



# NATIONAL

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

## MODEL 131-LED, 131-RLED Inclined Monocular Microscope with Cordless LED Illumination

The microscope model that sets the standard for high school instruction, now with the freedom of battery operated cordless illumination. Includes all the most commonly specified features. Rugged metal construction, locked-on parts. Superior DIN optical system and precision mechanical components assure parfocussed and parcentered optical alignment for sharp, unsurpassed viewing. Utilizes rechargeable batteries for bright, cool illumination from long-life LED bulbs.

### OPTICAL SYSTEM

- Widefield 10x eyepiece with revolving pointer. Accepts optional #965-160 eyepiece reticle.
- 45° inclined monocular viewing head rotates 360° for easy sharing by more than one student.
- 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. All are achromatic, parfocussed, parcentered and color-coded.
- 3-hole objective turret, ball-bearing mounted for smooth, precise changes in magnification.

### FOCUSING

- Low position coarse and fine focusing controls.
- Slip clutch prevents damage from over focusing.
- Tension adjustment eliminates stage drift.
- Safety rack stop prevents damage to slides and objective lenses.

### ILLUMINATION

- Cool running LED light rated up to 50,000 hours of life.
- 50 hours of use from 3 standard AA alkaline batteries. (131-LED)
- Rechargeable batteries can be recharged up to 1000 times. (131-RLED)
- Optional power adapter allows operation from electrical outlet (131-LED)
- Battery recharge adapter with auto shut-off. (included 131-RLED)

### WARRANTY

- Limited lifetime warranty, excluding LED and batteries.



# National Model 131-LED,131-RLED

<b>Specifications</b>	
Eyepiece	10x, 18mm, with pointer
Head	45° inclined monocular viewing head, rotates 360°
Nosepiece	3-hole, click stop, ball-bearing mounted
Objectives	DIN, achromat, 4x (0.10 N.A.), 10x (0.25 N.A.) and 40xR (0.65 N.A.)
Stage	110mm x 120mm (4-3/8 in. x 4-3/4 in.) stage, with locked-on spring mounted stage clips, drilled and tapped to accept optional mechanical stage.
Condenser	Built-in 0.65 N.A. condenser lens, calibrated 5-hole disc diaphragm
Focusing	Separate coarse and fine controls with tension adjustment and slip clutch
Illumination	LED
Electrical	3 standard AA alkaline batteries (131-LED) 3 rechargeable AA nickel metal hydrate (131-RLED, recharge up to 1000 times)
Height/ Weight	14 1/8 in. (360mm)/ 6.8 lbs (3.1 kgs)

#### PACKING:

- Individual: Ship wt. 10 lbs (4.5 kgs), Dimensions 22x13x13 in. (550x325x325mm)
- Master carton pack 5 each: Ship wt. 43 lbs (19.5 kgs), Dimensions 35x12x18 in. (875x300x450mm)

<b>Parts and Accessories</b>	
800-001	Replacement LED bulb
910	Graduated mechanical stage
965-160	Eyepiece reticle, 10mm/100 div.
905	UL listed adapter permits bypass of batteries for operation of light from regular electrical outlet



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Authorized Distributor

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

**ISO 9001:2000 Certified**  
**ISO 14001:2001 Certified**