

KO | BRINGING QUALITY INTO FOCUS

www.knightoptical.com | Tel: +1 401 583 7846 | Fax: +1 401 583 7851
Knight Optical (USA) LLC | 1130 Ten Rod Road, Suite D102 | North Kingsdown RI 02852 USA
www.knightoptical.com | Tel: +44 (0) 1622 859444 | Fax +44 (0) 1622 859555
Knight Optical (UK) Ltd | Roebuck Business Park | Harrietsham | Kent ME17 1SB UK

Interference Bandpass Filters for Medical Sensors

[Medical Sensors](#) are used for the detection of enzymes, proteins, blood, bacteria and other substances inside the human body so that the correct treatment can be administered should abnormalities occur. These sensors use a number of different Interference Bandpass Filters of different wavelengths dependent on what needs to be detected.

With our wide range of [stock filters](#), Knight Optical provide wavelengths from the UV at 214nm for detection of bloods into IR wavelengths of 2000nm for the detection radiation or gases. These interference filters are also available for full customisation to your specific requirement. They are mounted in an aluminium ring making it easier for integration, we can also provide filter wheels to ensure quick changing within the instrument.

Our [stock](#) range are typically specified as follows:

Diameter & aperture (mm):	12.5mm ± 0.1 (8.5mm aperture) 25.0mm ± 0.1 (21mm aperture) 50.0mm ± 0.1 (46mm aperture)
Thickness (mm):	<=6.1mm +0/-0.1
Blocking:	<0.01% (OD4) @ 200nm to 1150nm (for filters with CWL less than 380nm) <0.01% (OD5) @ 200nm to 1150nm (for filters with CWL between 380nm and 1064) <0.01% (OD5) @ 200nm to 1850nm (for filters with CWL between 1080nm and 1640)
CWL tolerance (nm):	± 20% of FWHM
HBW tolerance (nm):	± 20% of FWHM
Optimum operating temperature:	23°C
Edge treatment:	Mounted in black anodized aluminium ring
Edge marking format:	In most cases {Knight Optical Part#} - {KOLTD} - arrow in direction of light path
Surface/ coating quality:	80/50 Per Mil-0-13830A
Usable temperature limits:	-50°C to +80°C
Design type:	Typical 3 cavity design
Assembly:	All filters are scribed and hermetically sealed to ensure maximum long-term stability (information sheet on scribed interference filters)

All our Interference Bandpass Filters are fully inspected on their quality in our ISO 9001:2015 certified, state-of-the-art Metrology laboratory, using our Varian Cary 6000 for precise transmission/blocking data, and Starrett AV300 video microscope for high accuracy diameter testing. This allows us to work to the highest [QA standards](#) and meet the tolerance specifications on these **precision components**.

[Contact our technical sales team](#) to discover how Knight Optical's high quality Interference Bandpass Filters bring quality into focus.

UK, Europe, Asia & RoW: E-Mail info@knightoptical.co.uk Tel +44 (0)1622 859444

USA & Canada: E-Mail usasales@knightoptical.com Tel +001 401-583-7846

- View our [QA and metrology information](#)

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