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## 20X Mitutoyo Plan Apo SL Infinity Corrected Objective

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20X Mitutoyo Plan Apo SL Infinity Corrected Objective, #46-398

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⊖ 1 ⊕ €4.050<sup>00</sup>

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### Product Downloads

### General

378-810-3 **Model Number:**

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

Microscope Objective **Type:**

Infinity Corrected **Style:**

Manufacturer:

Mtutoyo

## Physical & Mechanical Properties

Length excluding Threads (mm):

64.50

Maximum Diameter (mm):

34

Weight (g):

240.00

Exit Pupil Diameter (mm):

5.60

## Optical Properties

Compatible Cover Glass Thickness (mm):

N/A

Horizontal Field of View, 1/2" Sensor:

0.32mm

Horizontal Field of View, 2/3" Sensor:

0.44mm

Focal Length FL (mm):

10.00

Magnification:

20X

Numerical Aperture NA:

0.28

Resolving Power (μm):

1.0

Depth of Field (μm):

3.50

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

1.2

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

0.9

Working Distance (mm):

30.5

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 (°C):

+5 to +40

Operating Humidity:

20 - 80%

## Regulatory Compliance

RoHS 2015:

[Exempt](#)

Certificate of Conformance:

[View](#)

REACH 241:

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

## Product Details

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

Mtutoyo 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 They have achieved the best combination of working distance and optical performance by using a new approach—avoiding outdated conventions used by competitors.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. Mtutoyo 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

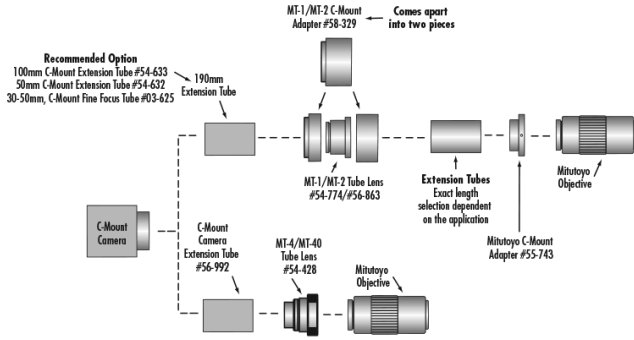
- Super-Long Working Distance for Bright Field Inspection
- 13mm Working Distance for 100X and 200X Models
- High Quality Achromat Design
- Flat Image Surface over Entire Field of View
- Good Color Reproducibility

## 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



Stock No.	M Plan Apo	A	B	C	D	E	F	W.D.
#58-235	1X	84.0	-	38.0	-	41.0	34.0	11.0
#46-142	2X	61.0	1.4	27.5	24.7	32.2	34.0	34.0
#46-143	5X	61.0	1.6	25.0	23.0	32.2	34.0	34.0
#66-383	7.5X	60.0	-	25.0	24.0	32.2	34.0	35.0
#46-144	10X	61.0	2.0	28.2	-	32.2	34.0	34.0
#46-145	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.	M Plan Apo HR	A	B	C	D	E	F	W.D.
#34-247	5X HR	69.5	3.7	24.8	-	32.2	34.0	25.5
#58-236	10X HR	80.0	7.5	29.0	26.0	37.0	39.0	15.0
#58-237	50X HR	89.8	2.0	28.2	-	32.2	34.0	5.2
#58-238	100X HR	93.7	2.0	28.2	-	32.2	34.0	1.3
Stock No.	M Plan APO SL	A	B	C	D	E	F	W.D.
#46-398	20X SL	64.5	1.5	24.8	24.0	32.2	34.0	30.5
#46-399	50X SL	74.5	3.9	25.2	23.5	32.2	34.0	20.5
#46-401	100X SL	82.0	1.4	23.9	22.0	32.2	34.0	13.0

