 N.A.), 40xR (0.65 N.A.) and 100xR oil immersion (1.25 N.A.) objectives. All are achromatic, parfocalled, parcentered and color-coded.

### ILLUMINATION

- 12v 20-watt halogen with variable rheostat control.
- Illuminated on/off switch, 3-wire grounded cord and plug.
- 12v DC power converter operates on 100v-240v 50Hz/60Hz current, without need of additional transformer.
- 1.25 N.A. Abbe condenser has rack & pinion focusing, iris diaphragm, swing-out filter holder with clear blue, green and yellow filters supplied.

### FOCUSING

- Coaxial coarse and fine focusing controls.
- Slip clutch prevents damage to focusing system.
- Tension adjustment eliminates stage drift.
- Safety rack stop prevents damage to slides and objective lenses.

### WARRANTY

- Lifetime limited warranty, excluding bulbs and cord.  
Camera 1 year limited warranty.



# National Model DC3-163, DC5-163

Specifications	
Eyepiece	10x, 18mm, with pointer
Head	30° inclined binocular viewing head
Nosepiece	4-hole, click stop, ball-bearing mounted
Objectives	DIN, achromatic, 4x, 10x, 40xR and 100xR (DC3-163, DC5-163) DIN, super high contrast, 4x, 10x, 40xR and 100xR (DC3-163-ACS, DC5-163-ACS) DIN, plan achromatic, 4x, 10x, 40xR and 100xR (DC3-163-P, DC5-163-P) DIN, plan phase, 4x, 10x, 40xR and 100xR (DC3-163-PH, DC5-163-PH)
Stage	140mm x 135mm (5 1/2 in. x 4 1/4 in.) stage, with professional quality low profile mechanical specimen holder with low-position coaxial x-y controls.
Condenser	1.25 N.A. Abbe condenser with spiral focusing mount and iris diaphragm.
Focusing	Separate coarse and fine controls with tension adjustment and slip clutch
Illumination	12v 20-watt halogen
Height/ Weight	16 in. (405mm)/ 13.9 lbs (6.3 kgs)

#### PACKING:

- Individual: Ship wt. 21 lbs. (9.6 kgs), Dimensions 23x18x12 in. (575x450x300mm)
- Master carton pack 1 each: Ship wt. 21 lbs. (9.6 kgs), Dimensions 23x18x12 in. (575x450x300mm)

<b>Digital Camera</b>	This model permits hook-up to computer with supplied USB cable. Easy-to-use software for capturing microscope images, labeling, measuring and storing. Requires a PC with Windows XP or above. OSX		
<b>Model</b>	DC3-163		DC5-163
<b>Image device</b>	CCD (analog)	CCD (digital)	CMOS (digital)
<b>Effective pixels</b>	550 TV lines	720 x 480	1600 x 1200
<b>Framed resolution</b>		720 x 480 pixels	1600 x 1200 pixels
<b>White balance</b>	Push button	Push button	Software white balance
<b>Power supply</b>	External power supply	External power supply	USB powered



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Products subject to changes in material and design, equal to or exceeding those described above.

ISO 9001:2000 Certified  
ISO 14001:2001 Certified