

Color Filters

Blue, Red & NIR Color Filters

Blue filters, transmit wavelength in a corresponding color as seen by the human eye, while red are long pass filters. IR pass filters are long pass filters, transmitting only IR light. The Cut-on wavelength is defined at 50% transmittance of maximum. Color filters are absorptive filter that are used to increase contrast of a monochrome image, by isolating spectral regions and lighting colors. IR filters are absorptive filters, too. They are used in front of a NIR sensor or an image sensor for NIR imaging where IR spectrum only is needed. The type of the filter is thereby depending on two main factors: color of the object and illumination. Call for helping to select the best suitable filter.

Color filters are available unmounted in sizes from 10 mm to 74 mm diameter and mounted with common thread sizes M 25.5 to M 67.

We offer several AR coating options, depending on filter type.

Call us to discuss your OEM and custom requirements.



Key Features

- Sizes 10 mm to 74 mm diameter.
- Mounted with common thread sizes M 25.5 to M 67 available
- AR Coated
- Insensitive to angle of incidence
- Large CA, absence of vignetting
- Improve Contrast
- Isolate Colors

Applications

- Traffic
- Process Control
- Night Vision
- Machine Vision Applications
- Line Inspection
- Food and Beverage Inspection
- NIR Imaging (IR pass)

General technical specifications

according to ISO 10110

Parallelism	1'
Surface	10 – 18 mm: 5/1x0,10 L3x0,008
	18 – 30 mm: 5/2x0,10 L3x0,008
	31 – 50 mm: 5/2x0,16 L3x0,008
	51 – 64 mm: 5/3x0,16 L3x0,008
Wavefront distortion	10 – 30 mm: 13/1 (0.2)
	31 – 50 mm: 13/1 (0.25)
	51 – 74 mm: 13/1 (0.35)
Thickness	2.0 +/- 0.08 mm
Climate Testing	
Slow temperature cycling	DIN ISO 9022-2-14-03 -1
Damp heat, cyclic	DIN ISO 9022-2-16-01-1
Chemical resistant	DIN ISO 9011-4-04-05
Adhesive strength	DIN ISO 9211-4-02-03

Blue Filter (IF 039 MRC)

IF 039 MRC Blue Filter

Blue filters, transmit wavelength between 380 nm and 580 nm. They are used to increase contrast of a monochrome image, by isolating that spectral region and so lighting blue parts of the image.

Blue filters are available unmounted in sizes from 10 mm to 74 mm diameter and mounted with common thread sizes M 25.5 to M 67.

The filters come with our superior broadband multilayer resistant AR coating MRC.

Call us to discuss your OEM and custom requirements.



Key Features

- Sizes 10 mm to 74 mm diameter.
- Mounted with common thread sizes M 25.5 to M 67 available
- MRC multilayer resistant AR coated
- Insensitive to angle of incidence
- Large CA, absence of vignetting
- Improve Contrast
- Isolate Colors

Applications

- Process Control
- Machine Vision Applications
- Line Inspection
- Food and Beverage Inspection

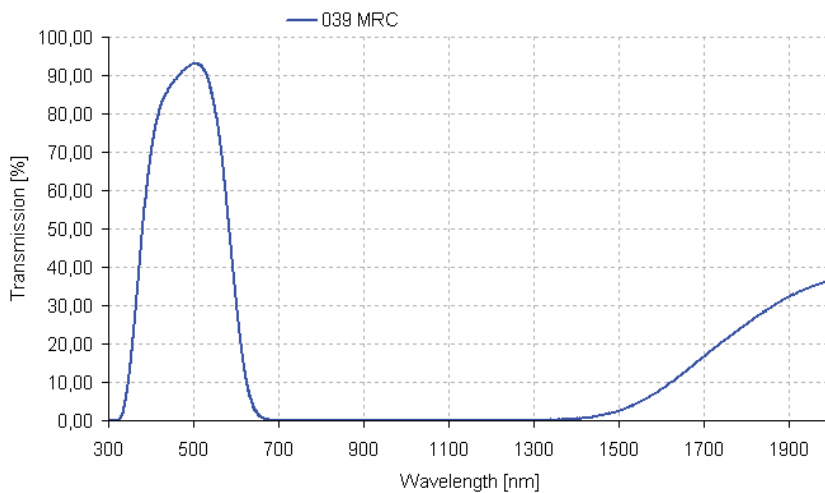
Technical Specifications

according to ISO 10110

Transmission	IF 039		
Wavelength tolerance	± 10 nm	Parallelism	1 arc minute
Peak transmittance	> 90%	Diameter	10 - 74 mm
Blocking	< 1% (300 - 330 & 660 - 1440 nm)	Diameter tolerance	+0 - 0.3 mm

¹ Specification according to ISO 10110

Filtertypen



Red Filters (IF 090, IF 091)

Red Color Filters

Red color glass filters are long pass filters, transmitting wavelength from a defined cut-on wavelength on. The cut-on wavelength is defined at 50% transmittance of maximum. Color filters are absorptive filter that are used to increase contrast of a monochrome image, by isolating spectral regions and lighting colors.

Color filters are available unmounted in sizes from 10 mm to 74 mm diameter and mounted with common thread sizes M 25.5 to M 67.

Available with AR coating options: broadband coating (E) or multi resistance coating (MRC).

Call us to discuss your OEM and custom requirements.



Key Features

- Sizes 10 mm to 74mm diameter.
- Mounted with common thread sizes M 25.5 to M 67 available
- AR coating options: broadband (E) or multi resistance (MRC)
- Insensitive to angle of incidence
- Large CA, absence of vignetting
- Improve Contrast
- Isolate Colors
- AR coated

Applications

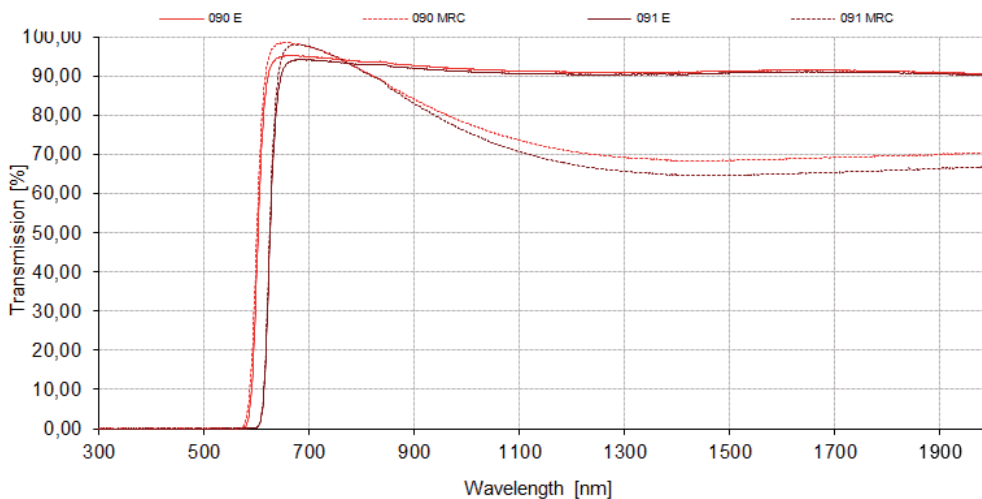
- Traffic
- Process Control
- Night Vision
- Machine Vision Applications
- Line Inspection
- Food and Beverage Inspection

Technical Specifications

Filter type	IF 090	IF 091		
Cut-on wavelength	600 nm	625 nm	Wave front distortion ¹	10 – 30 mm:13/1 (0.2) 31 – 50 mm:13/1 (0.25) 51 – 74 mm:13/1 (0.35)
Wavelength tolerance	± 10 nm		Parallelism	1 arc minute
Color	Red	Dark Red	Diameter	10 - 74 mm
Transmittance Blocking	> 90 % / < 1%		Diameter tolerance	+0 - 0.3 mm
Surface ¹	5/2 × 0.16		Thickness	2.0 ± 0.2 mm

¹ Specification according to ISO 10110

Red Color Glass Filter



IR Pass Filter (IF 092, IF 098, IF 093)

Infrared (IR) Filters

IR filters are long pass filters, transmitting wavelength higher than 695 nm. The cut-on wavelength is defined at 50% transmittance of maximum. IR filters are absorptive filters that are used in front of a NIR sensor or an image sensor, for NIR imaging. Passes needed IR spectrum only.

IR filters are available unmounted in sizes 10 mm to 74 mm diameter and mounted with common thread sizes M 25.5 to M 67. Available uncoated and with your superior NIR multi resistance AR Coating, special designed to reduce reflects in NIR spectrum.



Call us to discuss your OEM and custom requirements.

Key Features

- Unmounted 10 mm to 74 mm diameter.
- Mounted with common thread sizes M 25.5 to M 67 available
- MRCIR coated (up to 74 mm diameter) and uncoated versions available
- Insensitive to angle of incidence
- Large CA, absence of vignetting
- Passes IR spectrum only
- Block UV and VIS spectrum

Applications

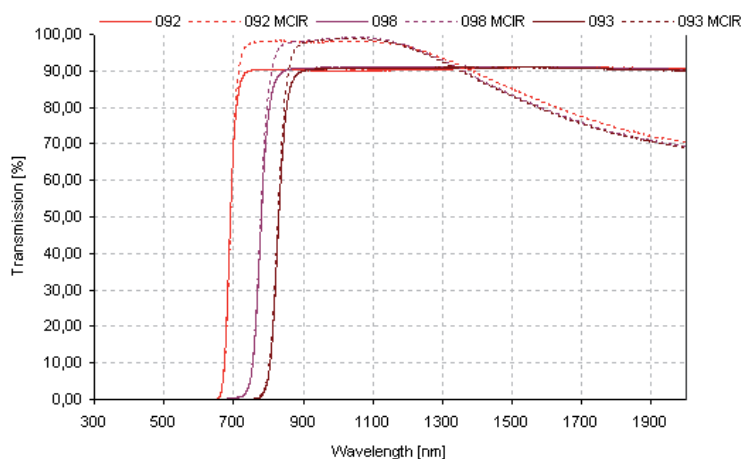
- Traffic
- Night Vision
- Solar
- NIR Imaging

Technical Specifications

Filter type:	IF 092	IF 098	IF 093		
Cut-on wavelength	695 nm	775 nm	825 nm	Wave front distortion ¹	10 – 30 mm:13/1 (0.2) 31 – 50 mm:13/1 (0.25) 51 – 74 mm:13/1 (0.35)
Wavelength tolerance	± 10 nm			Parallelism	1 arc minute
Peak transmittance	> 90%			Diameter	10 - 74 mm
Blocking	< 1%			Diameter tolerance	+0 - 0.3 mm
Surface ¹	5/2 × 0.16			Thickness	2.0 ± 0.2 mm

¹ Specification according to ISO 10110

IR Filter IF 093 098 093



Order Instructions:																										
Mounted filter:	IF																									
Unmounted filter glass:	IFG																									
Type:	039 Blue 090 Red, 091 Dark Red 092, 093, 098 NIR Pass E (broadband coating) - not for IF039 MRC (multi resistant coating) MRCIR																									
Coating:	SH (standard M- thread mounts) SN-1 (only for 30.5 mm)																									
Mount:	CMT (C-mount) Thread of mount for mounted filters (IF) or Diameter in mm for unmounted glass (IFG)																									
Size:																										
Examples:	<table border="1"> <thead> <tr> <th>IFx</th> <th>type</th> <th>coating</th> <th>mount</th> <th>size</th> </tr> </thead> <tbody> <tr> <td>IF</td> <td>039</td> <td>MRC</td> <td>SH</td> <td>25.5</td> </tr> <tr> <td>Mounted filter,</td> <td>Blue,</td> <td>MRC coated,</td> <td>thread size</td> <td>M25.5</td> </tr> <tr> <td>IFG</td> <td>091</td> <td>E</td> <td></td> <td>30.0</td> </tr> <tr> <td>Unmounted filter,</td> <td>Red</td> <td>E coated,</td> <td></td> <td>diameter 30.0 mm</td> </tr> </tbody> </table>	IFx	type	coating	mount	size	IF	039	MRC	SH	25.5	Mounted filter,	Blue,	MRC coated,	thread size	M25.5	IFG	091	E		30.0	Unmounted filter,	Red	E coated,		diameter 30.0 mm
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