



Fluorescence Microscopes

1400FL Series

- Professional Level
- Fluorescence, Phase Contrast, & Brightfield
- Precision Optics



The 1400FL Series Fluorescence Microscopes are the flagship of the VanGuard line. Combining top performance with highly-advanced features and optics, the 1400FL Series models produce fluorescence images of the utmost in clarity. Available with brightfield or phase contrast / brightfield.

Viewing Head. Trinocular (Seidentopf) heads rotate 360° and are inclined at 30°. Both models feature interpupillary and dioptic adjustment. The heads feature a sliding main prism (30 / 70 split) to provide full-time imaging when the vertical tube is in use (70% of the image to the vertical tube and 30% to the viewing eyetubes).

Eyepieces. 10X Widefield (DIN) with a field number of 18.

Nosepiece. Quintuple, reversed, ball-bearing nosepiece with high-grade lubricant and positive stops. The nosepiece is reversed (inward-facing) to allow for easier manipulation of slides and to aid in keeping the objectives clean.

Objectives. Achromatic fluorescence objectives come standard on both models. Model 1482FL features plan achromatic brightfield objectives. Model 1486FL features plan achromatic phase contrast and brightfield objectives. All objectives are made to DIN standards and are coated.

Stage. Delivering a high level of fluid motion control and longevity, the stage measures 140x140mm. Features a removable spring-clip slide holder and a chemical-resistant finish. Motion is controlled by a right-hand, low-position coaxial control and is driven by a rack and pinion system.

Focusing Movement. Coaxial, ultra low-position coarse and fine focus controls feature a 40mm focusing range and are graduated to 2 microns per division. Fitted with tension adjustment and safety autostop.

Condenser. Model 1482FL comes with a 1.25 N.A. Abbe condenser. Model 1486FL comes with a 1.25 N.A. Zernike condenser with phase annulus rings for 10X, 20X, 40X, & 100X; also has a "0" setting for brightfield work. All condensers are mounted on a rack and pinion focusing mechanism and feature spring-loaded centering knobs and an iris diaphragm with a swing-in filter holder.

Lower Illumination. 20W variable quartz halogen light source. Comes with blue, green (Model 1486FL only), and neutral density filters. 0.25A, 250V (2 ea.) fuses.

Upper Illumination. Features a 100W HBO mercury light source which is mounted to the rear and is protected by a sturdy, all-metal housing. Lamp is easily focused and centered with the front-mounted lamp viewer. External power supply provides constant, even light and features an electronic timer which automatically logs the amount of time the mercury lamp is in use. 5.0A, 250V fuse.

Fluorescence Filters. Features a 3-position (2 filter positions and 1 OFF position), sliding, filter cube assembly. Fluorescence models come standard with 2 broadband filters (blue & green). Custom fluorescence filters available on request.

Base. Stable 225x160mm base fitted with anti-skid rubber feet.

Body. Cast-metal, ergonomic body with stain-resistant enamel finish.

Dimensions. 225mm (L) x 160mm (W) x 465mm (H); 10.7kg



Model 1482FL



Specifications

Viewing Head: Trinocular
Viewing Head Type: Seidentopf
Head Rotation: 360°
Head Inclination: 30°
Sliding Prism: 70 / 30 Split
Interpupillary Adjustment: 55-75mm
Dioptric Adjustment: -5 to +5
Eyepiece Magnification: 10X Widefield
Eyepiece Field Diameter: 18mm
Optional Eyepieces: 15X (Field Diameter: 11mm)
 20X (Field Diameter: 11mm)
Nosepiece: Quintuple / Reversed
Fluorescence Objectives: 4X [0.10 N.A., 17.0mm W.D., 4.5mm F.O.V.]
 (Achromatic) 10X [0.25 N.A., 8.0mm W.D., 1.8mm F.O.V.]
 40X [0.65 N.A., 0.40mm W.D., 0.45mm F.O.V.]
 100X [1.25 N.A., 0.25mm W.D., 0.18mm F.O.V.]
Phase Contrast Objectives: 10X [0.25 N.A., 8.0mm W.D., 1.8mm F.O.V.]
 (Plan Achromatic) 20X [0.40 N.A., 0.50mm W.D., 0.9mm F.O.V.]
 40X [0.65 N.A., 0.40mm W.D., 0.45mm F.O.V.]
 100X [1.25 N.A., 0.25mm W.D., 0.18mm F.O.V.]
Brightfield Objectives: 4X [0.10 N.A., 17.0mm W.D., 4.5mm F.O.V.]
 (Plan Achromatic) 10X [0.25 N.A., 8.0mm W.D., 1.8mm F.O.V.]
 20X [0.40 N.A., 0.50mm W.D., 0.9mm F.O.V.] (Optional)
 40X [0.65 N.A., 0.40mm W.D., 0.45mm F.O.V.]
 60X [0.85 N.A., 0.30mm W.D., 0.3mm F.O.V.] (Optional)
 100X [1.25 N.A., 0.25mm W.D., 0.18mm F.O.V.]
Fluorescence Filter Cubes: Blue Broadband
 (Peak: 445nm, Excitation: 420-485nm, Emission: 520nm+)
 Intended Dyes: FITC, Acridine Orange, & Propidium Iodide
 Green Broadband
 (Peak: 546nm, Excitation: 535-550nm, Emission: 580nm+)
 Intended Dyes: Ethidium Bromide & TRITC
Custom Fluorescence Filters: Available On Request
Stage Dimensions: 140mm x 140mm
Stage Motion: Right-Hand Coaxial Control / Rack & Pinion Drive
Stage Movement Range: 50x75mm
Focusing Movement: Coaxial Coarse & Fine Controls / Safety Autostop
Focusing Range: 40mm
Focusing Graduation: 2 Microns Per Division
Brightfield Condenser: 1.25 N.A. Abbe Condenser w/ Iris Diaphragm
Phase Contrast Condenser: 1.25 N.A. Zernike Condenser w/ Iris Diaphragm
Phase Centering Tool: Telescoping Eyepiece [Model 1486FL]
Lower Illumination: 20W / 6V Variable Quartz Halogen
Upper Illumination: 100W HBO Mercury
Fuse: 0.25A, 250V (2 ea.) [Microscope]
 5.0A, 250V [External Power Supply]
Voltage: 110V [Standard]; 220V [Special Order]
Base Dimensions: 225mm x 160mm
Overall Dimensions: 225mm (L) x 160mm (W) x 465mm (H)
Weight: 10.7kg
Supplied With: 20W Halogen Lamp (Spare) (cat. no. 1400-20WHL),
 0.25A, 250V Fuse (Spare) (cat. no. 1400-FS1),
 Dust Cover, Operation Manual



Model 1482FL (Side View)



External Power Supply

Ordering Information

Model	Head	Type	Objective Magnification	Objective Type	Upper Illumination	Lower Illumination
1482FL	Trinocular	Fluorescence	4X, 10X, 40X, 100X (Oil)	Achromatic	100W HBO Mercury	20W Variable Quartz Halogen
		Brightfield	4X, 10X, 40X, 100X (Oil)	Plan Achromatic		
1486FL	Trinocular	Fluorescence	4X, 10X, 40X, 100X (Oil)	Achromatic	100W HBO Mercury	20W Variable Quartz Halogen
		Brightfield	4X, 10X, 40X, 100X (Oil)	Plan Achromatic		