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## Machine Vision Mounted Sapphire Windows



- Protective Windows for Machine Vision Applications
- Windows Feature Extreme Surface Hardness and Chemical Resistance
- M25.5 to M62.0 Filter Threads Available

Common Specifications

| Physical & Mechanical Properties                             |                                            |                                                  |                                                       |
|--------------------------------------------------------------|--------------------------------------------|--------------------------------------------------|-------------------------------------------------------|
| Bevel:                                                       | Protective as needed                       | Clear Aperture (%):                              | ≥90                                                   |
| Edges:                                                       | Fine Ground                                | Knoop Hardness (kg/mm <sup>2</sup> ):            | 1,900.00                                              |
| Parallelism (arcmin):                                        | ≤3.5                                       | Poisson's Ratio:                                 | 0.27                                                  |
| Young's Modulus (GPa):                                       | 435                                        |                                                  |                                                       |
| Optical Properties                                           |                                            |                                                  |                                                       |
| Abbe Number (v <sub>d</sub> ):                               | 72.24                                      |                                                  |                                                       |
| Axis Orientation:                                            | Random                                     | Birefringence (n <sub>o</sub> -n <sub>e</sub> ): | 0.008 for Visible Light<br>Orthogonal to Optical Axis |
| Coating:                                                     | Uncoated                                   | Index of Refraction (n <sub>d</sub> ):           | 1.77                                                  |
| Substrate:                                                   | Sapphire (Al <sub>2</sub> O <sub>3</sub> ) | Surface Flatness (P-V):                          | 2λ (typical)                                          |
| Surface Quality:                                             | 80-50                                      | Wavelength Range (nm):                           | 330 - 5500                                            |
| Material Properties                                          |                                            |                                                  |                                                       |
| Coefficient of Thermal Expansion CTE (10 <sup>-6</sup> /°C): | 8.8                                        | Density (g/cm <sup>3</sup> ):                    | 3.97                                                  |

## Technical Information

## Products

| Filter Thread | CA (mm) | Dia. (mm) | Thickness (mm) | Stock Number            | Price                                       | Buy        |
|---------------|---------|-----------|----------------|-------------------------|---------------------------------------------|------------|
| M25.5 x 0.50  | 20.7    | 23.00     | 1.50           | <a href="#">#23-281</a> | S\$168.00<br><a href="#">Volume Pricing</a> | 3 In Stock |
| M30.5 x 0.50  | 25.2    | 28.00     | 1.50           | <a href="#">#23-282</a> | S\$252.00<br><a href="#">Volume Pricing</a> | Contact Us |
| M34.0 x 0.50  | 28.44   | 31.60     | 1.50           | <a href="#">#23-283</a> | S\$252.00<br><a href="#">Volume Pricing</a> | 2 In Stock |
| M37.5 x 0.50  | 31.5    | 35.00     | 2.20           | <a href="#">#23-284</a> | S\$351.40<br><a href="#">Volume Pricing</a> | 2 In Stock |
| M40.5 x 0.50  | 34.2    | 38.00     | 1.50           | <a href="#">#23-285</a> | S\$413.00<br><a href="#">Volume Pricing</a> | 2 In Stock |
| M43.0 x 0.75  | 36.18   | 40.20     | 1.50           | <a href="#">#23-286</a> | S\$459.20<br><a href="#">Volume Pricing</a> | 2 In Stock |
| M46.0 x 0.75  | 38.88   | 43.20     | 1.50           | <a href="#">#23-287</a> | S\$490.00<br><a href="#">Volume Pricing</a> | 4 In Stock |
| M58.0 x 0.75  | 49.5    | 55.00     | 2.00           | <a href="#">#23-288</a> | S\$700.00<br><a href="#">Volume Pricing</a> | 2 In Stock |
| M62.0 x 0.75  | 53.28   | 59.20     | 1.50           | <a href="#">#23-289</a> | S\$812.00<br><a href="#">Volume Pricing</a> | 2 In Stock |



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