

OLYMPUS[®]

POLARIZING MICROSCOPE

BX41-P

BX2 SERIES

UIS
UNIVERSAL
INFINITY SYSTEM



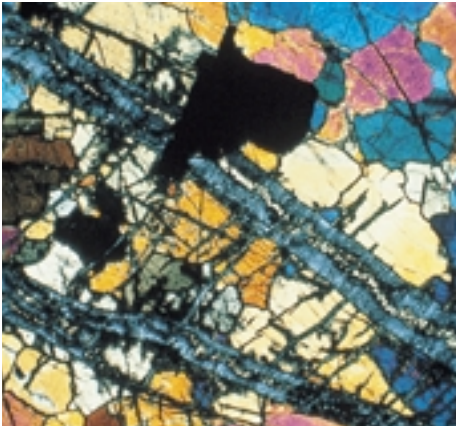
Outstanding optics and excellent design for sharper polarized light images

The new BX41-P is a new polarizing microscope from Olympus that offers exceptional performance in polarized light.

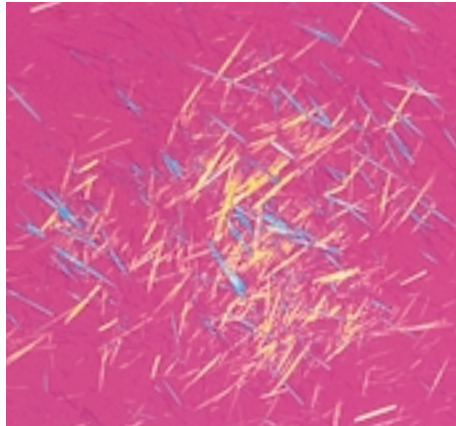
This is the result of new refinements in combining Olympus' original optical design with highly advanced UIS infinity-corrected optics.

The UIS optical system ensures a consistent standard of optical microscope performance without deterioration, and eliminates magnification factors, even when polarizing elements are introduced into the light path.

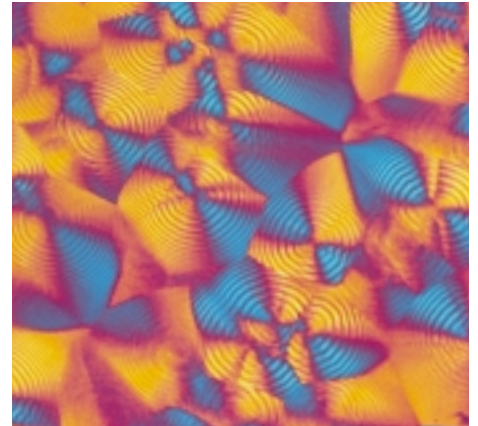
The BX41-P also features a newly extended line of compensators, which provide all the versatility required for handling observation and measuring applications from routine research to specialized geological studies at universities.



Dunite



Gout urates crystals (sensitive color)



High density polyethylene spherulite (sensitive color)

Enhanced operational ease and outstanding optical performance

- With the U-CPA conoscopic observation attachment, the changeover between orthoscopic and conoscopic observation methods is simple and quick — just slide the Bertrand lens control knob in or out.
- Newly developed U-SRG2 circular rotatable stage, which has two centering knobs and larger diameter than previous one, allows smoother sample rotation.
- An ergonomic Y-shaped frame ensures comfortable, efficient observation with less fatigue, even over prolonged periods.
- The high intensity 6V, 30W halogen light source combined with the UIS optical system and its high transmittance/reflection result in exceptionally bright and sharp images.



Orthoscopic version



Conoscopic/Orthoscopic version



Reflected light version

An extensive range of compensators is available

Six different compensators, tint plate and 1/4 wavelength retardation plate are available for the BX41-P microscope, allowing measurement of various retardation levels, ranging from 0 to 20λ . For easier measurement, the direct readout method is featured. Higher image contrast can be attained by using a Senarmont* or Brace-Koehler compensator to change the retardation level in the entire field of view.

* Used with monochromatic green filter, IF546 or IF550.



①U-TP530 ②U-TP137 ③U-TAD ④U-CBR1
⑤U-CBR2 ⑥U-CWE ⑦U-CSE ⑧U-CBE ⑨U-CTB

Measuring range of compensators

Compensator	Measurement range	Applications
Thick Berek (U-CTB)	0-11,000nm (20λ)	Measurement of high retardation level ($R^* > 3\lambda$), (crystals, macromolecules, fiber, etc.)
Berek (U-CBE)	0-1,640nm (3λ)	Measurement of retardation level (crystals, macromolecules, living organisms, etc.)
Senarmont compensator (U-CSE)	0-546nm (1λ)	Measurement of retardation level (crystals, living organisms, etc.) Enhancement of image contrast (living organisms, etc.)
Brace-Koehler compensator 1/10 λ (U-CBR1)	0-55nm (1/10 λ)	Measurement of low retardation level (living organisms, etc.)
Brace-Koehler compensator 1/30 λ (U-CBE2)	0-20nm (1/30 λ)	Enhancement of image contrast (living organisms, etc.)
Quartz wedge (U-CWE)	500-2,200nm (4λ)	Approximate measurement of retardation level (crystal, macromolecules, etc.)

*R= retardation level

For more accurate measurement, it is recommended that compensators (except U-CWE) be used together with the interference filter 45IF546.

Unmatched sharpness in orthoscopic and conoscopic observations

With a U-CPA conoscopic observation attachment, changeover between orthoscopic and conoscopic observation is simple and quick. Focusing of conoscopic images is easy and accurate. Employing a Bertrand field stop makes it possible to obtain consistently sharp and clear conoscopic images.



①U-CPA ②U-P4RE ③U-AN360P ④U-OPA
⑤U-POC-2

An upgrade in polarization characteristics

ACH-P strain-free objectives reduce internal strain to an absolute minimum. Olympus has also totally redesigned its polarizers and polarizing condensers to further enhance performance in polarized light. This means



ACH-P Series

a higher EF* value, resulting in unmatched image contrast.

*The EF (extinction factor) is the brightness ratio between parallel and crossed pol-filters.
The higher the EF value, the better the extinction.

PL-P Series

Item	N.A.	W.D.
Plan FL 4xP	0.1	22.0mm

ACH-P Series

Item	N.A.	W.D.
ACH 10xP	0.25	6.1mm
ACH 20xP	0.40	3.0mm
ACH 40xP	0.65	0.45mm
ACH 100xOP	1.25	0.13mm

Easy, accurate gout inspection

A transmitted light gout analyzer (U-GAN) and rotatable stage (U-SRG2) are provided for easy, accurate gout detection.



Simple pol option

With the use of U-SC3 swing out condenser, U-POT polarizer and U-ANT analyzer for transmitted light, it is possible to get optimal polarizing images from 1.25x to 100x.



Corresponds to reflected light observation

Reflected light illuminator and polarizing equipment can be attached simultaneously. BX-RLA2 complies with 100W halogen illumination and BX-KMA accepts 30W halogen illumination, both provides high intensity and long lifetime.



Cross-movement mechanical stage

Mounting an attachable cross-movement mechanical stage (U-FMP) onto the circular rotatable stage makes for improved observation efficiency. Interference between the mechanical stage and the objectives is eliminated, so that images of superb quality can be effortlessly observed with all objective magnification.



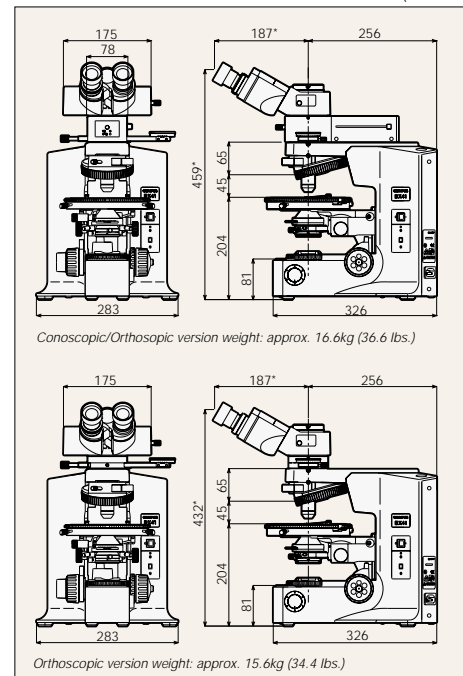
U-FMP

BX41-P specifications

Item	Conoscopic and orthoscopic observation (U-CPA)	Orthoscopic observation (U-OPA)
F.N.	22	22
Bertrand lens	Focusable	—
Bertrand field stop	ø3.4mm diameter (fixed)	—
Polarized light intermediate attachment (U-CPA or U-OPA)	Engage or disengage Bertrand lens changeover between orthoscopic and conoscopic observation Position of slider ● in Position of slider ○ out	—
Analyzer slot	Rotatable analyzer with slot (U-AN360P-2)	
Analyzer (U-AN360P-2)	360° dial-rotatable Rotatable minimum angle 0.1°	
Revolving centerable nosepiece (U-P4RE)	Quadruple, centerable attachable components: 1/4 wavelength retardation plate (U-TAD), Tint plate (U-TP530) and various compensators can be attached using plate adapter (U-TAD)	
Stage (U-SRG2)	Polarizing rotatable stage with 3-point centering function. 360° rotatable, lockable in any position, 360° graduated in 1° increments ● Slide holder (U-SCB2) and mechanical stage (U-FMP) can be attached	
Condenser (U-POC-2)	Achromat strain-free condenser (U-POC-2), 360° rotatable polarizer with swing-out achromatic top-lens, Click stop at position "0" is adjustable. N.A. 0.9 (top-lens in) N.A. 0.18 (top-lens out) Aperture iris diaphragm: adjustable from 2mm to 21mm diameters	

BX41-P dimensions

(unit: mm)

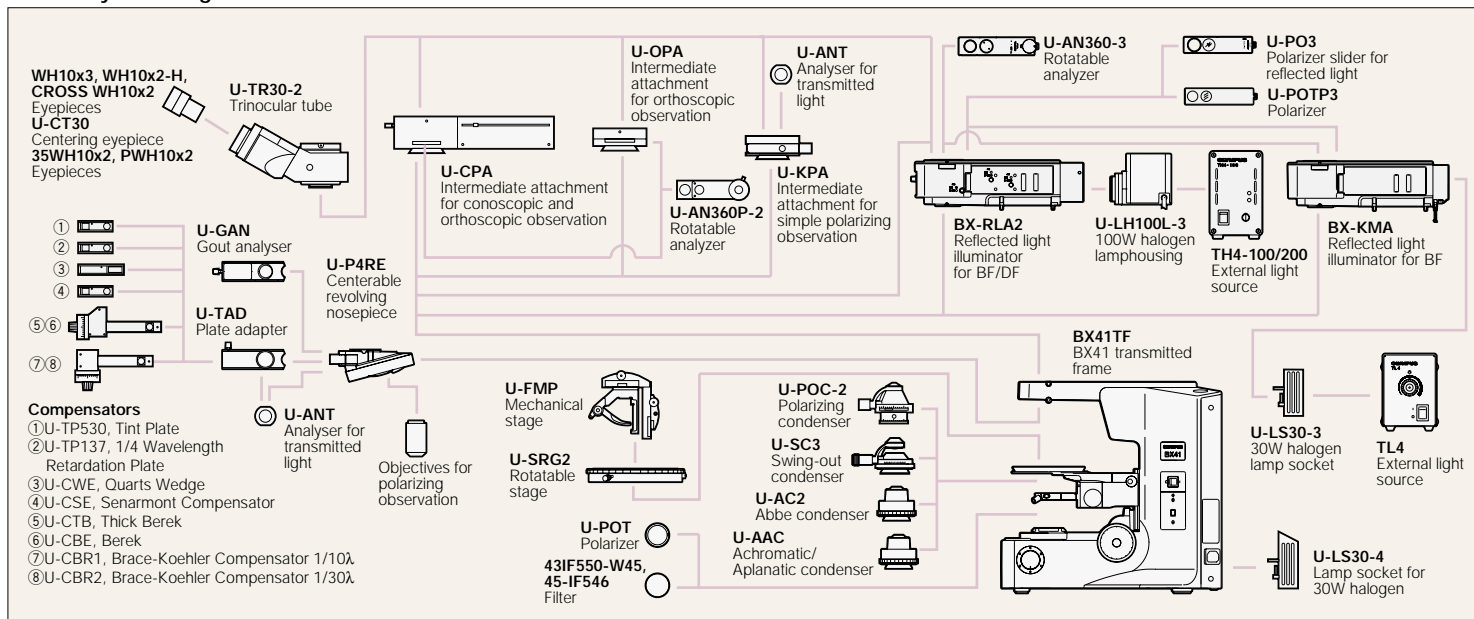


Conoscopic/Orthoscopic version weight: approx. 16.6kg (36.6 lbs.)

Orthoscopic version weight: approx. 15.6kg (34.4 lbs.)

Power consumption: 250VA
Note: The length marked with an asterisk (*) may vary according to the interpupillary distance setting.

BX41-P system diagram



* Please consult your nearest Olympus dealer for detailed information about available UIS optics accessories.

Specifications are subject to change without any obligation on the part of the manufacturer.

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