

SWIR Filters



Schneider-Kreuznach magnetron sputtered industrial narrow bandpass filters feature steep slopes for sophisticated applications that require a sharp transition between high transmission and deep blocking at stable cut-on and cut-off wavelengths. The layers are applied by means of magnetron sputtering, a special coating process.

Schneider-Kreuznach narrow bandpass filters are RoHS conform. Custom sizes are available on request.



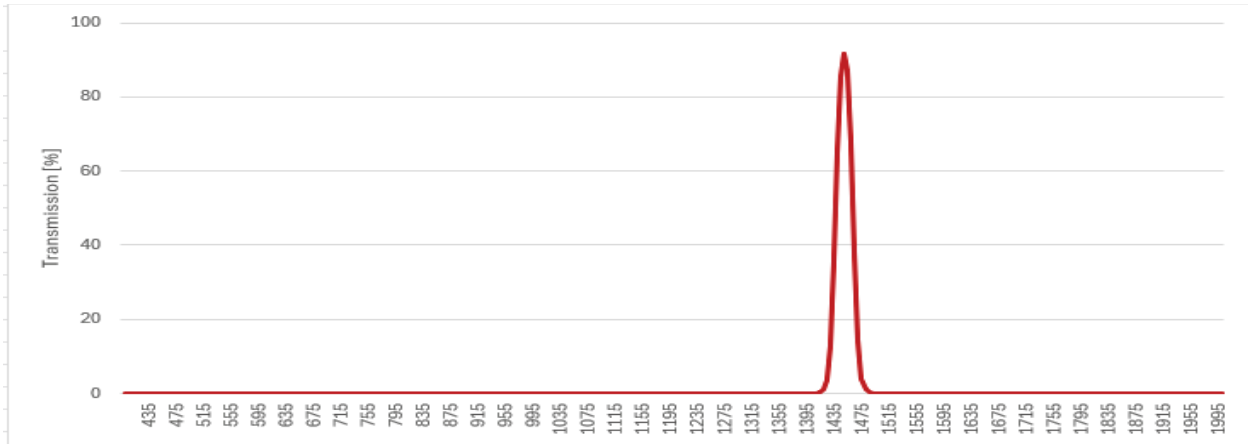
| Key features | Applications |
|--------------|--------------|
|--------------|--------------|

- Average transmittance >80%
- Steep slopes
- Wavelength tolerance +/- 5 nm
- Deep blocking / High optical density

- Food and beverage inspection
- Agriculture
- Mining
- Solar inspection
- Work of art inspection

| Standard Products | | available on request | |
|-------------------|--------------------------------|----------------------|-------------|
| Name | Description | Name | Description |
| NBP 1300-25 SWIR | Narrow Bandpass 1287 - 1312 nm | | |
| NBP 1450-25 SWIR | Narrow Bandpass 1437 - 1462 nm | | |
| NBP 1550-35 SWIR | Narrow Bandpass 1532 - 1567 nm | | |
| | | | |
| | | | |

Narrow Bandpass 1450-25 SWIR



| Technical specifications | according to ISO 10110 |
|-----------------------------------|---|
| Angle of incident | 0° +/- 8° |
| Central Wavelength (CWL) | 1450 +/- 5nm |
| Full Width at Half Maximum (FWHM) | 25 +/- 5nm |
| Transmittance | 1437 - 1463 nm: $T_{abs} > 90\%$ |
| Blocking | < 1430 nm: $T_{abs} < 0.025\%$ |
| | 1470 - 2000 nm: $T_{abs} < 0.025\%$ |
| Wavefront distortion | $\varnothing > 18 - 30$ mm: 13/ 1(0.25) $\varnothing > 30 - 50$ mm: 13/ 1(0.30) |
| Parallelism | 1' |
| Glass thickness tolerance | 1.1 mm +/- 0.08mm |

| Mounted Industrial Filter [IF] | | | | | |
|--------------------------------|-----------|---------|--|--|--|
| Mount | Thickness | ID | | | |
| CMT | 1.1 mm | 1110167 | | | |
| SH 25.5 | 1.1 mm | 1110168 | | | |
| SH 27.0 | 1.1 mm | 1110169 | | | |
| SN1 30.5 | 1.1 mm | 1110170 | | | |
| SH 34.0 | 1.1 mm | 1110171 | | | |
| SH 35.5 | 1.1 mm | 1110172 | | | |
| SH 37.0 | 1.1 mm | 1110173 | | | |
| SH 39.0 | 1.1 mm | 1110174 | | | |
| SH 40.5 | 1.1 mm | 1110175 | | | |
| SH 43.0 | 1.1 mm | 1110176 | | | |
| SH 46.0 | 1.1 mm | 1110177 | | | |
| SH 49.0 | 1.1 mm | 1110178 | | | |

Custom sizes available on request.

Order nomenclature

IF NBP 1450-25 SWIR [Mount] [Thickness]

Example: IF NBP 1450-25 HT SH 25.5 1.1

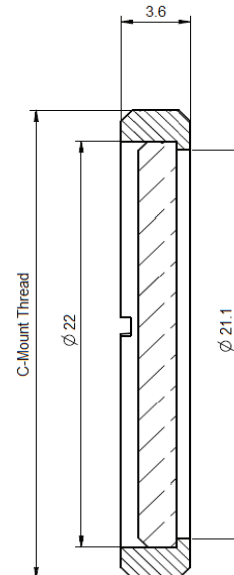
C-Mount

Defined by 1" (25.4mm) diameter and 32 turns per inch pitch, the C-Mount thread is a popular camera mount in machine vision industry. Schneider-Kreuznach offers a CMT mount option for most filters. So filters fit in any C-Mount based mechanics, including the C-Mount thread of a camera. The extension of the back flange distance has to be considered for imaging applications.

| Key features | Applications |
|--------------|--------------|
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|---|---|
| <ul style="list-style-type: none"> • Fits in C-Mount cameras • Robust • Black anodized brass | <ul style="list-style-type: none"> • Mounted in C-Mount camera threads • In vision systems based on C-Mount mechanics |
|---|---|

| Thread | Diameter | Clear Aperture | Thickness |
|---------|----------|----------------|-----------|
| 1" - 32 | 25.4 mm | 21.1 mm | 3.6 mm |



SH-Mount

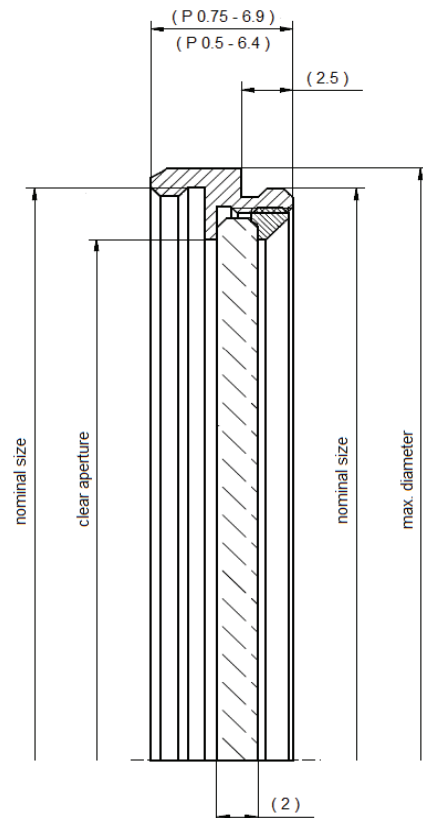
SH-Mount is the standard thread mount when high flexibility and stability is required. The filter glass is held in place by a retainer ring. SH-Mounts are extremely robust, have a female and male M-thread and can be stacked if several filters must be combined.

UV/IR Cut 380 - 650 nm

| Key features | Applications |
|--------------|--------------|
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|---|---|
| <ul style="list-style-type: none"> • Stackable • Robust • Black anodized brass | <ul style="list-style-type: none"> • Mounted on lenses • Mounted on measurement instruments |
|---|---|

| Thread | Diameter | Clear Aperture | Thickness |
|-------------|----------|----------------|-----------|
| M 25.5x0.5 | 29.5 mm | 20.8mm | 6.4 mm |
| M 27.0x0.5 | 31.0 mm | 21.8 mm | 6.4 mm |
| M 35.5x0.5 | 39.5 mm | 29.8 mm | 6.4 mm |
| M 37.0x0.75 | 41.0 mm | 31.8 mm | 6.9 mm |
| M 39.0x0.5 | 43.0 mm | 33.8 mm | 6.4 mm |
| M 40.5x0.5 | 44.5 mm | 35.8 mm | 6.4 mm |
| M 43.0x0.75 | 47.0 mm | 37.8 mm | 6.9 mm |
| M 46.0x0.75 | 50.0 mm | 40.8 mm | 6.9 mm |
| M 49.0x0.75 | 53.0 mm | 43.8 mm | 6.9 mm |
| M 52.0x0.75 | 56.0 mm | 46.8 mm | 6.9 mm |
| M 55.0x0.75 | 59.0 mm | 49.8 mm | 6.9 mm |
| M 58.0x0.75 | 62.0 mm | 52.8 mm | 6.9 mm |
| M 62.0x0.75 | 66.0 mm | 56.8 mm | 6.9 mm |
| M 67.0x0.75 | 71.0 mm | 61.8 mm | 6.9 mm |



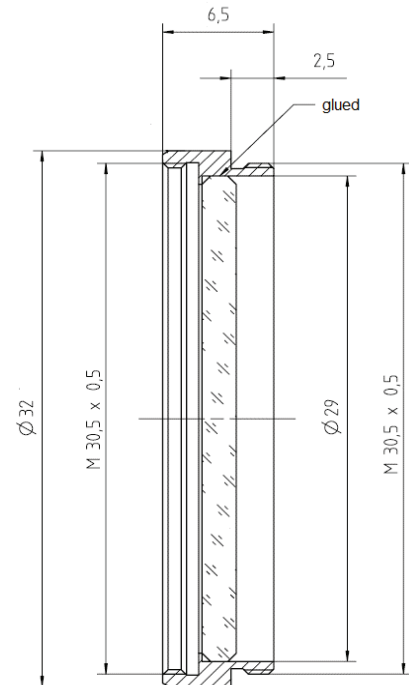
SN1-Mount

The SN1-Mount was designed for the popular M30.5x0.5 thread. With its high clear aperture, vignetting can be avoided even for wide angle applications. The filter is glued into the mount. So it is secured against vibrations when integrated into robots or production lines. It is ideal to be used in automated fabrication. SN1-Mounts have a male and female M-thread and can be stacked if several filters must be combined.

| Key features | Applications |
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|--|---|
| <ul style="list-style-type: none"> • Maximum clear aperture • No vignetting • Stackable • Robust • Black anodized brass | <ul style="list-style-type: none"> • Mounted on lenses • Mounted on measurement instruments |
|--|---|

| Thread | Diameter | Clear Aperture | Thickness |
|------------|----------|----------------|-----------|
| M 30.5x0.5 | 32 mm | 28 mm | 6.5 mm |



Headquarters Europe

Jos. Schneider Optische Werke GmbH
Ringstraße 132
55543 Bad Kreuznach
+49 671 601 205
isales@schneiderkreuznach.com
www.schneiderkreuznach.com

Offices Worldwide

America

+1 800 645 7239 (East Coast)
+1 800 228 1254 (West Coast)
info@schneideroptics.com

Asia

+86 755 8832 1170
info@schneider-asiapacific.com