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# 100X Mitutoyo Plan Apo HR Infinity Corrected Objective

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100X Mitutoyo Plan Apo HR Infinity Corrected Objective, #58-238

Stock **#58-238** **2 In Stock**

1  £6,408<sup>00</sup>

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#### Volume Pricing

Qty 1+	£6,408.00 each
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**!** Prices shown are exclusive of VAT/local taxes

#### Product Downloads

#### General

378-815-4 **Model Number:**

**Compatible Tube Lens Focal Length (mm):**  
Focal Length: 200mm

Microscope Objective **Type:**

Infinity Corrected **Style:**

Manufacturer:

Mitutoyo

## Physical & Mechanical Properties

Length excluding Threads (mm):

93.70

Maximum Diameter (mm):

34

Weight (g):

410.00

Exit Pupil Diameter (mm):

3.60

## Optical Properties

Compatible Cover Glass Thickness (mm):

N/A

Horizontal Field of View, 1/2" Sensor:

0.06mm

Horizontal Field of View, 2/3" Sensor:

0.09mm

Focal Length FL (mm):

2.00

Magnification:

100X

Numerical Aperture NA:

0.90

Resolving Power ( $\mu\text{m}$ ):

0.3

Depth of Field ( $\mu\text{m}$ ):

0.30

Field of View, 18 Diameter Field Eyepiece (mm):

0.18

Field of View, 24 Diameter Field Eyepiece (mm):

0.24

Working Distance (mm):

1.3

Wavelength Range (nm):

435 - 655

Parfocal Length (mm):

95

Immersion Liquid:

N/A

## Sensor

Maximum Sensor Format:

2/3"

## Threading & Mounting

Mounting Threads:

M26 x 36 TPI

## Environmental & Durability Factors

Operating Temperature ( $^{\circ}\text{C}$ ):

+5 to +40

Operating Humidity:

20 - 80%

## Regulatory Compliance

RoHS 2015:

[Exempt](#)

Certificate of Conformance:

[View](#)

REACH 241:

[Contains SVHC\(s\)](#)

## Product Details

- Long Working Distances
- Bright Field Inspection
- High Quality Plan Apochromat Design
- Flat Image Surface over Entire Field of View

Mitutoyo Infinity Corrected Long Working Distance Objectives are world-renowned for setting the standard of excellence for long working distance microscope optics. They have achieved the best combination of working distance and optical performance by using a new approach—avoiding outdated conventions used by competitors. Making the objectives larger and longer has made the designs easier (95mm parfocalization length). The lenses are all Plano Apochromats to maintain as high an N.A. and contrast as possible. An apochromatic objective lens is chromatic aberration corrected for red, blue, and yellow, while a standard achromatic objective lens is only corrected for red and blue. Plano Apochromats are typically very expensive, but high-volume production has made it possible to keep the cost down comparative to standard Achromat long working distance objectives. Mitutoyo Infinity Corrected

Long Working Distance Objectives are optimized for bright field illumination (incident illumination parallel to the optical axis) and are ideal for in-line illumination applications. A secondary (or tube) lens is required for an infinity correction system. All stated magnifications are based on a tube lens focal length of 200mm. Mounting thread: M26 x 0.706 pitch (36 TPI).

### M Plan Apo SL Series

- Super-Long Working Distance for Bright Field Inspection
- 13mm Working Distance for 100X and 200X Models
- High Quality Achromat Design
- Flat Image Surface over Entire Field of View
- Good Color Reproducibility

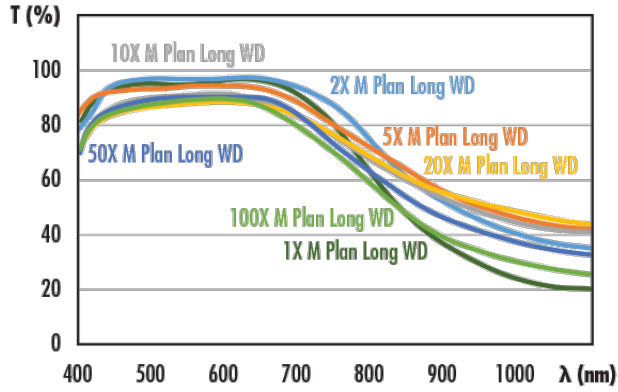
### Accessory Tube Lenses

[Accessory Tube Lenses](#) and [C-Mount Thread Adapters](#) can be used to adapt the Mitutoyo objectives to additional configurations.

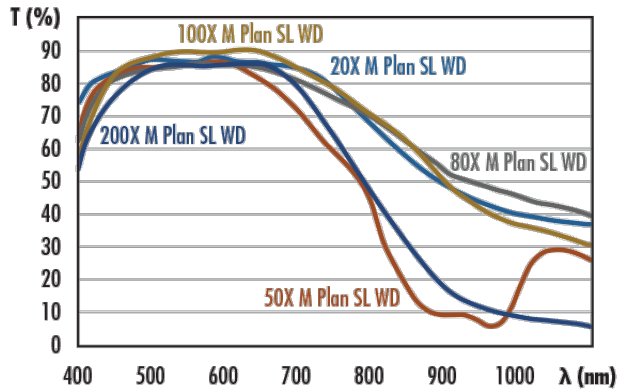
Edmund Optics is the main source for Mitutoyo Objectives. Place your orders now for these in demand quality products.

## Technical Information

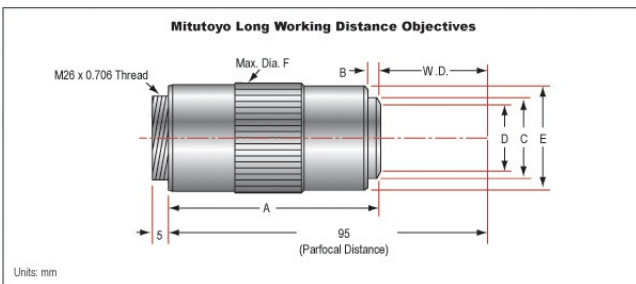
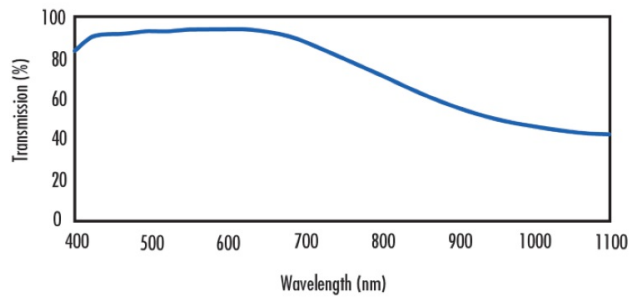
**Transmission of Mitutoyo Plan Apo Long Working Distance Objectives**



**Transmission of Mitutoyo Plan Apo SL Series Objectives**



**Typical Transmission for M Plan Apo**



Stock No.	M Plan Apo	A	B	C	D	E	F	W.D.
<a href="#">#58-235</a>	1X	84.0	-	38.0	-	41.0	34.0	11.0
<a href="#">#46-142</a>	2X	61.0	1.4	27.5	24.7	32.2	34.0	34.0
<a href="#">#46-143</a>	5X	61.0	1.6	25.0	23.0	32.2	34.0	34.0
<a href="#">#66-383</a>	7.5X	60.0	-	25.0	24.0	32.2	34.0	35.0
<a href="#">#46-144</a>	10X	61.0	2.0	28.2	-	32.2	34.0	34.0
<a href="#">#46-145</a>	20X	75.0	1.5	29.2	-	32.2	34.0	20.0

#46-146	50X	82.0	1.5	29.2	-	32.2	34.0	13.0
#46-147	100X	89.0	4.7	29.2	17.8	32.2	34.0	6.0
Stock No.	<b>M Plan Apo HR</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>W.D.</b>
#34-247	5XHR	69.5	3.7	24.8	-	32.2	34.0	25.5
#58-236	10XHR	80.0	7.5	29.0	26.0	37.0	39.0	15.0
#58-237	50XHR	89.8	2.0	28.2	-	32.2	34.0	5.2
#58-238	100XHR	93.7	2.0	28.2	-	32.2	34.0	1.3
Stock No.	<b>M Plan APOSL</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>W.D.</b>
#46-398	20XSL	64.5	1.5	24.8	24.0	32.2	34.0	30.5
#46-399	50XSL	74.5	3.9	25.2	23.5	32.2	34.0	20.5
#46-401	100XSL	82.0	1.4	23.9	22.0	32.2	34.0	13.0
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