

# Color Filters

## Blue, Green, Yellow, Orange, Red & NIR Color Filters

Blue and Green are band pass filters, transmitting wavelength in a corresponding color as seen by the human eye, while yellow, orange and 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

- red, orange, yellow, green and blue filter available
- 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)

### Technical Specifications

Filter type	Blue IF 039, Green IF 062, Yellow IF 022, Orange IF 041, Red IF 090, Dark Red IF 091 IR pass IF 092, IF 098, IF 093
Surface <sup>1</sup>	5/2 × 0.16
Wave front distortion <sup>1</sup>	10 – 30 mm: 13/1 (0.2) 31 – 50 mm: 13/1 (0.25) 51 – 74 mm: 13/1 (0.35)
Parallelism	1 arc minute
Diameter tolerance	+0 - 0.3 mm
Thickness	2.0 ± 0.2 mm

<sup>1</sup> Specification according to ISO 10110

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# Yellow, Orange, Red Filters (IF 022, IF 041, IF 090, IF 091)

## Yellow, Orange & Red Color Filters

Yellow, orange and red 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). IF 090 and IF 091 type additional with MRCIR coating, specialized for antireflection an NIR.

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

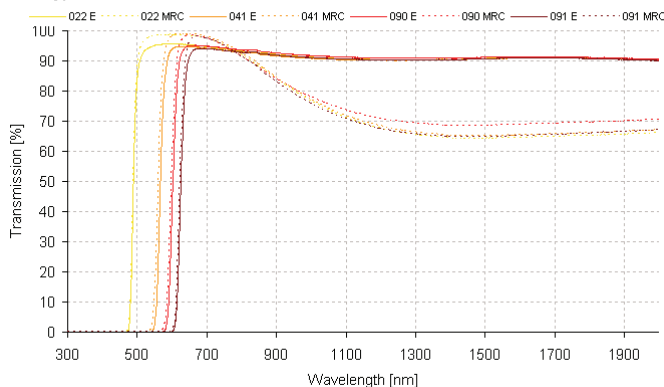
- Traffic
- Process Control
- Night Vision
- Machine Vision Applications
- Line Inspection
- Food and Beverage Inspection

### Technical Specifications

Filter type	IF 022	IF 041	IF 090	IF 091	
Wave front distortion <sup>1</sup>					10 – 30 mm:13/1 (0.2) 31 – 50 mm:13/1 (0.25) 51 – 74 mm:13/1 (0.35)
Cut-on wavelength	490 nm	565 nm	600 nm	625 nm	
Wavelength tolerance	± 10 nm				Parallelism
Color	Yellow	Orange	Red	Dark Red	Diameter
Transmittance Blocking	> 90 % / < 1%				Diameter tolerance
Surface <sup>1</sup>	5/2 × 0.16				Thickness
					10 - 74 mm +0 - 0.3 mm 2.0 ± 0.2 mm

<sup>1</sup> Specification according to ISO 10110

### Filtertypen



<b>Order Instructions:</b>																										
<b>Mounted filter:</b>	IF																									
<b>Unmounted filter glass:</b>	IFG																									
<b>Type:</b>	039 Blue 062 Green 022 Yellow 041 Orange 090 Red, 091 Dark Red 092, 093, 098 NIR Pass																									
<b>Coating:</b>	E (broadband coating) - not for IF039 and IF062 MRC (multi resistant coating)																									
<b>Mount:</b>	MRCIR- only IF090 and IF 091 SH (standard M- thread mounts) SN-1 (only for 30.5 mm)																									
<b>Size:</b>	CMT (C-mount) Thread of mount for mounted filters (IF) or Diameter in mm for unmounted glass (IFG)																									
<b>Examples:</b>	<table border="0"> <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>041</td> <td>E</td> <td></td> <td>30.0</td> </tr> <tr> <td>Unmounted filter,</td> <td>Orange</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	041	E		30.0	Unmounted filter,	Orange	E coated,		diameter 30.0 mm
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