

# RB40

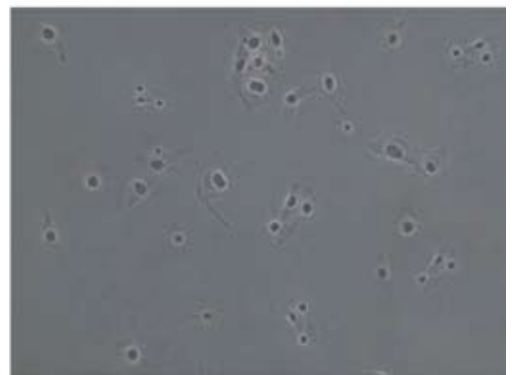
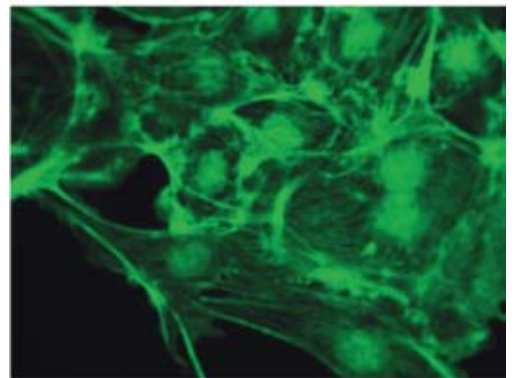
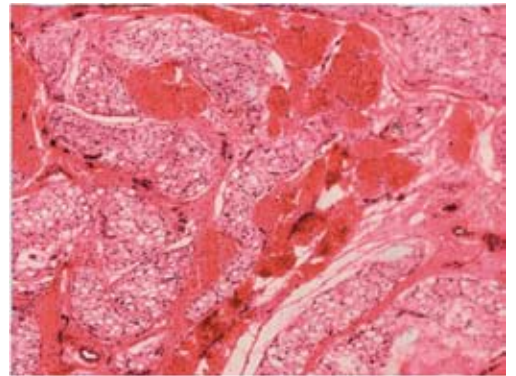
## Laboratory Biological Microscope





## Rugged Frame

Y-shaped body, all-metal diecasted under high pressure. High stability, no image dithering while observing under high magnification, ensures precision testing of mutli-channel fluorescence diagnosis.



# New Structure Design, Optimized

## **Koehler Illumination System**

6V 30W transmitted light system gives a bright and uniform field under every magnification.

Newly designed telecentric Koehler illumination system, working with N.A. 1.2/0.22 swing out achromatic condenser, applies to 2x-100x observation.



## **Movable Working Stage**

175 x 145mm double-layer mechanical stage with right side operating handle. Damped specimen retaining design allows for two specimen to be put together for testing and analyzing comparatively.

Marzhauser Stage with low torque available soon.



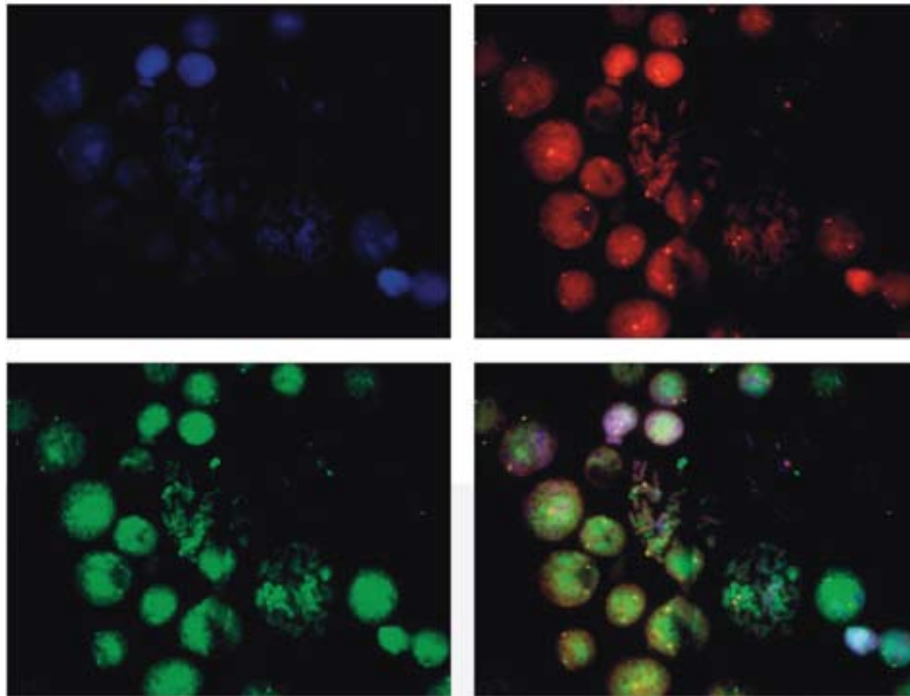
## **Focus Adjustment**

Coaxial coarse and fine adjustment with graduations of 2 $\mu$ m. The ergonomic design provides optimal comfort for the user.

## Semi-Apochromatic High N.A. Objectives

Infinity Plan Semi-Apochromatic Fluorescence objectives provide the best choice for fluorescence observation. Aberration correction and 25% higher numerical aperture present brighter and clearer images.

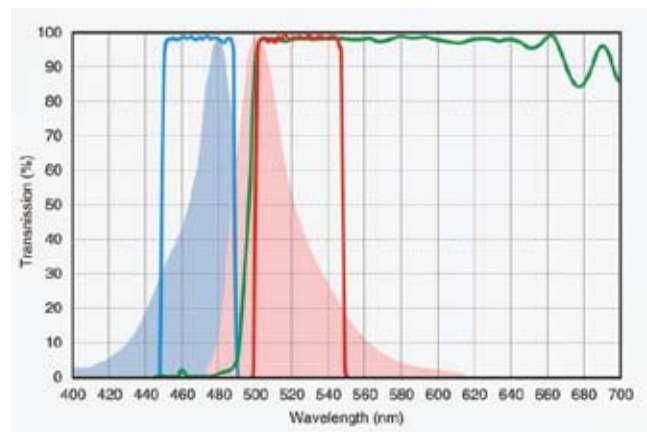
With advanced multi-coating wide-band technology, these objectives deliver improved UV and wide bandwidth light transmission.



## High Performance Fluorescence Filters

High performance fluorescence filters that provide high spectral transmission, good depth and gradient of spectral lines.

With high S/N ratio, high image contrast, and light eliminating technology, the filter sets deliver high contrast and sharp fluorescence images.



## 6 Position Filter Turret

High precision filter changing turret makes it easy to rapidly move between selected filter sets. This high performance system ensures the accuracy required for the most demanding applications including FISH. High transmittance of spectrum without cross color but a high S/N ratio, promotes dramatic fluorescence imaging contrast.

The filter with stray light elimination technology presents high contrast between the specimen and its background.

## Fluorescence Illumination System

This fluorescence system provides multiple illumination options, including a long-life metal halide illuminator or various other LED options. These systems also eliminate the hassle of lamp alignment of collector lenses.



## Cameras

Through the integration of the RB40 trinocular microscope and the selection of one of our wide range of digital cameras the user is able to achieve consistently crisp, live images. All Fein Optic cameras come equipped with your choice of basic or advanced image editing software.

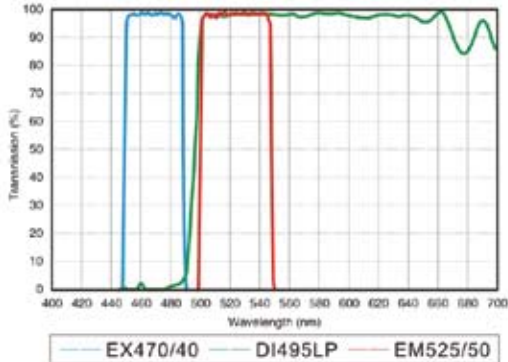
Please consult the Fein Optic Digital series of brochures for further details.

Should you decide to select a third-party camera, Fein Optic can provide 0.5x, 0.67x and 1.0x C-Mount adapters to meet any of your camera requirements.

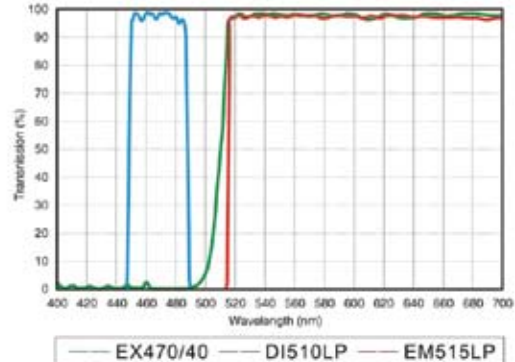


# Common Fluorescence Filter Parameter

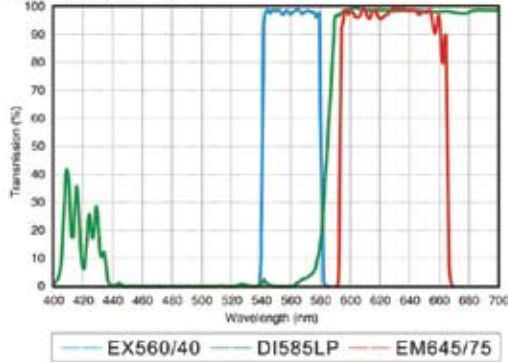
B1: EGFP/GFP/FITC /Alexa Fluor@488  
Cy2@/DIO/Fluo-4



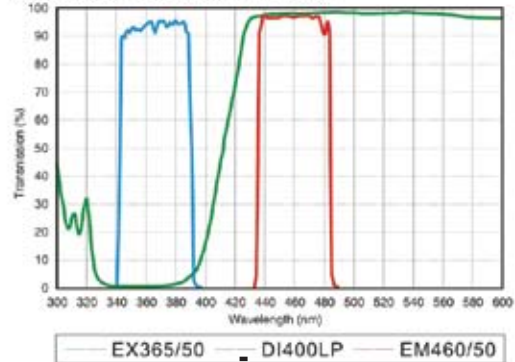
B2: EGFP/GFP/FITC /Alexa Fluor@488  
Cy2@/DIO/Fluo-4



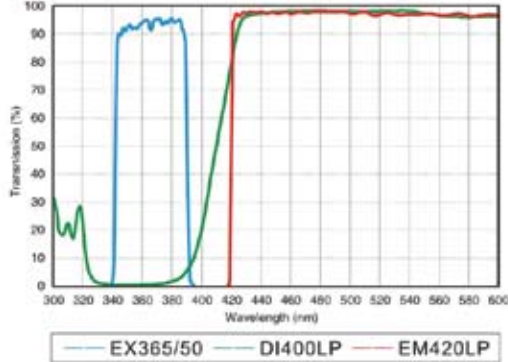
G1: TexasRED@/TexasRed@-X/Cy3.5  
Mito Tracker@Red



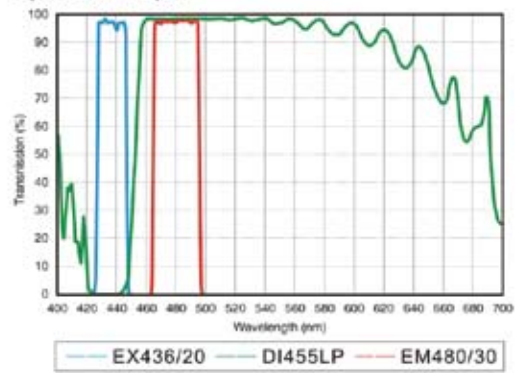
UV1: DAPI/Hoechst 33342/33258 AMCA/  
AMCA-X Blue/ Alexa Fluor® 350



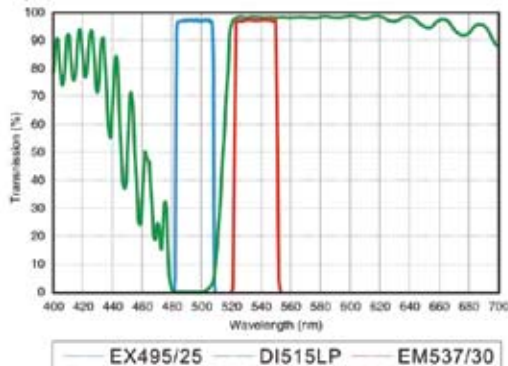
UV2: DAPI/Hoechst 33342/33258 AMCA/  
AMCA-X Blue/ Alexa Fluor® 350



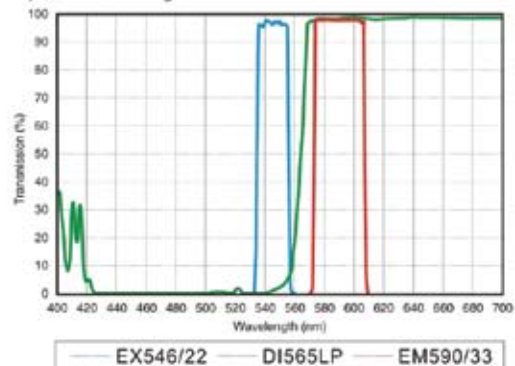
Spectrum Aqua



Spectrum Green



Spectrum orange





LPLAN series infinity plan achromatic objectives present sharp image contrast and work well even fluorescence observation.



PLAN-PH series infinity phase contrast objectives improve clarity and contrast, especially suitable to observe colorless or light-colored cells.

PLAN-FLUOR series infinity plan semi-apochromatic objectives work best for fluorescence observation. Adopting crystal materials, perfectly corrects all kinds of chromatic aberrations. Large numerical aperture design presents high resolution, high contrast micro-images. In fluorescence observation, the image is clear and bright while the background is pure black, prominent in ultraviolet fluorescence.

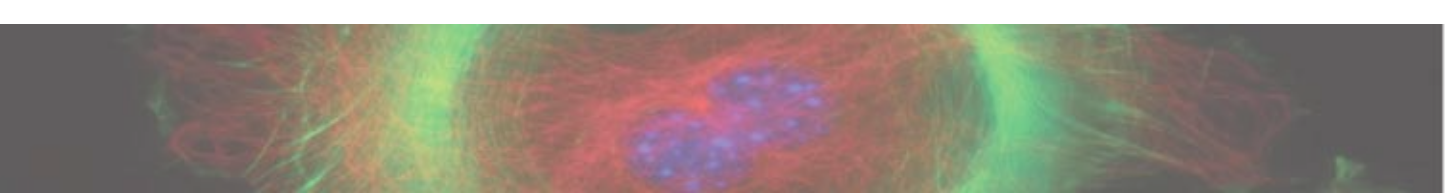


| Series            | Magnification  | N.A. | W.D. | F.N. | Cover glass thickness | Immersion | Spring |
|-------------------|----------------|------|------|------|-----------------------|-----------|--------|
| Plan series       | Plan2X         | 0.06 | 5.0  | 22   | —                     | /         | /      |
|                   | Plan4X         | 0.10 | 11.9 | 22   | 0.17                  | /         | /      |
|                   | Plan10X        | 0.25 | 12.1 | 22   | 0.17                  | /         | /      |
|                   | Plan20X        | 0.40 | 1.5  | 22   | 0.17                  | /         | /      |
|                   | Plan40X        | 0.65 | 0.36 | 22   | 0.17                  | /         | Yes    |
|                   | Plan60X        | 0.85 | 0.3  | 22   | 0.17                  | /         | Yes    |
| Plan PH series    | Plan100X       | 1.25 | 0.18 | 22   | 0.17                  | Oil       | Yes    |
|                   | Plan PH10X     | 0.25 | 12.1 | 22   | 0.17                  | /         | /      |
|                   | Plan PH20X     | 0.40 | 1.5  | 22   | 0.17                  | /         | /      |
|                   | Plan PH40X     | 0.65 | 0.36 | 22   | 0.17                  | /         | Yes    |
| Plan Fluor series | Plan PH100X    | 1.25 | 0.18 | 22   | 0.17                  | Oil       | Yes    |
|                   | Plan Fluor4X   | 0.13 | 18.5 | 25   | 0.17                  | /         | /      |
|                   | Plan Fluor10X  | 0.30 | 10.6 | 25   | 0.17                  | /         | /      |
|                   | Plan Fluor20X  | 0.50 | 2.33 | 25   | 0.17                  | /         | /      |
|                   | Plan Fluor40X  | 0.75 | 0.6  | 25   | 0.17                  | /         | /      |
|                   | Plan Fluor100X | 1.28 | 0.21 | 25   | 0.17                  | Oil       | /      |

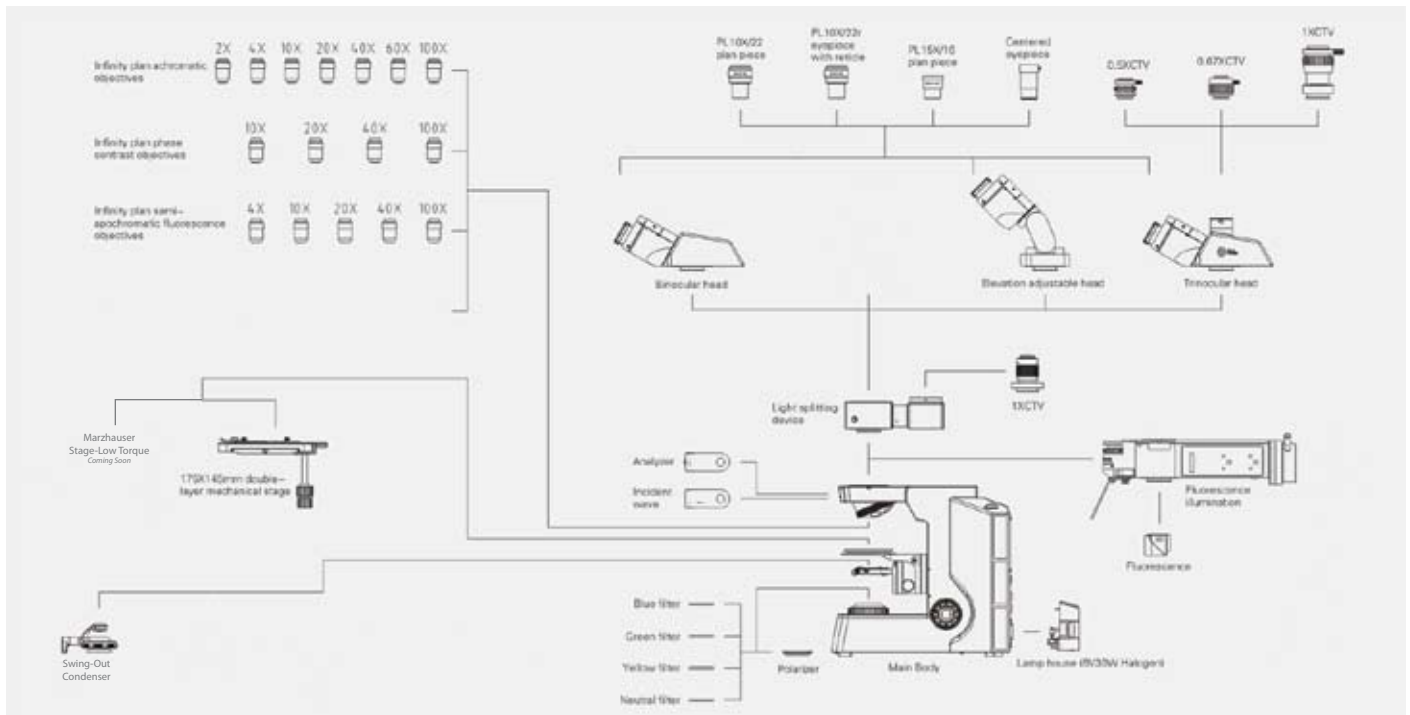
### RB40 Series Specifications

|                                  |  |
|----------------------------------|--|
| Optical System                   | Infinity Color Corrected Optical System  |
| Viewing Head                     | Efficient Ergonomic Infinity gemel binocular head, 30 - 60 elevation adjustable; 360 rotatable; interpupillary adjustable distance: 54-75mm +/-5 adjustable                  |
|                                  | 30 inclined gemel binocular head; 360 rotatable; interpupillary adjustable distance: 54-75mm; diopter +/-5 adjustable  |
|                                  | 30 inclined gemel trinocular head, splitting ratio R:T = 50:50 or R:T = 0:100; 360 rotatable; interpupillary adjustable distance distance : 54-75mm; diopter +/-5 adjustable |
| Eyepiece                         | High eye-point wide field plan eyepiece PL 10x 22mm  |
| Objective                        | Infinity Plan Achromatic/Phase Contrast/Semi-Apochromatic Fluorescence Objectives  |
| Nosepiece                        | Revolving Quintuple Nosepiece  |
| Body                             | Coaxial focus system with upper limited and tension adjustment; coarse range: 30mm; fine precision: 0.002mm; focus height adjustable   |
| Stage                            | 175x145mm double layer mechanical stage, rotatable; with special fabrication processing, anti-corrosive and anti-friction; moving range: 76x50mm, precision : 0.1mm          |
|                                  | Marzhauser Stage - Low Torque available soon   |
| Body                             | NA 1.2 Swing-out type achromatic condenser   |
| Fluorescence Illumination System | Reflected Fluorescence Koehler Illumination with alterable field diaphragm (center adjustable)   |
| Transmitted Illumination System  | Wide voltage: 100-240V, built-in transmitted Koehler illumination; 6V/30W halogen, pre-centered, intensity adjustable  |
| Polarizing Kit                   | Analyzer 360 rotatable ; polarizer and analyzer can be out of light path   |
| Filter                           | B2 Filter Set, UV1 Filter Set, G2 Filter Set   |
| Light Splitting Device           | R:T = 70:30 OR 100:0, special 1 x CTV  |
| Camera Adapter                   | 0.5x, 0.67x, 1.0x  |



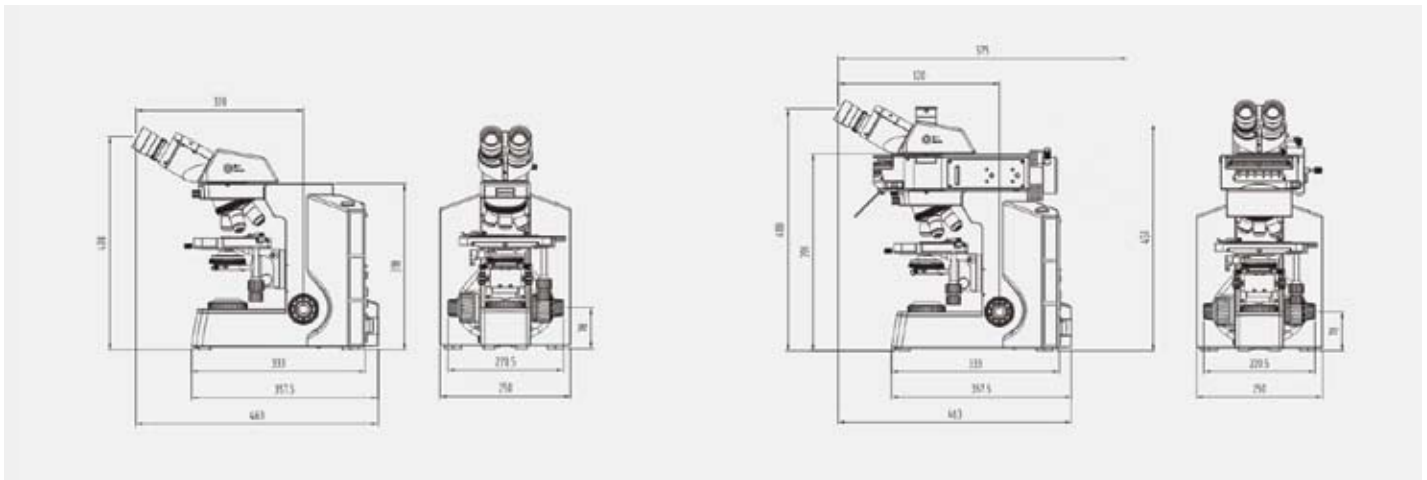


## RB40 Series System Diagram



## RB40 biological model dimensions: mm

## RB40 fluorescence model dimensions: mm



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