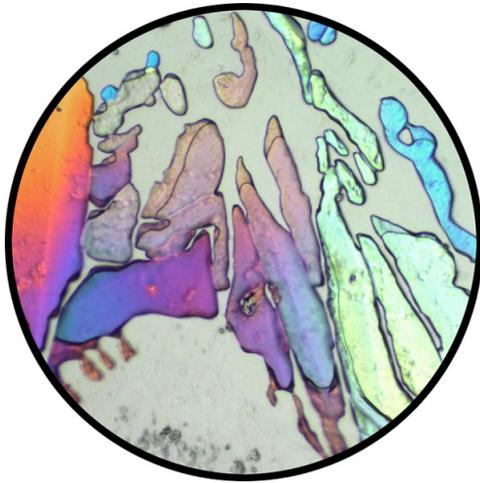
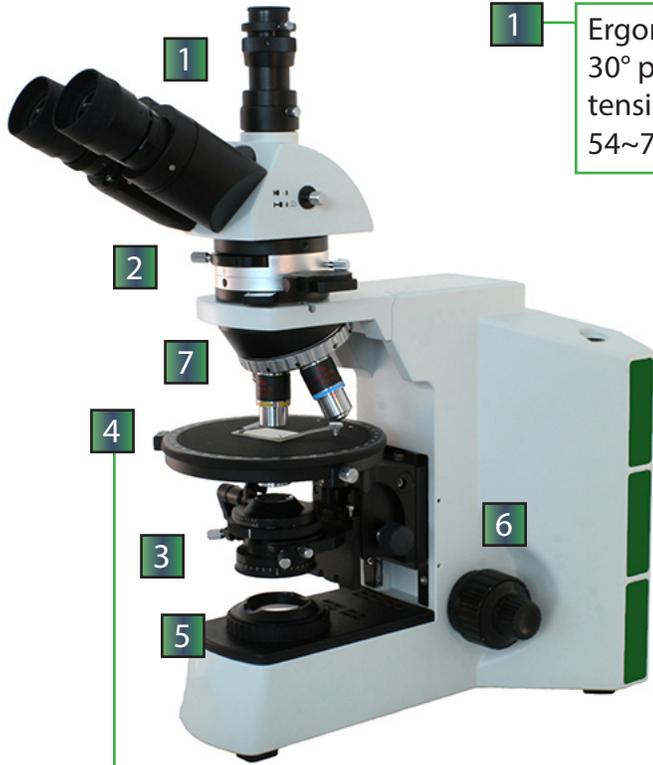




## R40POL Series Polarizing Microscopes



# R40POL Transmitted Light Polarizing Microscope Features



1 Ergonomically inclined trinocular head with eyetubes at 30° places user in the best working position, creating less tension and fatigue. Interpupillary distance is adjustable from 54~75mm.

2 Intermediate tube holds bertrand lens with rotating switch, pluggable analyzer rotates 360°, 2° increments. Slots for compensators: Gypsum full  $\lambda$  plate, Mica  $1/4\lambda$  plate and Quartz Wedge.

3 Polarizer rotates 360° and connects directly onto the base of the condenser.

4 160mm diameter, 360° rotatable metal stage can be locked in position, rotates in 1° increments. Stage is anti-corrosive, anti-friction, and coated in graphite. Mechanical stage can be added and provides moving range of 30mm x 40mm with high precision micrometer, 0.01mm increments.



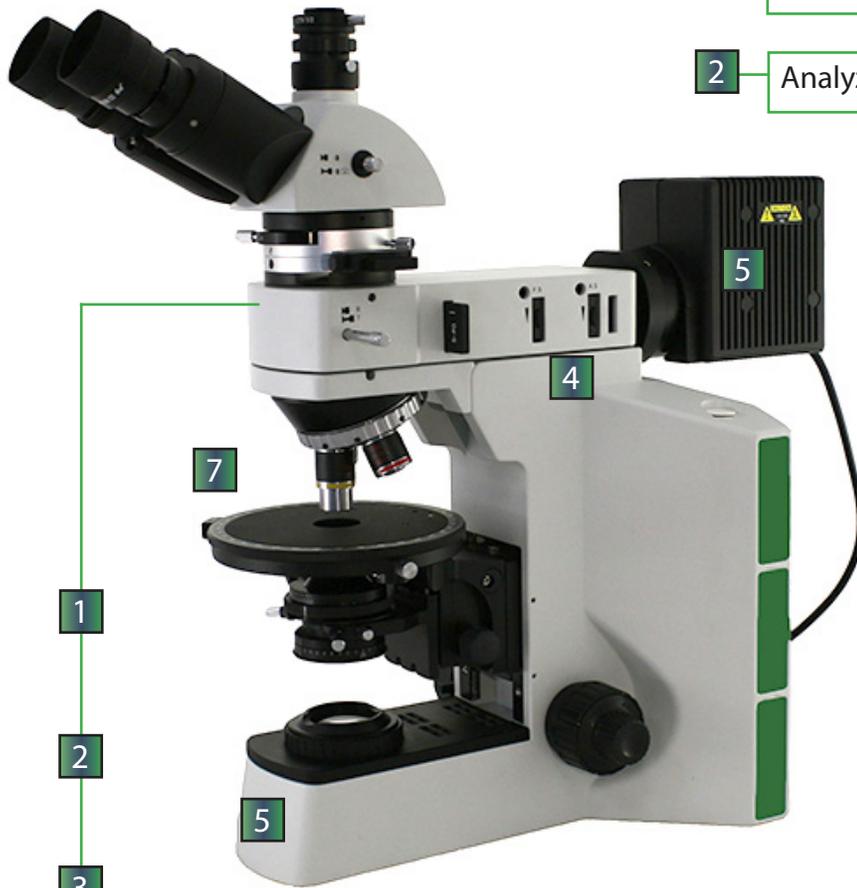
5 12v 50w halogen transmitted Koehler illumination with iris diaphragm.

6 Coaxial coarse and fine focusing adjustment. Coarse focus has upper limit and tension adjustment.

7 Revolving quintuple nosepiece holds stress free polarizing objectives.



# R40POL-RT Reflected & Transmitted Light Polarizing Microscope Features



1 — Lever changes light from transmitted to reflected.

2 — Analyzer rotates 360° in 2° increments.

3 — Polarizer slides into reflected light illumination arm and can be easily moved out of the light path.

4 — Field diaphragm and aperture diaphragm adjustments on reflected light illumination arm.

5 — 12v 50w halogen reflected & transmitted illuminators.

6 — Bertrand lens has rotating switch. Slots for compensators: Gypsum full  $\lambda$  plate, Mica  $1/4\lambda$  plate and Quartz Wedge.

7 — 160mm diameter, 360° rotatable metal stage can be locked in position, rotates in 1° increments. Stage is anti-corrosive, anti-friction, and coated in graphite. Mechanical stage can be added and provides moving range of 30mm x 40mm with high precision micrometer, 0.01mm increments.



# R40POL Polarizing Microscope Objectives

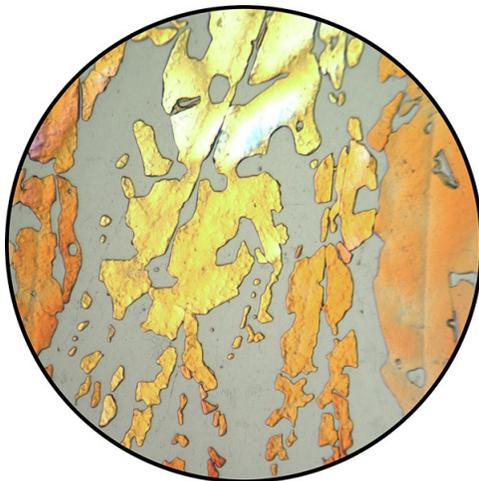
## Plan Achromat Stress Free Infinity Corrected Objectives



Part #	Objective	N.A.	W.D.
POL-PL4	4x	0.10	20.8mm
POL-PL10	10x	0.25	5.3mm
POL-PL20	20x	0.40	1.6mm
POL-PL40	40x	0.65	0.36mm
POL-PL60	60x	0.85	0.47mm

## Plan Achromat Stress Free LWD Infinity Corrected Objectives

Part #	Objective	N.A.	W.D.
POL-LWD5	5x	0.15	10.8mm
POL-LWD10	10x	0.30	10.0mm
POL-LWD20	20x	0.45	4.0mm
POL-LWD50	50x	0.55	7.9mm



Two sets of strain free objectives are available for geology, petrology and standard polarization work. Both sets of objective lenses are strain free, plan achromat and infinity corrected. The long working distance (LWD) stress free objectives are for use with the R40POL-RT reflected light. The standard plan achromat stress free objectives are intended for use with transmitted light.

# R40POL Polarizing Microscope Features

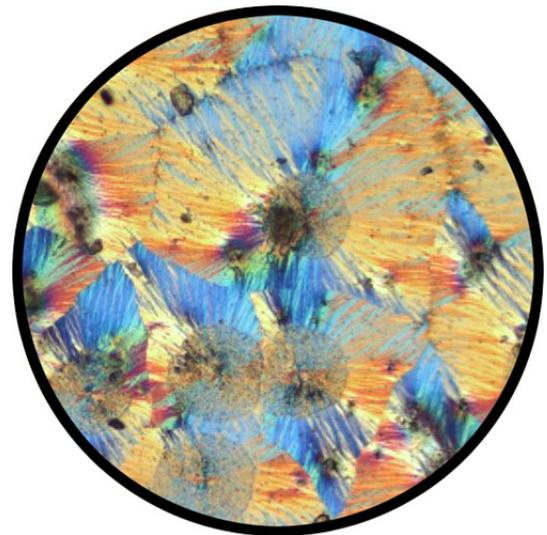


Attachable professional measuring mechanical stage provides more control over samples. Stage provides moving range of 30mm x 40mm with high precision micrometer reading 0.01mm increments.

The polarizing microscope has a large circular 160mm diameter stage that is coated in graphite, anti-corrosive and anti-friction. The scale is silk-printed with a special material that will not fade or wear off after years of use.

N.A. 1.2 swing-out achromatic condenser provides focused light for crisp and clear images. Center-adjustable with aperture diaphragm. Polarizer connects directly to the base of the condenser with rotatable scale.

Transmitted 12v, 50w halogen illuminator has iris diaphragm and rheostat control, resulting in higher clarity images.



## R40POL Polarizing Microscope Features



Intermediate device for professional conoscopic observation has internal Bertrand lens, analyzer, and slot for full  $\lambda$  plate,  $1/4 \lambda$  plate and quartz wedge.

Bertrand lens has rotating switch, is centerable, focusable and removable from the light path.

Pluggable analyzer rotates  $360^\circ$  in  $2^\circ$  increments with  $6'$  precision.

Reflected illuminator arm holds removable polarizer and includes adjustable field and aperture diaphragms.

Lever diverts light from reflected illumination to transmitted illumination.

Beam splitter directs light 100% to the eyepieces or 50% to the camera and 50% to the eyepieces for continued observation while capturing digital images.

# R40POL Polarizing Microscope Specifications

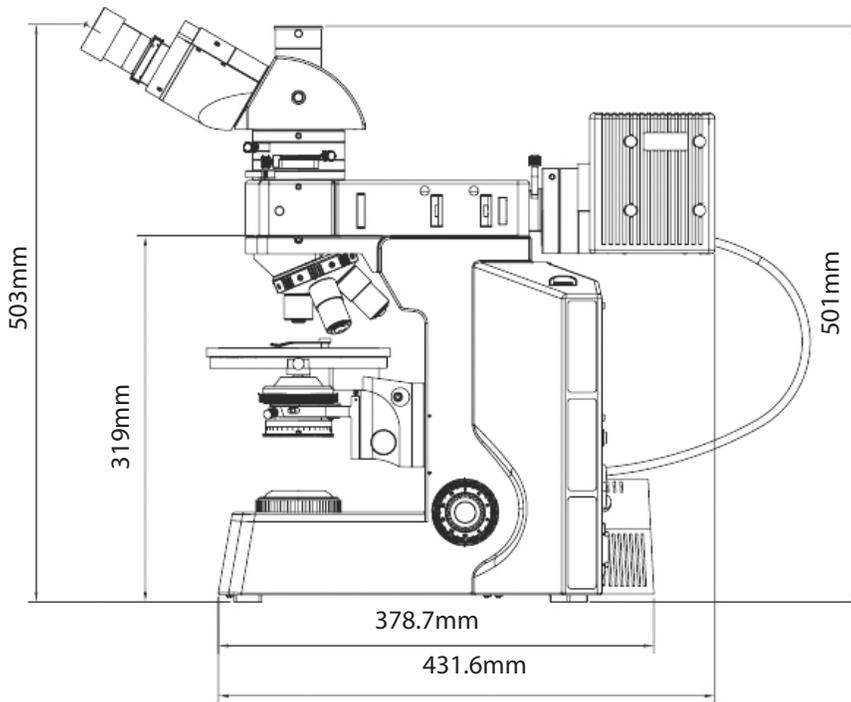
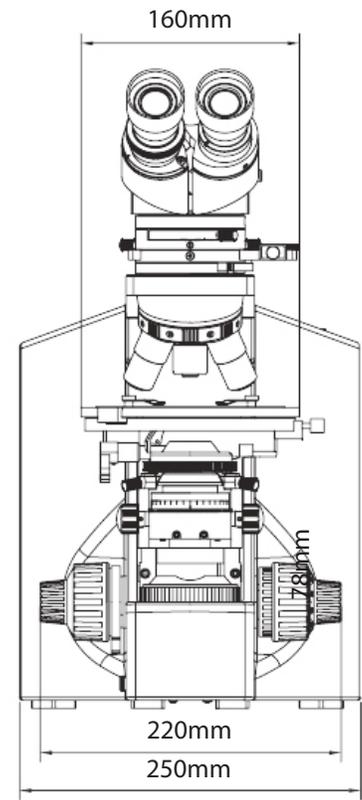
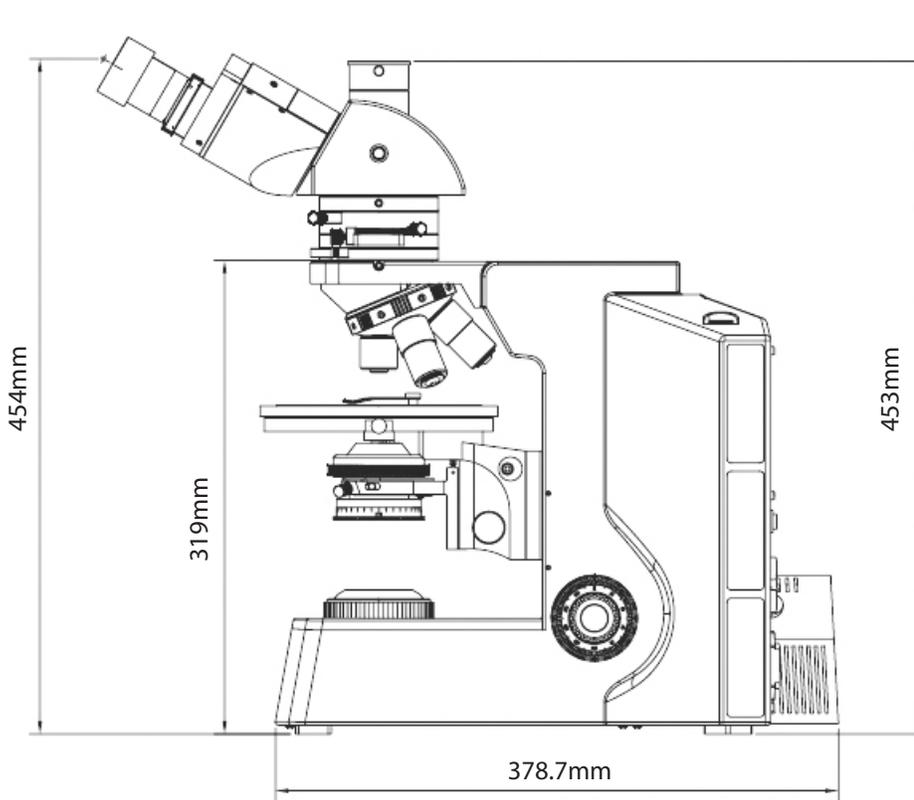
Optical System	Infinity Color Corrected Optical System
Viewing Head	30° gemel trinocular head. Head rotates 360°. Interpupillary distance adjustable 54~75mm. Diopter adjustable +/-5. Beam splitter ratio = 100:0, 50:50.
Eyepieces	FPL-WF 10x widefield, high eyepoint plan eyepiece, FN22, with cross-line reticle.
	FPL-WF 10x widefield, high eyepoint plan eyepiece, FN22.
Objective Lenses	Infinity Corrected Plan Achromat Stress Free LWD 5x, 10x, 20x, 50x.
	Infinity Corrected Plan Achromat Stress Free 4x, 10x, 20x, 40x, 60x.
Nosepiece	Reversed quintuple nosepiece.
Intermediate Tube	Intermediate tube holds centerable, removable and focusable Bertrand lens with rotating switch, pluggable 360° rotating analyzer and compensators.
Focus Adjustment	Coaxial focusing system, coarse focusing adjustment 30mm with tension adjustment. Fine adjustment precision of 0.002mm.
Stage	160mm diameter circular metal stage with graphite coating. Anti-corrosive and anti-friction. 360° rotatable in 1° increments, precision 6'.
	Mechanical stage can be attached to circular stage. Moving range of 30mm x 40mm with high precision micrometer, 0.01mm increments.
Condenser	Swing-out achromatic condenser, NA 1.2 with 360° rotatable polarizer and four-position adjustable scale of 0 / 90 / 180 / 270.
Reflected Illumination	Model R40POL-RT 12v, 50w halogen lamp house with pre-centered bulb. LBD filter and pluggable polarizer, field diaphragm and aperture diaphragm adjustments. Rheostat control, wide range voltage of 100V~240V.
Transmitted Illumination	Koehler illumination 12v, 50w halogen lamp house with pre-centered bulb and iris diaphragm. Rheostat control, wide range voltage of 100V~240V.
Polarizer	Model R40POL-RT polarizer slides into slot in reflected illumination arm.
	Model R40POL rotatable polarizer connects directly onto base of condenser.
Analyzer	360° rotatable analyzer sits in intermediate tube, 2° increments, 6' precision, with locking device.
Compensators	Gypsum 1λ plate (Ø18mm, optical path difference of 551nm). Mica 1/4λ plate (Ø18mm, optical path difference of 147.3nm). Quartz wedge (I - IV).
C-Mount Adapters	Focusing 0.35x, focusing 0.5x, focusing 0.65x, 1x.
Filters	Yellow, neutral, IF550 green interference, daylight blue 45mm diameter filters.



## Focusing C-Mount Adapters

Part #	C-Mount	Camera Chip Size
RB40-CMT0.35x	0.35x	1/4" - 1/3"
RB40-CMT0.5x	0.5x	1/2" - 1/1.8"
RB40-CMT0.65x	0.65x	2/3"
RB40-CMT1x	1.0x	2/3" - 1"

# R40POL Polarizing Microscope Dimensions



[info@feinoptic.com](mailto:info@feinoptic.com)