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# 100X Mitutoyo Plan Apo NIR HR Infinity Corrected Objective

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Mitutoyo NIR, NUV, and UV Infinity Corrected Objectives

Stock **#75-053** NEW **2 In Stock**

1  MRP ₹13,11,482

Price inclusive of all taxes

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## Product Downloads

### General

378-864-5 **Model Number:**

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

Microscope Objective **Type:**

Infinity Corrected **Style:**

Mitutoyo **Manufacturer:**

**Note:**  
Example Application: cutting and trimming of semiconductor wafer and circuits

## Physical & Mechanical Properties

85.00 **Length excluding Threads (mm):**

39.00 **Maximum Diameter (mm):**

450.00 **Weight (g):**

## Optical Properties

N/A **Compatible Cover Glass Thickness (mm):**

532, 1064 **Design Wavelength DWL (nm):**

0.06mm **Horizontal Field of View, 1/2" Sensor:**

Not Listed **Horizontal Field of View, 2/3" Sensor:**

2.00 **Focal Length FL (mm):**

100X **Magnification:**

0.70 **Numerical Aperture NA:**

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

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

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

10.00 **Working Distance (mm):**

480 - 1800 **Wavelength Range (nm):**

95.00 **Parfocal Length (mm):**

N/A **Immersion Liquid:**

## Sensor

1/2" **Maximum Sensor Format:**

## Threading & Mounting

M26 x 36 TPI **Mounting Threads:**

## Environmental & Durability Factors

-5 to +45 **Operating Temperature ( $^{\circ}\text{C}$ ):**

20 - 80% **Operating Humidity:**

23  $\pm$  2 **Performance Assurance Temperature ( $^{\circ}\text{C}$ ):**

## Regulatory Compliance

[View](#) **Certificate of Conformance:**

Japan **Country of Origin:**

**Imported By:**  
Edmund Optics India Private Limited  
267, Greystone Building, Second Floor,  
6th Cross Rd, Binnamangala,  
Stage 1, Indiranagar, Bengaluru,  
Karnataka, India 560038  
Phone: +91- 80-6845 0000

## Product Details

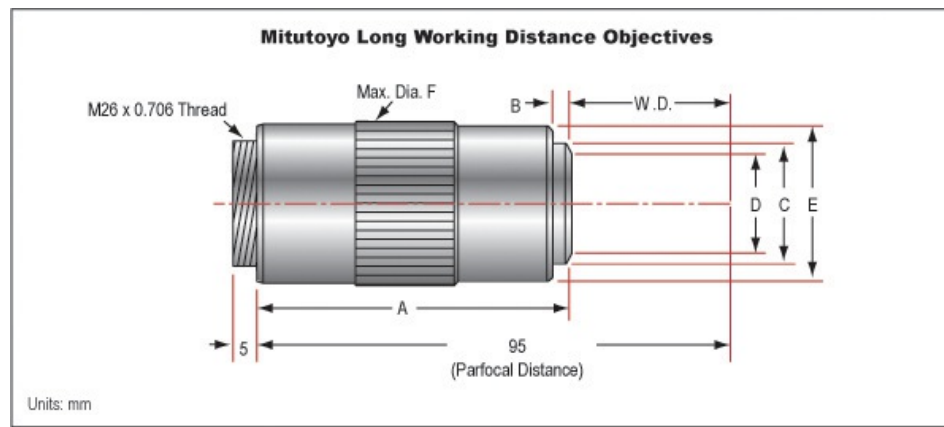
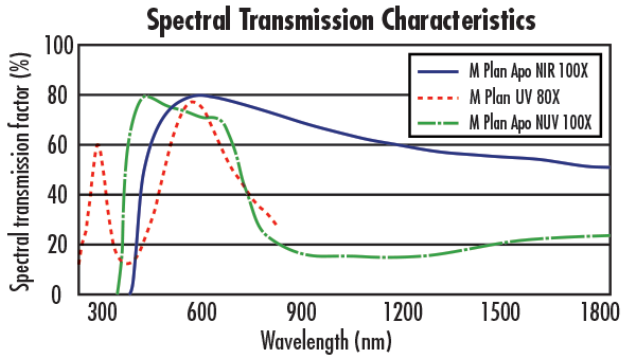
- Ideal for Bright Field Imaging in UV, Visible, and NIR Spectral Regions
- Excellent Performance at Nd:YAG Laser Lines
- Broad Spectral Ranges

Mitutoyo NIR, NUV, and UV Infinity Corrected Objectives combine the benefits of the standard **M Plan Apo** and **M Plan Apo SL series objectives** with enhanced spectral ranges. The NIR objectives are corrected from 480 to 1800nm and feature enhanced transmission of the fundamental and second harmonic of Nd:YAG lasers for laser cutting applications. The NUV and UV series of objectives also have excellent performance at the second, third, and fourth Nd:YAG harmonics of 532nm, 355nm, and 266nm respectively. Mitutoyo NIR, NUV, and UV Infinity Corrected Objectives are ideal for applications that require a significant distance between the objective lens and the object such as semiconductor inspection, machine vision, and defect detection. The HR series offers an increased numerical aperture, providing smaller spot sizes and higher resolution.

#### Accessory Tube Lenses

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

## Technical Information



#### Dimensions (mm)

| Stock No. | M Plan NIR  | A     | B    | C     | D     | E     | F     | W.D.  |
|-----------|-------------|-------|------|-------|-------|-------|-------|-------|
| #46-402   | 5X NIR      | 57.50 | -    | 23.80 | 23.00 | 32.20 | 34.00 | 37.50 |
| #46-403   | 10X NIR     | 64.50 | 1.00 | 25.20 | 24.80 | 32.20 | 34.00 | 30.50 |
| #46-404   | 20X NIR     | 75.00 | -    | -     | -     | 32.20 | 34.00 | 20.00 |
| #46-405   | 50X NIR     | 78.00 | -    | -     | -     | 32.20 | 34.00 | 17.00 |
| #46-406   | 100X NIR    | 83.00 | -    | 25.00 | 24.60 | 32.20 | 34.00 | 12.00 |
| #56-982   | 50X NIR HR  | 85.00 | -    | -     | -     | 37.00 | 39.00 | 10.00 |
| #56-983   | 100X NIR HR | 85.00 | -    | -     | -     | 37.00 | 39.00 | 10.00 |
| #89-350   | 20X NIR B   | 69.50 | -    | -     | -     | 37.00 | 37.00 | 25.50 |
| #89-351   | 50X NIR B   | 69.50 | -    | -     | -     | 37.00 | 37.00 | 25.50 |
| #37-550*  | 20X NIR LCD | 75.02 | -    | -     | -     | 32.20 | 34.00 | 20.35 |
| Stock No. | M Plan NUV  | A     | B    | C     | D     | E     | F     | W.D.  |
| #86-176   | 10X NUV     | 64.50 | -    | 25.20 | 24.80 | 32.20 | 34.00 | 30.50 |
| #46-407   | 20X NUV     | 78.00 | -    | -     | -     | 32.20 | 34.00 | 17.00 |
| #46-408   | 50X NUV     | 80.00 | -    | -     | -     | 32.20 | 34.00 | 15.00 |
| #46-409   | 100X NUV    | 84.00 | 1.80 | 25.00 | 24.00 | 32.20 | 34.00 | 11.00 |
| #86-177   | 50X NUV HR  | 85.00 | -    | -     | -     | 37.00 | 39.00 | 10.00 |
| Stock No. | M Plan UV   | A     | B    | C     | D     | E     | F     | W.D.  |
| #86-175   | 10X UV      | 75.00 | -    | -     | -     | 32.20 | 34.00 | 20.00 |
| #56-320   | 20X UV      | 80.00 | -    | -     | -     | 32.20 | 34.00 | 15.00 |
| #56-321   | 50X UV      | 83.00 | -    | -     | -     | 32.20 | 34.00 | 12.00 |
| #56-322   | 80X UV      | 85.00 | -    | 22.70 | -     | 32.20 | 34.00 | 10.00 |

\*LCD 20X parafocal length is 95.37