

## Description, all series

- 3 Series, all with Outstanding Optics, Superb image resolution, use microscope slides
  - infinity planachromatic objectives deliver excellent clarity, flatness, true color reproduction, optimal contrast with Koehler illumination; TS-211/311 or 1191D81/82
  - infinity E-planachromatic are economical professional and bright, clear; TS-102/103 or 1220Z61/Z62/Z63
  - DIN achromatic, clear and high contrast, smaller field of view; TS-135 series or 1191D93/D94/D95
- Easy to use - simple set up all three series
  - Factory installed & centered objectives, condenser
  - Available with cord wrap, contained stage, locked eye pieces and handle (TS-135 series excluded)
- Easy to choose: all include four objectives and camera option: except monocular 1191D94
  - Application Modules for Phase contrast, Fluorescence and Polarization available; most stable @ 22 lbs. biggest stage, best optics; only on TS-211/311 or 1191D81/82
  - Excellent for routine applications: hematology, wet prep, gram stains, cell identification/counting; Compact 14 lbs., durable: TS-102/103 or 1220Z61/Z62/Z63
  - Small and light, monocular and 3 objective models available for tight budgets: TS-135 series or 1191D93/D94/D95

## General Specifications, all series

Body/Head	inclined 30°, rotates 360°; interpupillary adjustment 48mm - 75mm; diopter adjust -5 to +5
Nosepiece	ball-bearing, positive click stops and smooth operation
Eyepieces	Wide field 10X eye pieces, FN 20mm; TS135 @ 18mm
Stage	Rack or rackless design; durable slide holder with two slide capacity
Focus Mechanism	All steel and brass gears; Adjustable Tension Control; Coaxial coarse and fine adjustments markings 0.002mm increments
Condenser	1.25 N.A. 2 element Abbe Condenser, iris diaphragm, Rack and Pinion focusing
Illumination	LED with electronic dimmer; Fuse: ½ Amp, located in base
Finish	White baked-on enamel paint with "stipple" finish
Dimension	AC 110-240V, 50/60 Hz Dimensions: TS135 not universal

**standard microscope includes:** two eye pieces, four objectives: 4, 10, 40 & 100X; immersion oil, blue filter, dust cover, power cord, spare lamp, fuse; and anti-microbial treatment on frame and head.

## Additional Info

### Dependable and Reliable with Comfort built-in

Industry leading 5 Year Warranty confirms reliability; 20 year history of dependable support continues

- Controls fit naturally, Minimal effort to move slide/control focus/illumination. Modern design is stable.

- Arrives mostly assembled, easy to set up, stays aligned and configured
- All metal construction; all glass parts adds to Reliability - no plastic

#### Plug and Play Camera with software for trinocular models 1191D82 1220Z62:

- Software, USB 2.0 cable & adapter supplied. Accessory item 59-3M, 1228M37; provides advanced capabilities including image capture, annotation, calibration (slide included) and measurement software included. Same as below.

#### Digital model TS-3M 1220Z63– integral CMOS color video camera

- Software, USB 2.0 cable supplied
- provides advanced capabilities including image capture, annotation, calibration (slide included) and measurement software included

#### Digital Specifications

Imaging Device 3.0 mega pixels, 1/2” CMOS, effective pixels 2048 x 1536 @ rate of 10 fps or 40 fps@ binning, 480MB transfer through USB2 connection, TWAIN compatible, 5V self-power through USB cable. System requirements: Windows XP, Vista, Windows 7, 10; P4, 1 GHz, 256MB RAM, USB 2.0 or MAC OSX, 1 GHz, 256MB RAM, USB 2.0

#### Objective Lens Specifications: R indicates retractable lens, excludes TS-135 series

<b>Infinity Objectives</b>	Magnification	Numerical Aperture (mm)	Field of View with 10X Eye Piece (mm)	Working Distance Phase Contrast (mm)
Plan achromatic	4X	0.1	5	6.73
Plan achromatic	10X	0.25	2	4
Plan achromatic	20X optional	0.4	1	1.24
Plan achromatic	40X R	0.66	0.5	0.29
Plan achromatic	100X R (oil)	1.25	0.2	0.12