› BANDPASS FILTERS

Specially designed for industrial imaging

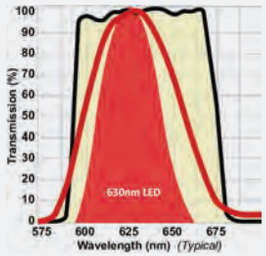
- Available in UV, VIS and NIR passbands
- Achieve optimal contrast
- Improve system control, repeatability and stability
- Block interfering wavelengths, eliminating the need for shrouds
- Superior out-of-band blocking
- Double-side polished glass for exceptional parallelism and transmitted optical wave-front
- Increase resolution by reducing chromatic aberration
- Anti-reflection coated for maximum transmission
- Hard coated, single substrate fabrication
- Exceptional surface quality; 40/20 scratch/dig

APPLICATIONS: Bandpass Filters are used in a variety of industries, including machine vision, factory automation, security and surveillance, license plate recognition, medical and life science, agricultural inspection, aerial imaging, motion analysis, photography and cinematography. Test the effects of monochromatic illumination – ***See page 8 for Filter Kits***

- BP Series are the most popular filters used in machine vision and factory automation systems and are a critical element in fluorescence imaging
- BN Series are popular in outdoor applications where sunlight is present (ex. license plate recognition and security surveillance) and also in fluorescence applications to prevent cross-talk while blocking excitation illumination and ambient light
- Bi Series are popular for life science and laser analysis applications where only discrete wavelengths need to be passed to maximize system performance

MOUNT & SIZE OPTIONS: In-stock, ready-to-ship Bandpass Filters are available in Threaded Mounts, sizes M13.25 to M105; 25.4™ C-Mount; Slip Mounts; or Unmounted. Custom shapes and sizes are also available. (BP/BN Series up to 165mmsq.; Bi Series up to 79.5mmsq.)

See page 31 for mount sizes and how to build your filter part #



GAUSSIAN DESIGN

The spectral output from any single color LED light source used in any vision application typically follows a normal Gaussian or "bell shape" profile. For a machine vision bandpass filter to be most effective, the position, height and width of the passband should approximate this bell-shaped curve. Selecting a filter that is too broad can allow more unwanted ambient light to pass through the filter.

Color Image with Ambient Light

Competitor Red Flat Top Filter

MidOpt Red Gaussian Filter

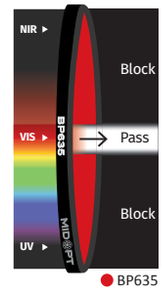
StablEDGE®
FILTER DESIGN

StablEDGE® filters reduce angular dependency & minimize short-shifting effects. ***See page 16 to learn more***

BP SERIES – BROAD BANDWIDTH

Designed to accommodate the entire output of common LEDs

Part #	Description	Useful Range	FWHM (nominal)	Peak Transmission	StablEDGE®
BP250	Deep-to-Near UV Bandpass	230-275nm	70nm	≥30%	
BP324	Near-UV Bandpass	290-365nm	105nm	≥90%	•
BP365	Near-UV Bandpass	335-400nm	80nm	≥85%	•
BP470	Blue Bandpass	425-495nm	85nm	≥90%	•
BP485	Absorptive VIS Bandpass/NIR Block	380-585nm	285nm	≥90%	•
BP500	Green-Blue Bandpass	440-555nm	248nm	≥85%	•
BP505	Cyan Bandpass	485-550nm	90nm	≥90%	•
BP525	Light Green Bandpass	500-555nm	80nm	≥90%	•
PE530	Photopic Response Bandpass	495-565nm	120nm	≥70%	•
BP550	Near-IR/UV-Block Visible Bandpass	410-690nm	300nm	≥90%	
BP590	Orange Bandpass	560-600nm	70nm	≥90%	•
BP635	Light Red Bandpass	615-645nm	60nm	≥90%	•
BP660	Dark Red Bandpass	640-680nm	65nm	≥90%	•
BP695	Near-IR Bandpass	680-720nm	65nm	≥90%	•
BP735	Near-IR Bandpass	715-780nm	90nm	≥90%	•
BP800	Near-IR Bandpass	745-950nm	315nm	≥90%	•
BP850	Near-IR Bandpass	820-910nm	160nm	≥90%	•
BP880	Near-IR Bandpass	845-930nm	130nm	≥90%	•

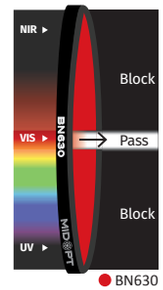


BP635

BN SERIES – NARROW BANDWIDTH

Designed for use with LEDs and laser diodes in applications with overwhelming ambient light

Part #	Description	Useful Range	FWHM (nominal)	Peak Transmission	StablEDGE®
BN470	Narrow Blue Bandpass	460-490nm	45nm	≥85%	•
BN532	Narrow Green Bandpass	525-550nm	55nm	≥85%	•
BN595	Narrow Orange Bandpass	580-610nm	45nm	≥85%	•
BN630	Narrow Light Red Bandpass	625-645nm	45nm	≥85%	•
BN650	Narrow Red Bandpass	638-672nm	50nm	≥85%	•
BN660	Narrow Dark Red Bandpass	645-675nm	45nm	≥85%	•
BN740	Narrow Near-IR Bandpass	730-755nm	50nm	≥85%	•
BN785	Narrow Near-IR Bandpass	770-790nm	55nm	≥85%	•
BN810	Narrow Near-IR Bandpass	798-820nm	50nm	≥85%	•
BN850	Narrow Near-IR Bandpass	840-865nm	45nm	≥85%	•
BN880*	Narrow Near-IR Bandpass	855-890nm	45nm	≥85%	
BN940*	Narrow Near-IR Bandpass	928-955nm	55nm	≥90%	

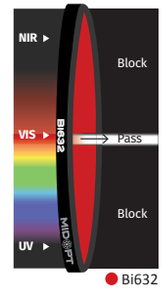


BN630

Bi SERIES – NARROW INTERFERENCE BANDWIDTH

Narrow passband, commonly used with laser diodes. Reflective coating design to withstand gradient temperature in high-powered light source applications.

Part #	Description	Useful Range	FWHM (nominal)	Peak Transmission	StablEDGE®
Bi405*	Violet Interference Bandpass	400-415nm	25nm	≥85%	
Bi450*	Blue Interference Bandpass	445-465nm	35nm	≥88%	
Bi520*	Light Green Interference Bandpass	515-525nm	25nm	≥88%	
Bi550*	Green Interference Bandpass	535-558nm	33nm	≥88%	
Bi632*	Light Red Interference Bandpass	625-640nm	28nm	≥88%	
Bi650*	Red Interference Bandpass	643-665nm	30nm	≥85%	
Bi660*	Dark Red Interference Bandpass	650-665nm	28nm	≥88%	
Bi725*	Red Edge Bandpass	717-732nm	25nm	≥90%	
Bi808*	Near-IR Interference Bandpass	798-820nm	35nm	≥85%	
Bi850*	Near-IR Interference Bandpass	845-860nm	33nm	≥88%	

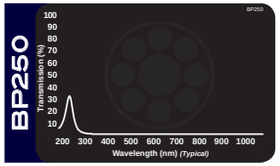


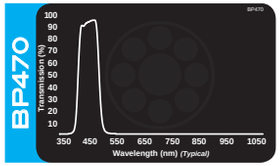
Bi632

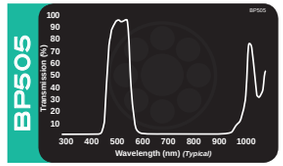
**Available in Threaded Mount sizes: M13.25-M82*

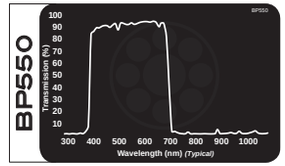
Due to continuous product improvement, specifications are subject to change without notice.

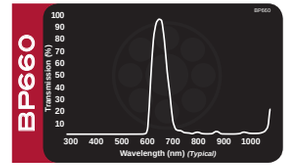
BP SERIES Broad Bandwidth

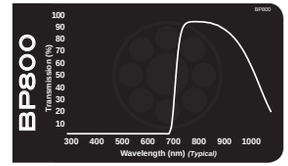


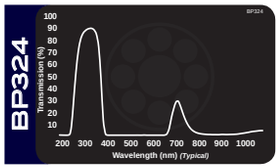


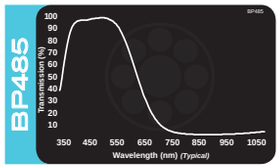


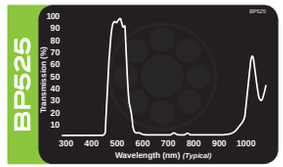


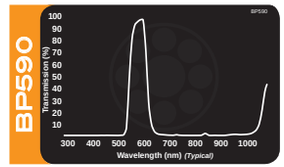


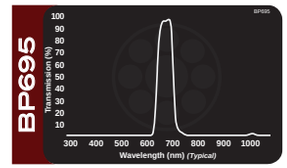


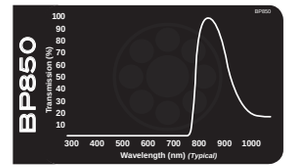


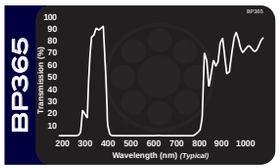


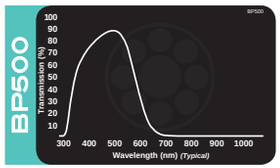


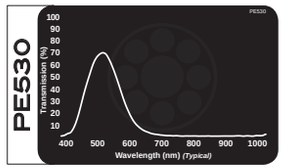


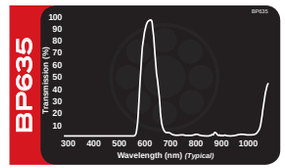


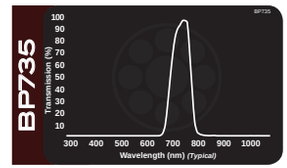


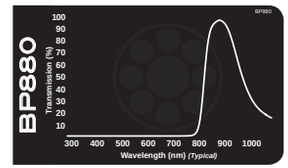




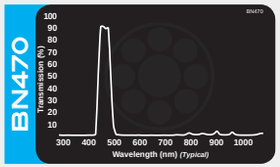


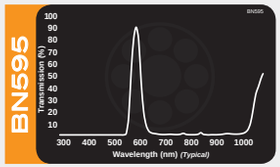


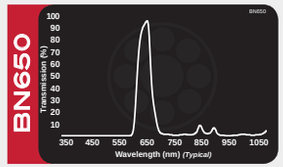


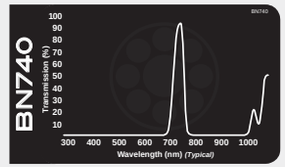


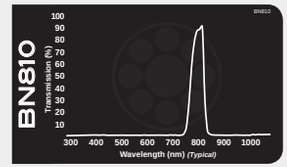
BN SERIES Narrow Bandwidth

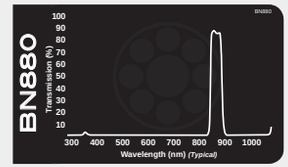


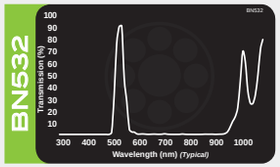


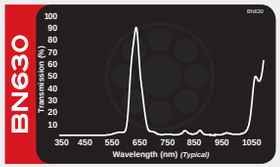


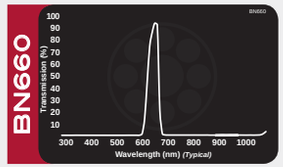


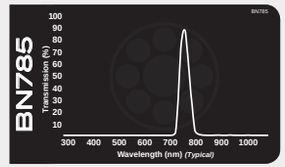


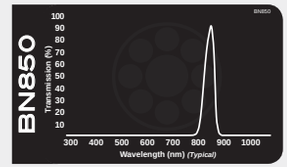


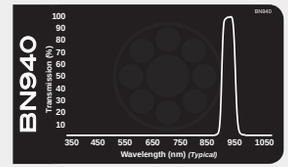




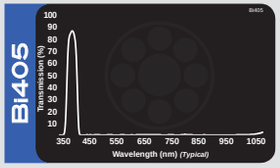


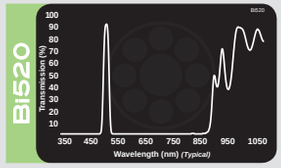


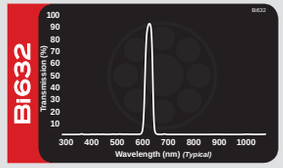


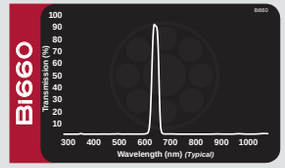


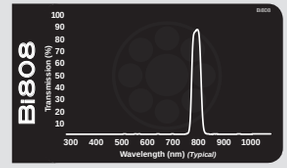
Bi SERIES Narrow Interference Bandwidth

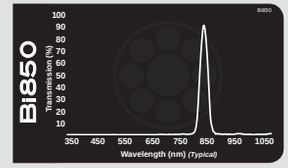


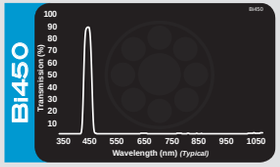


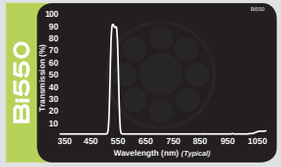


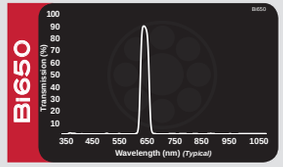


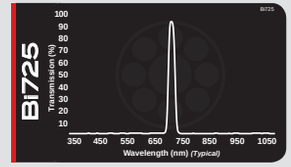












The performance of a filter is based on what happens to light passing through the filter. The apparent color of light reflected off the surface is not a reliable way to judge the filter's capabilities. Batch-to-batch difference in the apparent color of the coatings or filter substrates can often be easily seen when looking at two examples of the same filter type. The color of the coating does not indicate a disparity in performance.

A NECESSITY,
NOT AN ACCESSORY.

Midwest Optical Systems, Inc.
322 Woodwork Lane
Palatine, IL 60067 USA
info@midopt.com

日本代理店：
レボックス株式会社
〒222-0033 神奈川県横浜市港北区新横浜2-17-19
AR新横浜ビルディング4F
Tel 045-548-8172 Fax 045-548-8568
本社（技術サポート）
〒252-0243 神奈川県相模原市中央区上溝1880-2 SIC-3
Tel 042-786-0371 Fax 042-786-0372
E-mail info@revox.jp
www.revox.jp

WWW.MIDOPT.COM