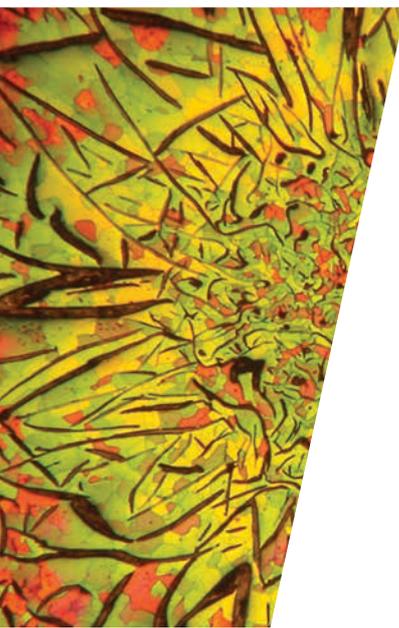
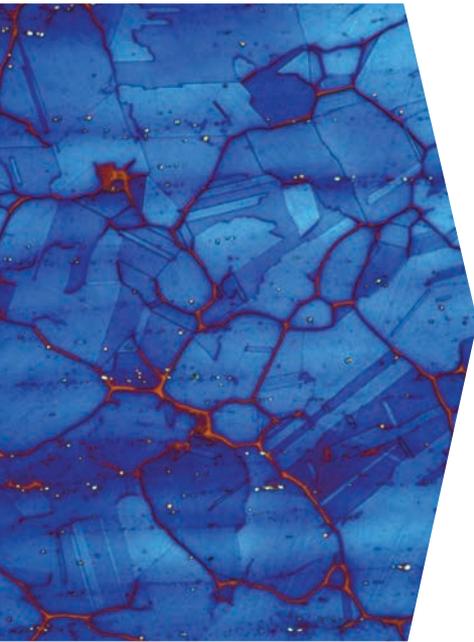


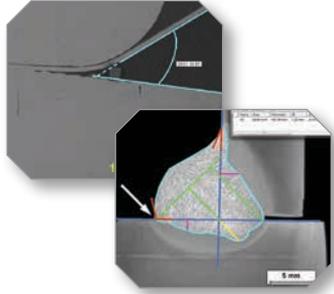
Configuration Guide
Microscopes



Microscope Configuration Guide

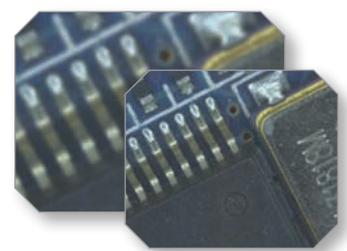
Microscope selection and configuration is an important step in the analysis of prepared samples. The type of information that is of interest and the size of the specimen being viewed will dictate the type of microscope that will be most suitable for the application. Microscopes offered by Buehler® generally fall into two categories: stereo microscopes for applications requiring a large Field of View (FOV) and compound microscopes for applications requiring higher magnification. Further configuration depends on the need for reflected or transmitted light, the observation method being used (BF, DF, DIC, or POL), the preferred illumination (Halogen or LED), and whether the primary samples being viewed are mounted.

Welds

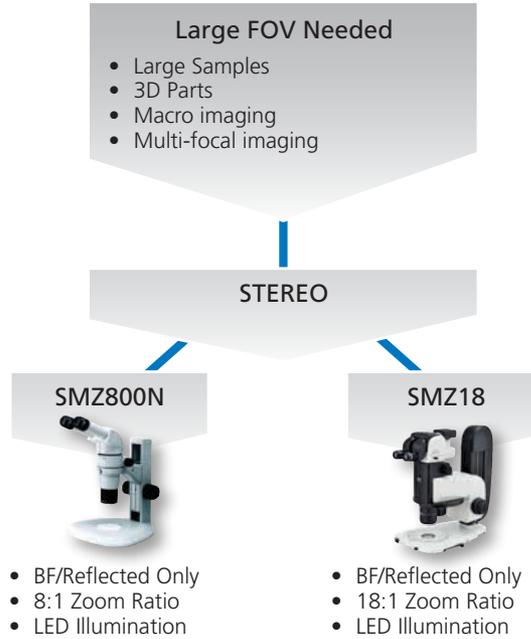


Top: Using OmniMet™ Adjustable Angle Measurement (included in OmniMet Advanced) Bottom: OmniMet Weld Module (86-4115)

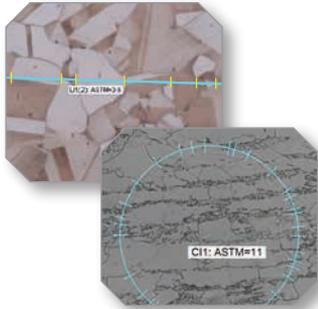
Electronics



Using OmniMet Multi-Focal imaging module (86-4130)

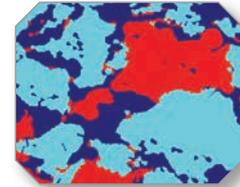


Grain Size

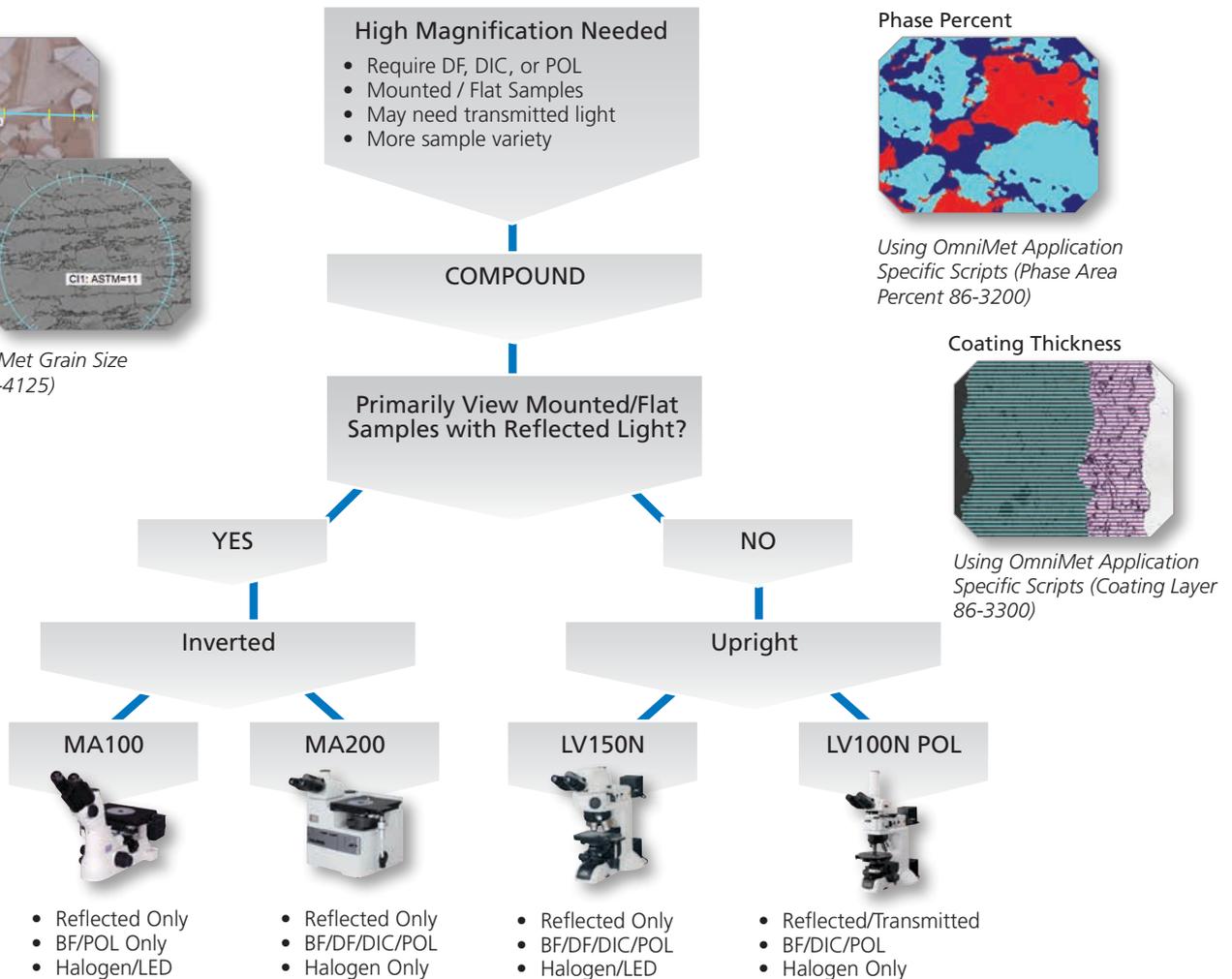


Using OmniMet Grain Size Module (86-4125)

Phase Percent

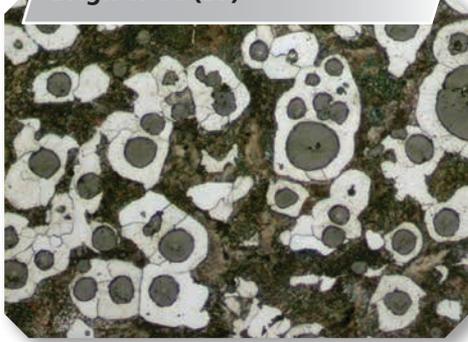


Using OmniMet Application Specific Scripts (Phase Area Percent 86-3200)



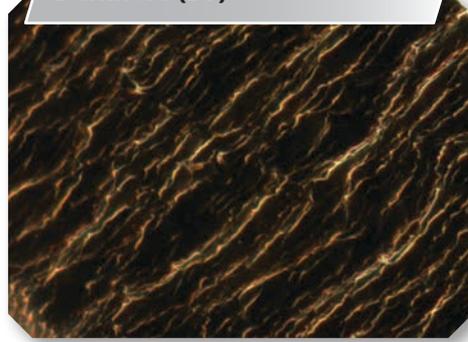
Brightfield, Darkfield, DIC & Polarization

Brightfield (BF)



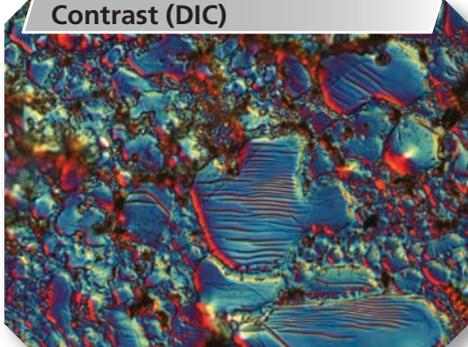
BF highlights flat, perpendicular surfaces while angled surfaces appear dark, making it good for surface detection, inclusions, grain size, etc.

Darkfield (DF)



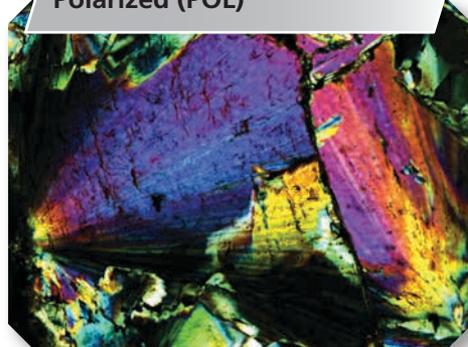
DF highlights cracks, pores, coatings, and uneven surfaces with angled light while flat surfaces remain dark.

Differential Interference Contrast (DIC)



DIC (or Nomarski Illumination) uses polarized light that is sheared and recombined enhancing contrast and allowing features to stand out that could normally not be seen.

Polarized (POL)



Polarization highlights anisotropy based on the natural refractive index of the material, making it good for mineralogy, petrography, grain size in titanium, etc.

OmniMet™ Modular Digital Imaging Solutions

OmniMet delivers powerful image analysis through simple measurements, modules and application specific automation. Couple a configured Stereo or Compound microscope with OmniMet software and a camera for unprecedented ease in quantitative image analysis and data archiving.



For a full selection of cameras and software packages, please see the Buehler Product Catalogue or OmniMet Imaging Solutions Brochure.

Stereo Microscopes

Nikon SMZ800N Zoom Stereo Microscope

- High resolution and magnification stereoscope ideal for weld analysis and macro imaging.
- 1 – 8x zoom range (with 1/2/3/4/6/8x click stops)
- 5x – 160x magnification range with 10x eyepieces (*dependent upon objective and camera adapter selection*)
- LED fiber illumination available with epi coaxial, ringlight, and flexible light pipe options.
- Double nosepiece accessory enables on-axis viewing, extended depth of focus, and quick rotation between multiple objectives
- Trinocular body tubes enable built-in access for camera adapter, camera, and OmniMet™ integration



Objectives	1x Camera Adapter			0.7x Camera Adapter		0.55x Camera Adapter	
	Mag. Range	FOV Range (with eyepiece)	FOV Range (with camera)	Mag. Range	FOV Range (with camera)	Mag. Range	FOV Range (with camera)
0.5x	5x – 40x	5.5 – 44mm	1.7 – 13mm	3.5x – 28x	2.4 – 19mm	2.8x – 22x	3 – 24mm
0.75x	7.5x – 60x	3.7 – 29mm	1.1 – 9mm	5.3x – 42x	1.6 – 13mm	4.1x – 33x	2 – 16mm
1x	10x – 80x	2.8 – 22mm	0.8 – 7mm	7x – 56x	1.2 – 9mm	5.5x – 44x	1.5 – 12mm
1.5x	15x – 120x	1.8 – 15mm	0.6 – 4mm	10.5x – 84x	0.8 – 6mm	8.3x – 66x	1 – 8mm
2x	20x – 160x	1.4 – 11mm	0.4 – 3mm	14x – 112x	0.6 – 5mm	11x – 88x	0.8 – 6mm

*Magnification and Field of View ranges obtained assumes use of 10x eyepieces and a camera with 0.55in chipset where noted.

**Field of View will vary when using a camera, monitor, and software. Actual variation depends on screen size & resolution, camera chip size, and software.

***The Use of the SMZ800N Epi Coaxial illumination option adds a 1.5x magnification factor reducing field of view accordingly.

Nikon SMZ800N Zoom Stereo Microscope Preconfigured Packages

Part Number	Configuration
8741-01	Nikon SMZ800N with 1x Objective - on plain stand with 50/50 trinocular body tube with camera port (requires camera adapter), 10x eyepieces, 1x objective, LED illuminator, flexible light pipes, ¼ Lambda plate, and dust cover.
8741-02	Nikon SMZ800N with 0.5x Objective - on plain stand with 50/50 trinocular body tube with camera port (requires camera adapter), 10x eyepieces, 0.5x objective, LED illuminator, flexible light pipes, ¼ Lambda plate, and dust cover.

Nikon SMZ800N Zoom Stereo Microscope Accessories



8741-61
Manual rotatable nosepiece for 2 objectives (Choose a 2nd objective for this option)



8741-62
3 x 2in Mechanical Stage and Adapter



8749-11
Camera Adapter, C-Mount, 0.55x, LV-TV



8749-12
Camera Adapter, C-Mount, 0.7x, LV-TV



8749-13
Camera Adapter, C-Mount, 1x, LV-TV

Customize a Nikon SMZ800N

Step 1: Base, Focus and Zoom Body

Must Choose 1:



8741-11
SMZ800N on Plain Stand

- Zoom Body
- Focus Mount
- Stand
- Dust Cover



8741-12
SMZ800N on Boom Stand

- Zoom Body
- Boom Stand & Mount
- Dust Cover

Step 2: Tubes and Eyepieces

Must Choose 1:



8741-21
10x eyepieces on stationary binocular tube (with beam splitter for camera port)



8741-22
10x eyepieces on 30° tilting trinocular tube (with camera port); 100% Eye or 100% Photo



8741-23
10x eyepieces on 30° tilting trinocular tube (with camera port); 100% Eye or 50% Eye / 50% Photo

Step 3: Objectives

Must Choose 1:



NIMNH54050
0.5x



NIMNH54075
0.7x



NIMNH54100
1x



NIMNH54150
1.5x
Cannot use with ¼ Lambda Plate



NIMNH54200
2.0x
Cannot use with ringlight, Coax Illuminators or ¼ Lambda Plate

Step 4: Illumination Systems

Must Choose 8741-50:



Includes C-FLED light source, AC adaptor, ¼ Lambda, and cord.

Must Choose at least 1:



8741-51
Flex Double Arms
Includes 2 flexible light pipes and holder for attachment to scope



8741-52
Epi Coaxial
Adds 1.5x Mag Factor
Cannot use with 2x objective



8741-53
P2-FIR Ring Light
Cannot use with 2x objective

Step 5: Accessories

Optional:

8741-61
Manual rotatable nosepiece for 2 objectives
(Choose a 2nd objective for this option)

8741-62
3 x 2in Mechanical Stage and Adapter
Cannot be used with Boom Stand.

8749-11
Camera Adapter, C-Mount, 0.55x, LV-TV

8749-12
Camera Adapter, C-Mount, 0.7x, LV-TV

8749-13
Camera Adapter, C-Mount, 1x, LV-TV

Stereo Microscopes

Nikon SMZ18 Zoom Stereo Microscope

- Higher resolution, contrast, and zoom ratio stereoscope ideal for electronics and other 3D parts.
- 0.75 – 13.5x zoom range (with 0.75/1/2/3/4/5/6/8/10/12/13.5x click stops)
- 3.75 – 270x magnification range with 10x eyepieces (dependent upon objective and camera adapter selection)
- LED fiber illumination available with epi coaxial, ringlight, and flexible light pipe options.
- Double nosepiece accessory enables on-axis viewing, extended depth of focus, and quick rotation between multiple objectives.
- Trinocular body tubes enable built-in access for camera adapter, camera, and OmniMet™ integration



Objectives	1x Camera Adapter			0.7x Camera Adapter		0.55x Camera Adapter	
	Mag. Range	FOV Range (with eyepiece)	FOV Range (with camera)	Mag. Range	FOV Range (with camera)	Mag. Range	FOV Range (with camera)
0.5x	3.8x – 67.5x	3.3 – 59mm	1 – 18mm	2.6x – 47.3x	1.4 – 25mm	2.1x – 37.1x	1.8 – 32mm
1x	7.5x – 135x	1.6 – 29mm	0.5 – 9mm	5.3x – 94.5x	0.7 – 13mm	4.1x – 74.3x	0.9 – 16mm
1.5x	12x – 216x	1 – 18mm	0.3 – 6mm	8.4x – 151.2x	0.4 – 8mm	6.6x – 118.8x	0.6 – 10mm
2x	15x – 270x	0.8 – 15mm	0.2 – 4mm	10.5x – 189x	0.3 – 6mm	8.3x – 148.5x	0.4 – 8mm

*Magnification and Field of View ranges obtained assumes use of 10x eyepieces.

**Field of View will vary when using a camera, monitor, and software. Actual variation depends on screen size & resolution, camera chip size, and software.

Nikon SMZ18 Zoom Stereo Microscope Preconfigured Packages

Part Number	Configuration
8742-01	Nikon SMZ18 with 1x Objective - on plain base with 105mm of Z travel, 50/50 trinocular body tube with camera port (requires camera adapter), 10x eyepieces, 1x objective, LED illuminator, fiberoptic ringlight, ¼ Lambda plate, and dust cover

Nikon SMZ18 Zoom Stereo Microscope Accessories



8749-11
Camera Adapter, C-Mount, 0.55x, LV-TV



8749-12
Camera Adapter, C-Mount, 0.7x, LV-TV



8749-13
Camera Adapter, C-Mount, 1x, LV-TV



8742-61
Low Profile 6 x 4in Stage

Customize a Nikon SMZ18

Step 1: Base, Focus and Zoom Body

Must Choose 1:



8742-11
SMZ18 on Plain Stand
For reflected illumination and
65mm of Z travel

- Zoom Body
- Plain Stand & Focus Mount
- Dust Cover



8742-12
SMZ18 on Plain Base
For reflected illumination
and 105mm of Z travel

- Zoom Body
- Plain Base & Focus Unit
- Dust Cover

Step 2: Tubes and Eyepieces

Must Choose 1:



8742-21
10x eyepieces on
stationary trinocular tube
(with camera port);
100% Eye or 100% Photo



8742-22
10x eyepieces on 30°
tilting trinocular tube (with
camera port); 100% Eye or
100% Photo



8742-23
10x eyepieces on 30°
tilting trinocular tube (with
camera port); 100% Eye or
50% Eye / 50% Photo

Step 3: Nosepiece

Must Choose 1:



8742-31
Single nosepiece



8742-32
Manual rotatable
nosepiece for 2
objectives

Step 5: Illumination Systems

Must Choose 8742-50:



Includes C-FLED light source,
AC adaptor, ¼ Lambda, and
cord.

Must Choose at least 1:



8742-51
Flex Double Arms
Includes 2 flexible light pipes
and holder



8742-52
Epi Coaxial
For use with 0.5x and 1x
objectives only



8742-53
P2-FIR Ring Light
For use with 0.5x and 1x
objectives only

Step 4: Objectives

Must Choose 1 for 8742-31 / Choose 2 for 8742-32:



NIMNH55050
0.5x



NIMNH55100
1x



NIMNH55160
1.6x
Cannot use with
Coax or ringlight



NIMNH55200
2.0x
Cannot use with
Coax or ringlight

Step 6: Accessories

Optional:

- 8749-11** Camera Adapter, C-Mount, 0.55x, LV-TV
- 8749-12** Camera Adapter, C-Mount, 0.7x, LV-TV
- 8749-13** Camera Adapter, C-Mount, 1x, LV-TV
- 8742-61** Low Profile 6 x 4in Mechanical Stage

Inverted Microscopes

Nikon Eclipse MA100 Inverted Microscope

- Compact, durable, inverted microscope ideal for mounted, flat samples
- Available in BF only, reflected illumination only
- LED and Halogen (6V/30W) illumination available
- Trinocular body tubes enable built-in access for camera adapter, camera, and OmniMet™ integration



Objectives	1x Camera Adapter			0.7x Camera Adapter	
	Magnification	FOV <i>(with eyepiece)</i>	FOV <i>(with camera)</i>	Magnification	FOV <i>(with camera)</i>
1x*	10x	22mm	6.6mm	7x	9.4mm
2.5x*	25x	8.8mm	2.6mm	17.5x	3.8mm
5x	50x	4.4mm	1.3mm	35x	1.9mm
10x	100x	2.2mm	0.7mm	70x	0.9mm
20x	200x	1.1mm	0.3mm	140x	0.5mm
50x	500x	0.4mm	0.1mm	350x	0.2mm
100x*	1000x	0.2mm	0.1mm	700x	0.1mm

*Not included in standard configuration packages. MA100 can hold up to 5 objectives.

Nikon Eclipse MA100 Inverted Microscope Preconfigured Packages

Part Number	Configuration
8743-01	Nikon MA100 Inverted Halogen Microscope - with ISO camera port (<i>requires ISO camera adapter</i>), halogen lamphouse and 30W bulb, NCB11 and ND4 filters, 10x eyepieces, manually driven XY stage (50 x 50mm) travel, 5-position nosepiece, includes 5x, 10x, 20x and 50x TU Epi Plan objectives, and dust cover.
8743-02	Nikon MA100 Inverted LED Microscope - with ISO camera port (<i>requires ISO camera adapter</i>), 1W LED illuminator, 10x eyepieces, manually driven XY stage (50 x 50mm) travel, 5-position nosepiece, includes 5x, 10x, 20x and 50x TU Epi Plan objectives, and dust cover.

Nikon Eclipse MA100 Inverted Microscope Accessories



8743-61
Polarizer/Analyzer



8743-62
Grain size reticle
(for eyepiece)



8743-63
Stage Insert
1in, 1.25in, 1.5in



8743-64
Stage Insert
25mm, 30mm,
40mm



8749-14
Camera Adapter,
C-Mount, 0.7x,
ISO



8749-15
Camera Adapter,
C-Mount, 1x, ISO

Customize a Nikon Eclipse MA100

Step 1: MA100 Base



8743-11 MA100 with Halogen For Brightfield Only

- MA100 Stand with Halogen (6V/30W)
- Power Cord
- Mechanical stage (50 x 50mm travel, 20 & 40mm inserts)
- NCB11 and ND4 filters
- 2 Eyepieces
- Bulb
- Dust Cover

Must Choose 1:



8743-12 MA100 with LED For Brightfield Only

- MA100 Stand with LED
- Power Cord
- Mechanical stage (50 x 50mm travel, 20 & 40mm inserts)
- 2 Eyepieces
- Dust Cover

Step 2: Objectives

May choose up to 5:



NIMUE12010
1x
Polarizer Required



NIMUE12030
2.5x
Polarizer Required



NIMUD00050
5x



NIMUD00100
10x



NIMUD00200
20x



NIMUD00500
50x



NIMUD00900
100x

Step 3: Accessories

Optional:

- 8743-61 Polarizer/Analyzer
- 8743-62 Grain size reticle (for eyepiece)
- 8743-63 Stage Insert: 1in, 1.25in, 1.5in
- 8743-64 Stage Insert: 25mm, 30mm, 40mm
- 8749-14 Camera Adapter, C-Mount, 0.7x, ISO
- 8749-15 Camera Adapter, C-Mount, 1x, ISO

Inverted Microscopes

Nikon Eclipse MA200 Inverted Microscope

- Compact, research-grade, inverted microscope ideal for mounted, flat samples.
- Available in BF, DF, DIC, & POL with Halogen Illumination (50W)
- Ergonomic design with all controls easily accessible from the front
- DIC configuration includes intelligent nosepiece which displays objective position on front
- Slider slots available for Grain Size and Dial Scale reticle which show up on camera as well as through the eyepiece



Objectives	1x Camera Adapter			0.7x Camera Adapter		0.55x Camera Adapter	
	Magnification	FOV (with eyepiece)	FOV (with camera)	Magnification	FOV (with camera)	Magnification	FOV (with camera)
1x*	10x	22mm	6.6mm	7x	9.4mm	5.5x	12mm
2.5x*	25x	8.8mm	2.6mm	17.5x	3.8mm	13.75x	4.8mm
5x	50x	4.4mm	1.3mm	35x	1.9mm	27.5x	2.4mm
10x	100x	2.2mm	0.7mm	70x	0.9mm	55x	1.2mm
20x	200x	1.1mm	0.3mm	140x	0.5mm	110x	0.6mm
40x*	400x	0.6mm	0.2mm	280x	0.2mm	220x	0.3mm
50x	500x	0.4mm	0.1mm	350x	0.2mm	275x	0.2mm
100x*	1000x	0.2mm	0.1mm	700x	0.1mm	550x	0.1mm

*Not included in standard configuration packages. MA200 can hold up to 6 BF objectives or 5 DF/DIC objectives total.

Nikon Eclipse MA200 Inverted Microscope Preconfigured Packages

Part Number	Configuration
8744-01	Nikon MA200 BF Inverted Microscope - with stationary trinocular body tube, 10x eyepieces, LV-TV camera ports on body and trinocular head (<i>requires camera adapter</i>), halogen lamphouse with 50W bulb, manual XY stage with insert (50 x 50mm travel), 6-position nosepiece with 5x, 10x, 20x, and 50x Epi Plan Fluor BF objectives, and dust cover.
8744-02	Nikon MA200 BF/DF Inverted Microscope - with stationary trinocular body tube, 10x eyepieces, LV-TV camera ports on body and trinocular head (<i>requires camera adapter</i>), halogen lamphouse with 50W bulb, manual XY stage with insert (50 x 50mm travel), 5-position nosepiece with 5x, 10x, 20x, and 50x Epi Plan Fluor BF objectives, and dust cover.
8744-03	Nikon MA200 BF/DF/DIC Inverted Microscope - with stationary trinocular body tube, 10x eyepieces, LV-TV camera ports on body and trinocular head (<i>requires camera adapter</i>), halogen lamphouse with 50W bulb, manual XY stage with insert (50 x 50mm travel), polarizer and analyzer set, DIC slider, 5-position nosepiece with 5x, 10x, 20x, 50x Epi Plan Fluor BD objectives and dust cover.

Nikon Eclipse MA200 Inverted Microscope Accessories

 8744-61 Polarizer/Analyzer (<i>included with DIC Package</i>)	 8744-62 Grain Size Reticle Slider (<i>displays on screen</i>)	 8744-63 Scale Dial slider; 5x, 10x, 20x, 50x, 100x (<i>displays on screen</i>)	 8744-64 Stage Insert; 1in, 1.25in, 1.5in
 8744-65 Stage Insert; 25mm, 30mm, 40mm	 8749-11 Camera Adapter, C-Mount, 0.55x, LV-TV	 8749-12 Camera Adapter, C-Mount, 0.7x, LV-TV	 8749-13 Camera Adapter, C-Mount, 1x, LV-TV

Customize a Nikon Eclipse MA200

Step 1: Stand, Stage, Lamphouse



Must Choose:

8744-11
MA200 Base
For Brightfield, Darkfield, DIC, and POL

- MA200 Stand (includes rear camera port)
- Power Cord
- Mechanical stage
- Lamphouse
- Bulb
- Dust Cover

Step 2: Tubes and Eyepieces



8744-21
10x eyepieces on Stationary Binocular Body Tube (no camera port)

Must Choose 1:



8744-22
10x eyepieces on Stationary Trinocular Body Tube (with camera port); 100% Eye or 100% Photo



8744-23
10x eyepieces on 30° tilting trinocular tube (with camera port); 100% Eye or 100% Photo

Step 3: Observation Method

BF Package - Brightfield Only



8744-31
Nosepiece with 6 positions

Must Choose 1:

BF/DF Package - Brightfield & Darkfield



8744-32
5 Position Nosepiece

BF/DF/DIC Package - Brightfield, Darkfield & DIC



8744-33
Includes intelligent 5 position Nosepiece, Polarizer, DIC Stabilizer

Enables DIC Capability and display of magnification on front

Step 4: BF Objectives

May choose up to 6:



NIMUE12010 - 1x
Polarizer Required

NIMUE12030 - 2.5x
Polarizer Required

NIMUE12050 - 5x

NIMUE12100 - 10x

NIMUE12200 - 20x

NIMUE00400 - 40x

NIMUE12500 - 50x

NIMUE12900 - 100x

Step 4: DF/DIC Objectives

May choose up to 5:



NIMUE42050 - 5x

NIMUE42200 - 20x

NIMUE42900 - 100x

NIMUE42100 - 10x

NIMUE42500 - 50x

Step 5: Accessories

Optional:

8744-61 Polarizer/Analyzer (included with DIC Package)

8744-62 Grain Size Reticle Slider

8744-63 MA2-MR Scale Dial type slider; 5x, 10x, 20x, 50x, 100x

8744-64 Stage Insert; 1in, 1.25in, 1.5in

8744-65 Stage Insert; 25mm, 30mm, 40mm

8749-14 Camera Adapter, C-Mount, 0.7x, ISO

8749-15 Camera Adapter, C-Mount, 1x, ISO

Upright Industrial Microscopes

Nikon Eclipse LV150N Upright Microscope

- Versatile upright microscope suitable for reflected light applications
- Available with LED illumination for BF applications
- Available with Halogen (50W) illumination for BF, DF, DIC & POL
- Epi Plan Fluor objectives provide superior chromatic aberration performance, high numerical apertures, and long working distance at all magnifications



Objectives	1x Camera Adapter			0.7x Camera Adapter		0.55x Camera Adapter	
	Magnification	FOV (with eyepiece)	FOV (with camera)	Magnification	FOV (with camera)	Magnification	FOV (with camera)
1x*	10x	22mm	6.6mm	7x	9.4mm	5.5x	12mm
2.5x*	25x	8.8mm	2.6mm	17.5x	3.8mm	13.75x	4.8mm
5x	50x	4.4mm	1.3mm	35x	1.9mm	27.5x	2.4mm
10x	100x	2.2mm	0.7mm	70x	0.9mm	55x	1.2mm
20x	200x	1.1mm	0.3mm	140x	0.5mm	110x	0.6mm
40x*	400x	0.6mm	0.2mm	280x	0.2mm	220x	0.3mm
50x	500x	0.4mm	0.1mm	350x	0.2mm	275x	0.2mm
100x*	1000x	0.2mm	0.1mm	700x	0.1mm	550x	0.1mm

*Not included in standard configuration packages. LV150N can hold up to 6 BF objectives or 5 DF/DIC objectives total.

Nikon LV150N Upright Microscope Preconfigured Packages

Part Number	Configuration
8745-01	Nikon LV150NL BF Upright LED Microscope - with stationary trinocular body tube, 10x eyepieces, LV-TV camera port (requires camera adapter), LED illumination, manual 3 x 2in [76 x 51mm] mechanical stage, 6-position nosepiece with 5x, 10x, 20x and 50x Epi Plan Fluor BF objectives, and dust cover.
8745-02	Nikon LV150N BF/DF/DIC Upright Halogen Microscope - with stationary trinocular body tube, 10x eyepieces, LV-TV camera port (requires camera adapter), Halogen illumination with 50W bulb, NCB11 and ND4 filters, 3 x 2in [76 x 51mm] mechanical stage, 5-position nosepiece with 5x, 10x, 20x and 50x Epi Plan Fluor BF objectives, rotating polarizer/analyzer, DIC slider, and dust cover.

Nikon LV150N Upright Microscope Accessories



8745-61
Polarizer/Analyzer for LV150N Halogen
(included with DIC Package)



8745-62
Polarizer/Analyzer for LV150NL LED



8745-63
Column Riser (adds 35mm of working distance, max 2)



8749-11
Camera Adapter, C-Mount, 0.55x, LV-TV



8749-12
Camera Adapter, C-Mount, 0.7x, LV-TV



8749-13
Camera Adapter, C-Mount, 1x, LV-TV

Customize a Nikon Eclipse LV150N

Step 1: LV150N Base



8745-11
LV150N with Halogen
For Brightfield, Darkfield, & DIC

- LV150N Stand with Halogen Illuminator, lamphouse and bulb
- Power Cord
- NCB11 & ND4 Filter Sliders
- Dust Cover

Must Choose:



8745-12
LV150N with LED
For Brightfield only

- LV150NL Stand with LED Illuminator
- Power Cord
- Dust Cover

Step 2: Tubes and Eyepieces

Must Choose 1:



8745-21
10x eyepieces on stationary Trinocular Body Tube (with camera port); 100% Eye or 100% Photo



8745-22
10x eyepieces on 30° tilting trinocular tube (with camera port); 100% Eye or 20% Eye / 80% Photo

Step 3: Stages

Must Choose 1:



8745-51
3in x 2in mechanical stage



8745-52
6in x 6in mechanical stage with quick release clutch

Step 4: Observation Method

Must Choose 1:

BF Package - Brightfield Only
For both Halogen & LED



8745-31
Nosepiece with 6 positions

BF/DF Package - Brightfield & Darkfield
Only for Halogen



8745-32
Nosepiece with 5 positions

BF/DF/DIC Package - Brightfield, Darkfield & DIC
Only for Halogen



8745-33
Includes 5 position Nosepiece, Polarizer/Analyzer, DIC Slider

Step 5: BF Objectives

May choose up to 6:



NIMUE12010 - 1x
Polarizer Required

NIMUE12030 - 2.5x
Polarizer Required

NIMUE12050 - 5x

NIMUE12100 - 10x

NIMUE12200 - 20x

NIMUE00400 - 40x

NIMUE12500 - 50x

NIMUE12900 - 100x

Step 5: DF/DIC Objectives

May choose up to 5:



NIMUE42050 - 5x

NIMUE42100 - 10x

NIMUE42200 - 20x

NIMUE42500 - 50x

NIMUE42900 - 100x

Step 6: Accessories

Optional:

- 8745-61** Polarizer/Analyzer for LV150N Halogen (included with DIC Package)
- 8745-62** Polarizer/Analyzer for LV150NL LED (included with DIC Package)
- 8745-63** Column Riser (adds 35mm of working distance, max 2)
- 8749-11** Camera Adapter, C-Mount, 0.55x, LV-TV
- 8749-12** Camera Adapter, C-Mount, 0.7x, LV-TV
- 8749-13** Camera Adapter, C-Mount, 1x, LV-TV

Upright Industrial Microscopes

Nikon Eclipse LV100N POL Upright Microscope

- Upright microscope suitable for reflected and transmitted light applications ideal for petrography applications
- Available with Halogen Illumination (12V/50W) for BF, DIC, & POL
- Configured with precision circular stage and attachable XY stage
- Accomplished advanced polarizing microscopy under both reflected and transmitted illumination
- Epi Plan Fluor POL objectives provide superior chromatic aberration performance, high numerical apertures, and long working distance at all magnifications



Objectives	1x Camera Adapter			0.7x Camera Adapter		0.55x Camera Adapter	
	Magnification	FOV (with eyepiece)	FOV (with camera)	Magnification	FOV (with camera)	Magnification	FOV (with camera)
5x	50x	4mm	1.2mm	35x	1.7mm	27.5x	2.2mm
10x	100x	2mm	0.6mm	70x	0.9mm	55x	1.1mm
20x	200x	1mm	0.3mm	140x	0.4mm	110x	0.5mm
50x	500x	0.4mm	0.1mm	350x	0.2mm	275x	0.2mm
100x*	1000x	0.2mm	0.1mm	700x	0.1mm	550x	0.1mm

*Not included in standard configuration packages. LV100N POL can hold up to 5 objectives total.

Nikon Eclipse LV100N POL Upright Microscope Preconfigured Packages

Part Number

Configuration

8746-01

Nikon LV100N POL Upright Microscope in BF/DIC/POL - with Episcopic (reflected) and diasopic (transmitted) halogen illumination (8746-61 Epi/Dia Dual Kit required for simultaneous use) with 2 lamphouses, 50W bulbs, trinocular body with camera port (requires camera adapter), 10x eyepieces, rotating circular precision stage with attachable XY stage (35 x 25mm travel), 5-position nosepiece with 5x, 10x, 20x, and 50x Epi Plan Fluor POL objectives, flip-out condenser, NB11 and ND4 filters, ¼ wave plate, and dust cover.

Nikon Eclipse LV100N POL Upright Microscope Accessories

8746-61

Epi/Dia Dual Kit

Enables use of transmitted and reflected illumination simultaneously

Includes:

- 12V/1000W Transformer
- Cable & Power Cord



8749-11

Camera Adapter, C-Mount, 0.55x, LV-TV



8749-12

Camera Adapter, C-Mount, 0.7x, LV-TV



8749-13

Camera Adapter, C-Mount, 1x, LV-TV

Customize a Nikon Eclipse LV100N POL

Step 1: LV100N POL Base



Must Choose 1:

8746-11 LV100N POL with Halogen

For reflected or transmitted illumination with Brightfield, DIC, or POL

- LV100N POL Stand with reflected and transmitted illumination, 2 lamphouses, and 2 bulbs
- Nosepiece
- Power Cord
- NCB11 & ND8 Filter Sliders
- Episcopic Diascopic Polarizer
- Rotating circular precision stage
- Attachable XY mechanical stage with 35 x 25mm travel
- Flip-out, achromatic Condenser and ¼ wave plate
- Dust Cover

Step 2: Tube and Eyepieces



8746-21
10x eyepieces on Stationary Binocular Tube
(no camera port)

Must Choose 1:



8746-22
10x eyepieces on stationary trinocular tube (with phototube camera port)

Step 3: Objectives

May choose up to 5:



NIMUE13050
5x



NIMUE13100
10x



NIMUE13200
20x



NIMUE13500
50x



NIMUE13900
100x

Step 5: Accessories

Optional:

- 8746-61 Epi/Dia Dual Kit (includes 12V/100W Transformer, cable and power cord)
8749-11 Camera Adapter, C-Mount, 0.55x, LV-TV
8749-12 Camera Adapter, C-Mount, 0.7x, LV-TV
8749-13 Camera Adapter, C-Mount, 1x, LV-TV

Digital Cameras

Attach a camera to any configured microscope to enable on-screen viewing and quantitative analysis with OmniMet™ Digital Imaging Solutions. All cameras are C-Mount which will attach to any C-Mount camera adapter. Select a camera with higher frame rate for applications involving more stage movement, multiple FOV analysis, vibration, or live video.

Part Number	Model	Mega pixels	Chip Size	Resolution (w x h)	Frame Rate (fps)	Image Sensor	Interface
86-0240	uEye 1240LE-C	1.3	0.55in	1280 x 1024	25.8	CMOS	USB2.0
86-0274	uEye 1460SE-C	3.1	0.5in	2048 x 1536	11.2	CMOS	USB2.0
86-0270	uEye 1460LE-C	3.1	0.5in	2048 x 1536	11.2	CMOS	USB2.0
86-10004	uEye 1480SE-C	5	0.5in	2560 x 1920	6.3	CMOS	USB2.0
86-10005	uEye 1490SE-C	10	0.5in	3840 x 2748	3.2	CMOS	USB2.0
86-0278	uEye 2240SE-C	1.3	0.5in	1280 x 1024	15	CCD	USB2.0
86-0280	uEye 2250SE-C	1.9	0.55in	1600 x 1200	18	CCD	USB2.0



LE Edition



SE Edition

Stage Micrometer

8749-21	Stage Micrometer, Glass, mm-Inch NIST Certified
8749-22	Stage Micrometer, Metal, 1mm/0.01mm
8749-23	Stage Micrometer, Metal, 1mm/0.01mm w/ UKAS certificate
8749-24	Stage Micrometer, Metal, 50mm/0.1mm
8749-25	Stage Micrometer, Metal, 50mm/0.1mm w/ UKAS certificate



Leveling Accessories for all Upright Microscopes

8749-31	Leveling Press
8749-32	Plasticine Clay
8749-33	Protective paper (Josef-Paper)
8749-34	Metal Slides, Set of 5, 75mm x 25 mm
8749-35	Metal Slides, Set of 5, 1in x 3in



Spare Bulbs for Microscopes & Illuminators

8749-71	Halogen Bulb, 12V/50W for Nikon LV100ND, LV150N, LV150, LV100D, & MA200
8749-72	Halogen Bulb, 150W for FibrFlex Illuminator
8749-73	Halogen Bulb, 6V/10W for Nikon SMZ Stereo Illuminator
8749-74	Halogen Bulb, 6V/30W for DigiMet 2000, SMZ1000, SMZ1500 & MA100
8749-75	Halogen Bulb, 6V/30W for ViewMet



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