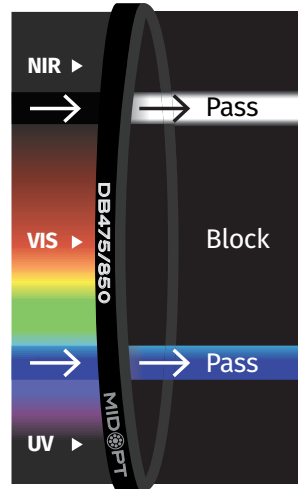
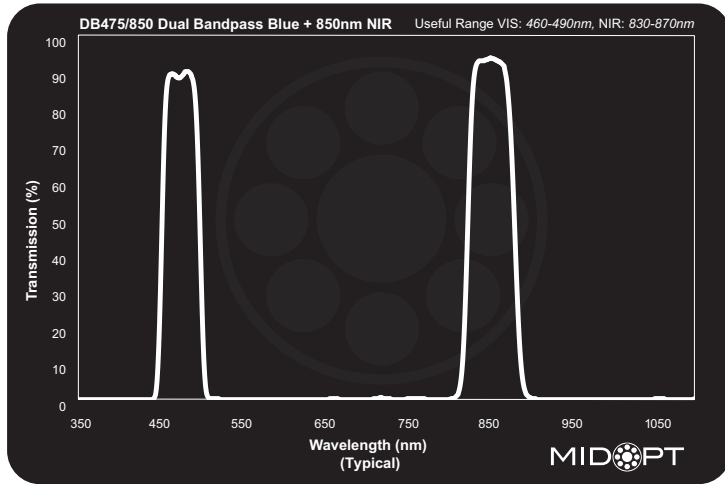


# DB475/850 DUAL BANDPASS BLUE + 850 NIR

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**Useful Range:** 460-490nm, 830-870nm  
**FWHM:** 45nm, 55nm  
**Peak Transmission:** ≥90%  
**Surface Quality:** 40/20

The DB475/850 filter has been primarily designed for NDVI imaging applications. When using a single camera, incorporation of this filter allows reflected near-infrared light (850nm) to be captured in the camera sensor's red channel and reflected blue light (475nm) to be captured in the sensor's blue channel (the green channel is not used). Even when using an inexpensive consumer camera (that has first had its IR blocking filter removed), this easy separation then makes it possible to post-process the red and blue channels for NDVI by performing the calculation:  $NDVI = (red - blue) / (red + blue)$ . Healthy vegetation will absorb (not reflect) blue light and strongly reflect near-infrared light. Thus this information can then be used to apply a false color gradient to images to better highlight the contrast between regions of healthy vegetation vs. areas with stressed/diseased or no vegetation.

## DB475/850 DATA POINTS (TYPICAL)

Wavelength (nm)	Transmission (%)	Wavelength (nm)	Transmission (%)	Wavelength (nm)	Transmission (%)	Wavelength (nm)	Transmission (%)
1100	0.15	910	0.14	720	0.44	530	0.06
1090	0.05	900	0.51	710	0.20	520	0.22
1080	0.01	890	6.78	700	0.03	510	0.34
1070	0.04	880	53.04	690	0.07	500	27.47
1060	0.25	870	89.20	680	0.04	490	86.64
1050	0.14	860	93.01	670	0.09	480	89.98
1040	0.01	850	93.57	660	0.21	470	88.43
1030	-0.02	840	92.99	650	0.08	460	88.63
1020	-0.02	830	84.55	640	0.03	450	33.62
1010	0.00	820	21.07	630	0.00	440	0.07
1000	0.04	810	0.87	620	0.02	430	0.02
990	0.01	800	0.10	610	0.03	420	0.02
980	-0.01	790	0.03	600	0.01	410	0.03
970	-0.01	780	0.05	590	0.02	400	0.02
960	0.06	770	0.19	580	0.01	390	0.01
950	0.09	760	0.25	570	0.02	380	0.01
940	0.00	750	0.17	560	0.02	370	0.00
930	0.00	740	0.04	550	0.01	360	0.00
920	0.03	730	0.12	540	0.03	350	0.01

\*Due to continuous product improvement, specifications are subject to change without notice. For the most up-to-date information visit [www.midopt.com](http://www.midopt.com)

## FILTER MOUNT & SIZE OPTIONS

### Threaded Mount



For lenses with filter threads; Mount Sizes M13.25 - M82

Part #	Thread Dia x Pitch	Part #	Thread Dia x Pitch
DB475/850-13.25	M13.25 x P0.5	DB475/850-43	M43 x P0.75
DB475/850-22.5	M22.5 x P0.5	DB475/850-46	M46 x P0.75
DB475/850-25.4	M25.4 x P32TPI	DB475/850-48	M46 x P0.75
DB475/850-25.5	M25.5 x P0.5	DB475/850-49	M49 x P0.75
DB475/850-27	M27 x P0.5	DB475/850-52	M52 x P0.75
DB475/850-30.5	M30.5 x P0.5	DB475/850-55	M55 x P0.75
DB475/850-34	M34 x P0.5	DB475/850-58	M58 x P0.75
DB475/850-35.5	M35.5 x P0.5	DB475/850-62	M62 x P0.75
DB475/850-37	M37 x P0.75	DB475/850-67	M67 x P0.75
DB475/850-37.5	M37.5 x P0.5	DB475/850-72	M72 x P0.75
DB475/850-39	M39 x P0.5	DB475/850-77	M77 x P0.75
DB475/850-40.5	M40 x P0.5	DB475/850-82	M82 x P0.75

### 25.4™ C-Mount



Threads between lens and sensor

Part #: DB475/850-25.4

### Slip Mount



- Designed for lenses without filter threads, varifocal and wide-angle lenses
- Includes locking set screws to secure adapter to lens

#### Create Part #

Use "S" and add the outside diameter of lens in mm (ex: 43mm)

Example: DB475/850-**S43**

### Unmounted

Custom shapes & sizes available

#### Create Part #

CIRCLE: Use "D" and add diameter in mm (ex: 19mm)

Example: DB475/850-**D19**

RECTANGLE: Use "R" and add length in mm (ex: 30mm) x width in mm (ex: 15mm)

Example: DB475/850-**R30x15**

SQUARE: Use "R" and add side measurement in mm (ex: 15mm)

Example: DB475/850-**R15**