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Ordering Information **ibc**

Fluorophore(s)

- Consult our Fluorophore Reference Table (pages 6 and 7) or the **Curvo-matic** on our website for excitation and emission spectra as well as recommended Omega filter sets.

Application

- What is most important in your application—bright signal, dark background, color discrimination, or high signal-to-noise? While no one design can optimize for all dimensions, many designs provide a solution that gives good overall performance.
- Does your application require customized reflection and transmission specifications for your dichroic?
- Does your application require “imaging quality” filters?

Light Source

- What is your light source—mercury, xenon, laser?
- Some filter sets will perform better with a given light source.

Detector

- Specify your detector—CCD, PMT, CMOS, film, eye.
- Detectors have wavelength specific sensitivity that may affect filter set performance.
- Filter set blocking strategies are designed to optimize performance for different detectors.

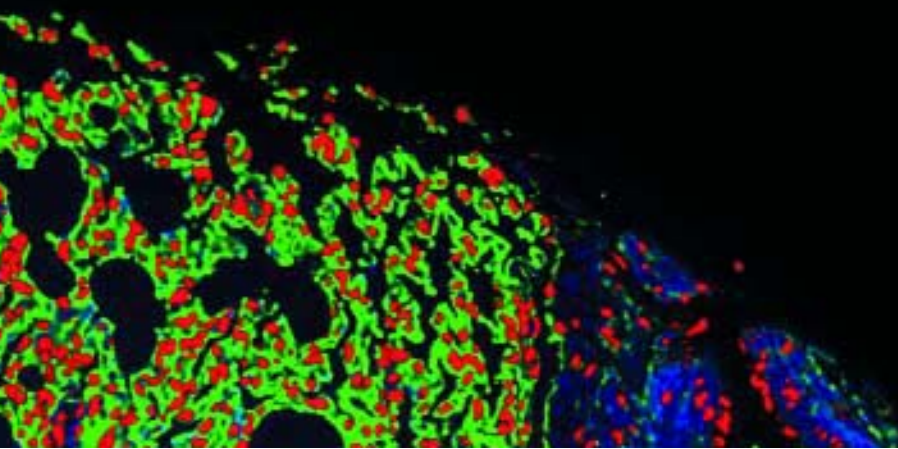
Microscope

- What is the make and model of your microscope, instrument, filter wheel, or slider? We manufacture filters to fit all available instruments and holders.
- We supply holders for most microscopes and also mount filters in customer supplied holders.
- Specify if filters are to be mounted in a filter holder.

Further Reading

If you would like more information on filter set selection, see the technical section of our website for pdf files of the below articles.

- “The Right Filter Set Gets the Most Out of a Microscope” from the January/February 1999 issue of *Biophotonics International*.
- “Optimize Your System with the Right Filter Set” from the November 2002 issue of *Biophotonics International*.



Filter Set Features

Filter Set General Features

- Designed for overall optimization of signal-to-noise, brightness, and multi-color discrimination.
- Excitation & emission bands optimized for color perception.
- Optimized for system speed of microscopes.
- Holders/cubes available to fit most microscopes.

Excitation Filter Features

- Bandpass placement maximizes excitation energy while minimizing emission band crossover.
- Blocking from UV to the limits of CCD detection (1150nm) to minimize background.
- Blocking design in some filters significantly increases filter life by reducing transmission where not needed.
- Designed for extreme heat tolerance.
- Protected high-phase thickness coatings for superior spectral control and environmental stability.

Dichroic Beamsplitter Features

- Steep cut-on slopes optimize excitation and emission performance while maximizing signal.
- Polished to precise specifications to minimize wavefront distortion for better reflection.
- Anti-reflection coatings to increase transmission and enhance image sharpness.
- Fused silica substrates for reduced auto-fluorescence.
- Surface coatings with high durability.

Emission Filter Features

- Bandpass/longpass placement maximizes emission signal while minimizing excitation band crossover.
- Polished to precise specifications to minimize wavefront distortion, beam deviation, and pixel shift.
- Anti-reflection coatings to increase transmission and reduce eyepiece back reflection.
- Standard thickness to minimize registration shift when switching filter sets.
- Blocking design optimized to maximize emission signal.

Zero Pixel Shift Sets

A selection of filter sets are available in a Zero Pixel Shift (ZPS) option for those demanding multi-labeling applications that require critical registration. To order, add ZPS to the filter set part number.

- The ALPHA Vivid ZPS sets are recommended for multi-color applications and result in better transmission and discrimination than traditional multi-band sets. (See page 9.)
- The M-FISH ZPS sets are recommended for applications such as M-FISH (fluorescence *in situ* hybridization), CGH (comparative genomic hybridization), SKY (spectral karyotyping), and co-localization studies. (See page 16.)

Filter Descriptions & Nomenclature

Excitation & Emission Filters

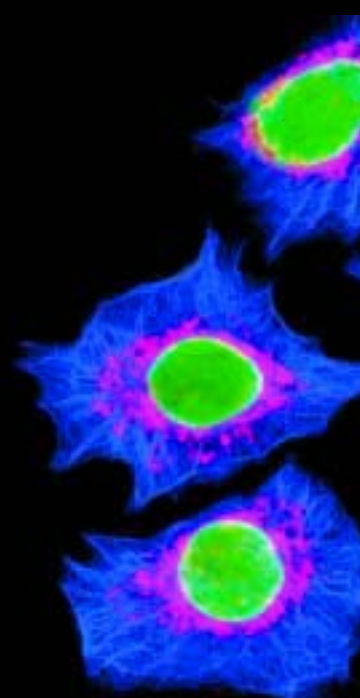


Note: FWHM or Full Width Half Maximum is defined as the bandwidth at 50% of the maximum transmission of the filter.

Filter Design

Bandpass filters vary in the steepness of their edges and the depth of the blocking outside the passband.

- **3RD**: 3RD Millennium Filter designs are manufactured using proprietary ALPHA technology and Omega's patent-pending hermetic assembly.
- **AF**: ALPHA Filter designs are manufactured using Omega's proprietary technology resulting in extremely steep edges, precise edge placement, and extremely high attenuation >OD 10.
- **DF**: Discriminating Filter designs have 6 or more interfering cavities, resulting in a bandpass filter with rectangular shape, very steep edges, and very deep blocking up to Optical Density (OD) 6 outside the passband.
- **WB**: Wide-Band Filter designs are 4 & 5 cavity designs with FWHM greater than 30nm and up to several hundred nanometers.
- **NB**: Narrow-Band Filter designs are 2-cavity designs with FWHM typically between 0.2 and 8nm.



Dichroic Beamsplitters



Note: Cut-On or cut-off wavelength is defined as the wavelength at which the dichroic is at 50% of its maximum transmission value. While defined by the cut-on or cut-off wavelength, the wavelength ranges of the reflection and transmission bands are more critical to dichroic performance.

Filter Design

Dichroics are used at non-normal angles of incidence (typically 45 degrees), highly reflecting one specified spectral region while optimally transmitting another.

- **LP**: Longpass designs transmit wavelengths longer than the cut-on and reflect a range of wavelengths shorter than the cut-on.
- **SP**: Shortpass designs transmit wavelengths shorter than the cut-off and reflect a range of wavelengths longer than the cut-off.
- **DC**: Dichroic designs provide wide regions of both transmission and reflection, exhibiting a high degree of polarization along with a somewhat shallow transition slope.
- **DR**: Dichroic Reflector designs provide a steep transition slope, low polarization, a wide region of transmission, and a limited region of reflection.
- **DCXR**: Dichroic designs that provide extended reflection regions.

Miscellaneous

- **DB**: Dual-band filter designs have two passbands and two rejection bands.
- **TB**: Triple-band filter designs have three passbands and three rejection bands.
- **AR**: Anti-reflection coatings are used on many filters to increase transmission and reduce back reflections.
- **OG**: Orange Glass is longpass absorption glass from Schott with varying spectral profiles.

Fluorophore Reference Table

This reference table contains the most common fluorophores along with recommendations for filter sets. For the most comprehensive and up-to-date fluorophore and filter set information check the [Curvomatic](#) on our website. The Curv-o-matic is an interactive database of fluorophore absorption and emission spectra, along with filter set recommendations and accompanying filter spectral curves. Filter set data is available as downloadable ASCII files.

Key: **Red** = ALPHA Vivid sets (page 9) **Blue** = Vivid Plus sets (page 10) **Purple** = Vivid Standard sets (page 11)
Teal = Vivid Classic sets (page 12) **Black** = special application sets

Fluorophore	EX	EM	Recommended XF Part #	Alternative XF Part #
Acridine orange (+DNA)	500	526	104	105
Acridine orange (+RNA)	460	650	21	19
Alexa Fluor® 350	347	442	06	02, 03, 05
Alexa Fluor® 430	434	540	14	15
Alexa Fluor® 488	495	519	100	22, 23, 25, 115, 202
Alexa Fluor® 532	531	554	104	30, 99, 105, 203
Alexa Fluor® 546	556	573	108	32, 34, 37, 38, 101, 204
Alexa Fluor® 555	553	568	108	32, 33, 34, 37, 38, 101
Alexa Fluor® 568	579	604	102	40, 41, 207
Alexa Fluor® 594	591	618	102	40, 41, 42, 43, 207
Alexa Fluor® 633	632	647	140	46
Alexa Fluor® 647	653	669	110, 140	46, 47, 208
Alexa Fluor® 660	663	690	141	47, 70
Alexa Fluor® 680	679	702	141	48
Alexa Fluor® 700	702	723	142	
Alexa Fluor® 750	749	775	143	
Allophycocyanin (APC)	650	660	110	44, 45, 70
AMCA / AMCA-X	345	445	06	02, 03, 05
7-Aminoactinomycin D (7-AAD)	546	647	103	34, 35, 36, 38, 101
7-Amino-4-methylcoumarin	351	430	06	02, 03, 05
Aniline Blue	370	509	09	08, 13
ANS	372	455	05	02
ATTO-TAG™ CBQCA	465	560	18, 19	
ATTO-TAG™ FQ	486	591	115	21
Auramine O-Feulgen	460	550	20, 71	19
BCECF	503	528	16	
BFP (Blue Fluorescent Protein)	382	448	131	129
BFP / EGFP FRET	382	508	89	
BOBO™-1, BO-PRO™-1	462	481	114	130
BOBO™-3, BO-PRO™-3	570	604	102	40, 41, 42
BODIPY® FL	505	513	100	22, 23, 25, 115
BODIPY® TMR	542	574	108	32, 33, 34, 37, 38, 101, 204
BODIPY® TR-X	589	617	102	40, 41, 42, 43, 204
BODIPY® 530/550	533	550	108	30, 101
BODIPY® 558/568	558	568	108	32, 33, 34, 38, 101
BODIPY® 564/570	564	570	108	32, 33, 34, 101
BODIPY® 581/591	582	590	102	39, 40
BODIPY® 630/650-X	630	650	45	46
BODIPY® 650/665-X	650	665	110	47, 70, 208
BTC	401/464	529	133	
Calcein	494	517	100	22, 23, 25, 115
Calcein Blue	375	420	06	02, 03, 05
Calcium Crimson™	590	615	102	40, 41, 42, 43
Calcium Green-1™	506	531	104	23, 25, 30, 105
Calcium Orange™	549	576	108	32, 33, 34, 37, 38, 101

Fluorophore	EX	EM	Recommended XF Part #	Alternative XF Part #
Calcofluor® White	350	440	06	02, 03, 05
5-Carboxyfluorescein (5-FAM)	492	518	100	22, 23, 25, 115
5-Carboxynaphthofluorescein	598	668	102	44, 45
6-Carboxyrhodamine 6G	525	555	104	30, 105
5-Carboxytetramethylrhodamine (5-TAMRA)	542	568	108	32, 33, 34, 37, 38, 101, 204
Carboxy-X-rhodamine (5-ROX)	574	602	102	39, 40, 41
Cascade Blue®	400	420	06	10, 11, 13
Cascade Yellow™	402	545	106	13, 14, 76
CCF2 (GeneBLAzer™)	402	520	106, 124	
CFP (Cyan Fluorescent Protein)	434	477	114	130, 201
CFP / DsRed2 FRET	434	583	152	
CFP / YFP FRET	434	527	88	
Chromomycin A3	450	470	114	13, 130
Cl-NERF (low pH)	504	540	104	16, 30, 105
CPM	385	471	11	10
6-CR 6G	518	543	104	30, 105
CryptoLight CF-2	584/642	657	44	45
CryptoLight CF-5	566	597	39	
CryptoLight CF-6	566	615	42	
CTC Formazan	450	630	21	
Cy2®	489	506	100	22, 23, 25, 115, 202
Cy3®	550	570	108	32, 33, 34, 37, 38, 101, 204
Cy3.5®	581	596	102	40, 41, 206
Cy5®	649	670	110	45, 46, 47, 70, 208
Cy5.5®	675	694	141	48, 138, 210
Cy7®	743	767	143	
Dansyl cadaverine	335	518	02, 05	08
Dansylchloride	380	475	10	13
DAPI	358	461	06	02, 03, 05,
Dapoxyl®	373	574	05	08
DiA (4-Di-16-ASP)	491	613	21	18, 115
DiD (DiIC ₁₆ (5))	644	665	110	45, 47, 70
DIDS	341	414	03	02
DiI (DiIC ₁₆ (3))	549	565	108	32, 33, 34, 37, 38, 101
DIO (DiOC ₁₆ (3))	484	501	100	22, 23, 25, 115
DiR (DiIC ₁₆ (7))	750	779	143	
Di-4 ANEPPS	488	605	21	17
Di-8 ANEPPS	468	635	21	17
DM-NERF (4.5–6.5 pH)	510	536	104	16, 30, 105
DsRed2 (Red Fluorescent Protein)	558	583	108	101, 111, 151
ELF® -97 alcohol	345	530	09	02, 05, 08
Eosin	524	544	104	30, 105
Erythrosin	529	554	104	30, 105
Ethidium bromide	518	605	103	28, 34, 35, 38
Ethidium homodimer-1 (EthD-1)	528	617	103	28, 34, 35, 38

Fluorophore	EX	EM	Recommended XF Part #	Alternative XF Part #
Europium (III) Chloride	337	613	02	08
5-FAM (5-Carboxyfluorescein)	492	518	100	22, 23, 25, 115
Fast Blue	365	420	06	02, 03, 05
Fluorescein (FITC)	494	518	100	22, 23, 25, 115
Fluo-3	506	526	104	105
Fluo-4	494	516	100	115
FluorX®	494	519	100	22, 23, 25, 115
Fluoro-Gold™ (high pH)	368	565	09	02, 05, 08
Fluoro-Gold™ (low pH)	323	408	05	02
Fluoro-Jade	475	525	100	22, 23, 25, 115
FM® 1-43	479	598	115	25
Fura-2	335	505	04	
Fura-2 / BCECF	335/503	505/528	79	
Fura Red™	436	637	17	18, 77
Fura Red™ / Fluo-3	472/506	672/527	26	105
GeneBLAzer™ (CCF2)	402	520	124	106
EGFP	488	508	116	100, 115
GFP (sapphire)	395	508	76	
EGFP / DsRed FRET	470	585	151	
HcRed	591	613	102	
Hoechst 33342 & 33258	352	461	06	02, 03, 05
7-Hydroxy-4-methylcoumarin (pH 9)	360	449	06	02, 03, 05
1,5 IAEDANS	336	482	02	
Indo-1	330	401	07	
JC-1	498/593	525/595	115	26
6-JOE	525	555	104	30, 105
JOJO™-1, JO-PRO™-1	529	545	104	101, 105
Lissamine rhodamine B	570	590	102	32, 40, 41
LOLO™-1, LO-PRO™-1	565	579	39	
Lucifer Yellow	428	536	14	15, 77
LysoSensor™ Blue (pH 5)	374	424	113	05, 06, 10, 129
LysoSensor™ Green (pH 5)	442	505	14	15, 71, 77
LysoSensor™ Yellow/Blue (pH 4.2)	384	540	129	04, 07, 08, 13
LysoTracker® Green	504	511	104	22, 23, 25, 105
LysoTracker® Red	577	592	102	40, 41
LysoTracker® Yellow	465	535	18	19
Mag-Fura-2	330	491	04	
Mag-Indo-1	330	417	07	
Magnesium Green™	506	531	104	105
Marina Blue®	365	460	06	02, 03, 05
4-Methylumbelliferone	360	449	06	02, 03, 05
Mithramycin	395	535	14	15
MitoTracker® Green	490	516	100	22, 23, 25, 115
MitoTracker® Orange	551	576	108	32, 33, 34, 37, 38, 101
MitoTracker® Red	578	599	102	40, 41
NBD	465	535	18	19
Nile Red	549	628	103	34, 35, 38, 39
Oregon Green® 488	496	524	100	22, 23, 25, 115
Oregon Green® 500	503	522	104	105
Oregon Green® 514	511	530	104	105
Pacific Blue™	410	455	119	11
PBF1	334	504	04	
C-phycoerythrin	620	648	45	44, 46
R-phycoerythrin	618	642	102	43, 44
R-phycoerythrin (PE)	565	575	108	32, 33, 34, 37, 38, 101
PKH26	551	567	108	32, 33, 34, 37, 38, 101
POPO™-1, PO-PRO™-1	434	456	114	130
POPO™-3, PO-PRO™-3	534	572	108	32, 34, 37, 38, 101

Fluorophore	EX	EM	Recommended XF Part #	Alternative XF Part #
Propidium Iodide	536	617	103	34, 35
PyMPO	415	570	15	
Pyrene	345	378	02	
Pyronin Y	555	580	108	32, 34, 37, 38, 101
Qdot™ 525 Conjugate	UV	525	300, 301	
Qdot™ 565 Conjugate	UV	565	300, 302	
Qdot™ 585 Conjugate	UV	585	300, 303	
Qdot™ 605 Conjugate	UV	605	300, 304	
Qdot™ 655 Conjugate	UV	655	300, 305	
Qdot™ 705 Conjugate	UV	705	300, 306	
Qdot™ 800 Conjugate	UV	800	300, 307	
Quinacrine Mustard	423	503	14	15
Resorufin	570	585	102	37, 38, 39, 40
Red Fluorescent Protein (DsRed2)	561	585	108	101
RH 414	500	635	103	21, 25, 30
Rhod-2	550	571	108	101
Rhodamine B	555	580	108	32, 33, 34, 37, 38, 39, 101
Rhodamine Green™	502	527	104	105
Rhodamine Red™	570	590	102	39, 40, 41
Rhodamine Phalloidin	542	565	108	34, 37, 38, 101
Rhodamine 110	496	520	100	22, 23, 25, 115
Rhodamine 123	507	529	104	105
5-ROX (carboxy-X-rhodamine)	574	602	102	39, 40, 41
SBF1	334	525	04	
SensiLight P1	550	664	36	
SensiLight P3	609	661	45	
SITS	337	436	03	02
SNAFI®-1	576	635	29	
SNAFI®-2	525	546	29	
SNARF®-1	575	635	72	30, 31, 40
Sodium Green™	507	535	104	105
SpectrumAqua®	433	480	201	12, 13, 114, 130
SpectrumBlue®	400	450	06	11
SpectrumGold®	530	555	203	
SpectrumGreen®	497	524	202	22, 23, 25, 100, 115, 144
SpectrumOrange®	559	588	204	32, 33, 34, 37, 38, 39, 101, 108, 146
SpectrumRed®	587	612	207	40, 41, 42, 102
SpectrumFRed®	655	675	208	147
SYTO® 11	508	527	104	105
SYTO® 13	488	509	100	22, 23, 25, 115
SYTO® 17	621	634	44	
SYTO® 45	452	484	114	130
SYTOX® Blue	445	470	114	13, 130
SYTOX® Green	504	523	104	105
SYTOX® Orange	547	570	108	32, 33, 34, 37, 38, 101
5-TAMRA (5-Carboxytetramethylrhodamine)	542	568	108	32, 33, 34, 37, 38, 101
Tetramethylrhodamine (TRITC)	555	580	108	32, 33, 34, 37, 38, 40, 101
Texas Red® / Texas Red®-X	595	615	102	42, 43
Thiadicarbocyanine	651	671	47	46
TOTO®-1, TO-PRO®-1	514	533	104	30, 105
TOTO®-3, TO-PRO®-3	642	660	110	45, 46, 47
TO-PRO®-5	748	768	143	
WW 781	605	639	45	
X-Rhodamine (XRITC)	580	605	102	39, 40, 41
YFP (Yellow Fluorescent Protein)	513	527	104	105
YOYO®-1, YO-PRO®-1	491	509	100	22, 23, 25, 115
YOYO®-3, YO-PRO®-3	612	631	102	43

3RD Millennium Sets

Our patent-pending 3RD Millennium filters offer the advantages of surface coatings, along with the benefits of extreme phase thickness coatings and automated manufacturing. At the heart of each filter is a hermetically-sealed assembly which protects the dielectric coatings and eliminates the environmental instability of surface coatings. The physical assembly eliminates polymer adhesives, minimizing the potential for photodamage and thermal instability. The result is longer filter life, increased transmission, reduced parasitic fluorescence and significantly reduced Transmitted Wavefront Distortion (TWD). The 3RD Millennium line incorporates CNC, robotics, and refined process resulting in a high degree of manufacturing consistency.

Application

Highest performance sets for seven common fluorophores

Design Features

Manufactured using Omega's patent-pending hermetic assembly and proprietary ALPHA technology for superior performance and longer filter life. 25mm standard ring size only.

Excitation Filters

3RD Millennium assembly and ALPHA bandpass designs

Dichroic Beamsplitters

Hard-surface and AR coated

Emission Filters

3RD Millennium assembly and ALPHA bandpass designs

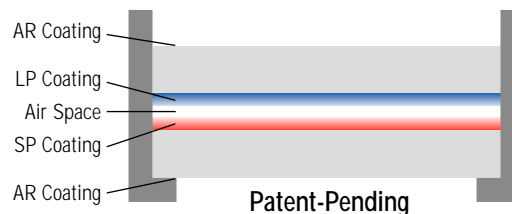
Set #	Fluorophores	Components	
		Type	Part #
3RD-F1	DAPI	Exciter Dichroic Emitter IR Blocker	XF1005 (365WB50) XF2001 (400DCLP) 3RD/434-485 3RD/B10
3RD-F2	CFP	Exciter Dichroic Emitter IR Blocker	3RD/401-451 XF2034 (455DRLP) 3RD/471-500 3RD/B10
3RD-F3	FITC, EGFP	Exciter Dichroic Emitter IR Blocker	3RD/455-504 XF2010 (505DRLP) 3RD/510-560 3RD/B10
3RD-F4	YFP	Exciter Dichroic Emitter IR Blocker	3RD/485-515 XF2030 (525DRLP) 3RD/525-560 3RD/B10
3RD-F5	TRITC	Exciter Dichroic Emitter IR Blocker	3RD/505-555 XF2017 (560DRLP) 3RD/570-650 3RD/B11
3RD-F6	Texas Red®	Exciter Dichroic Emitter IR Blocker	3RD/535-590 XF2029 (595DRLP) 3RD/607-695 3RD/B11
3RD-F7	Cy5®	Exciter Dichroic Emitter IR Blocker	3RD/570-645 XF2072 (650DRLP) 3RD/660-730 3RD/B11

Microscope Compatibility: 25mm standard ring fits the following microscopes: Nikon Eclipse: Olympus IX, BX; Zeiss Axio Sliders, Turret, and Plus

Filter Specifications: Assembly Diameter: 25mm Assembly Thickness: 5.5mm Substrates: SiO₂ with a broadband anti-reflection coating

Note on IR Blocker: An additional filter may be required to extend attenuation to the limits of the detector (1150nm for silicon) and to reduce the heat load on the optical system. Many lamp housings and detectors have existing filters to remove long wavelength energy.

Standard Blocker Sizes: 18mm, 25mm, and 32mm. Please specify size when ordering. Custom sizes are available.



Patent-pending Assembly

- Improved Filter Life
- Improved Environmental Stability
- Fused Silica Substrates

Optical Epoxy Eliminated

- Reduced Auto-Fluorescence
- Improved Parallelism and Flatness
- Improved Heat Tolerance

ALPHA Filter Components

- More Accurate Band Placement
- Steeper Edge Slopes
- Higher-Throughput

Product #	Fluorophores	Application	Components		
			Type	Part #	Description
XF100-2 *	EGFP, Fluorescein (FITC) Alexa Fluor® 488 Cy2®, DiO, Fluo-4	See XF115-2 for longpass emitter	Exciter Dichroic Emitter	XF1073 XF2010 XF3084	475AF40 505DRLP 535AF45
XF100-3	EGFP, Fluorescein (FITC) Alexa Fluor® 488 Cy2®, DiO, Fluo-4	See XF115-2 for longpass emitter	Exciter Dichroic Emitter	XF1087 XF2077 XF3105	470AF50 500DRLP 545AF75
XF101-2	TRITC Cy3®, Alexa Fluor® 555 MitoTracker® Orange	See XF108-2 for bandpass emitter	Exciter Dichroic Emitter	XF1074 XF2017 XF3085	525AF45 560DRLP 565ALP
XF102-2 *	Texas Red® / Texas Red®-X Cy3.5® MitoTracker® Red		Exciter Dichroic Emitter	XF1067 XF2029 XF3081	560AF55 595DRLP 645AF75
XF103-2	Propidium Iodide Ethidium bromide Nile Red		Exciter Dichroic Emitter	XF1074 XF2016 XF3081	525AF45 560DCLP 645AF75
XF104-2 *	YFP Rhodamine Green™ Alexa Fluor® 532	See XF105-2 for longpass emitter	Exciter Dichroic Emitter	XF1068 XF2030 XF3074	500AF25 525DRLP 545AF35
XF105-2	YFP Rhodamine Green™ Alexa Fluor® 532	See XF104-2 for bandpass emitter	Exciter Dichroic Emitter	XF1068 XF2030 XF3082	500AF25 525DRLP 530ALP
XF108-2 *	TRITC, Alexa Fluor® 555 Cy3®, DsRed2 MitoTracker® Orange	See XF101-2 for longpass emitter	Exciter Dichroic Emitter	XF1074 XF2017 XF3083	525AF45 560DRLP 595AF60
XF110-2 *	Cy5®, Alexa Fluor® 647 APC (allophycocyanin) DiD (DiIC ₁₈ (5))		Exciter Dichroic Emitter	XF1069 XF2035 XF3076	630AF50 650DRLP 695AF55
XF111-2	DsRed2		Exciter Dichroic Emitter	XF1077 XF2015 XF3089	540AF30 570DRLP 575ALP
XF114-2 *	CFP SpectrumAqua®	See XF130-2 for longpass emitter	Exciter Dichroic Emitter	XF1071 XF2034 XF3075	440AF21 455DRLP 480AF30
XF115-2	EGFP, Cy2® Fluorescein (FITC) Alexa Fluor® 488	See XF100-3, XF100-2 for bandpass emitter	Exciter Dichroic Emitter	XF1073 XF2010 XF3086	475AF40 505DRLP 510ALP
XF116-2 *	EGFP Fluorescein (FITC) Alexa Fluor® 488, Cy2®	For multiple labeling with DsRed2	Exciter Dichroic Emitter	XF1072 XF2037 XF3080	475AF20 500DRLP 510AF23
XF119-2	Pacific Blue™		Exciter Dichroic Emitter	XF1076 XF2040 XF3078	400AF30 435DRLP 465AF30
XF129-2	BFP LysoSensor™ Blue (pH 5)	See XF113-2 for bandpass emitter	Exciter Dichroic Emitter	XF1075 XF2004 XF3088	387AF28 410DRLP 435ALP
XF130-2	CFP SpectrumAqua®	See XF114-2 for bandpass emitter	Exciter Dichroic Emitter	XF1071 XF2034 XF3087	440AF21 455DRLP 480ALP
XF138-2	Alexa Fluor® 660 / 680 Cy5.5®	Red Diode & HeNe lasers	Exciter Dichroic Emitter	XF1085 XF2075 XF3104	680ASP 690DRLP 690ALP
XF140-2	Alexa Fluor® 633 / 647 Cy5®	Hg arc lamp	Exciter Dichroic Emitter	XF1082 XF2072 XF3076	607AF75 650DRLP 695AF55
XF141-2	Cy5.5®		Exciter Dichroic Emitter	XF1095 XF2082 XF3113	655AF50 692DRLP 710AF40
XF142-2	Alexa Fluor® 700		Exciter Dichroic Emitter	XF1096 XF2083 XF3114	685AF30 708DRLP 730AF30
XF143-2	Alexa Fluor® 750 Cy7®		Exciter Dichroic Emitter	XF1097 XF2084 XF3115	730AF45 760DRLP 770ALP

* **Zero Pixel Shift (ZPS) Sets:** A selection of filter sets are available in a Zero Pixel Shift (ZPS) option for those demanding multi-labeling applications that require critical registration. To order add ZPS to the filter set part number. There is an additional charge of \$100 for this option. The ALPHA Vivid ZPS sets are recommended for multi-color applications and result in better transmission and discrimination than traditional multi-band sets.

Application

High signal-to-noise imaging applications

Design Features

ALPHA Technology excitation and emission filters provide steep edges, increased blocking, and reduced auto-fluorescence

Excitation Filters

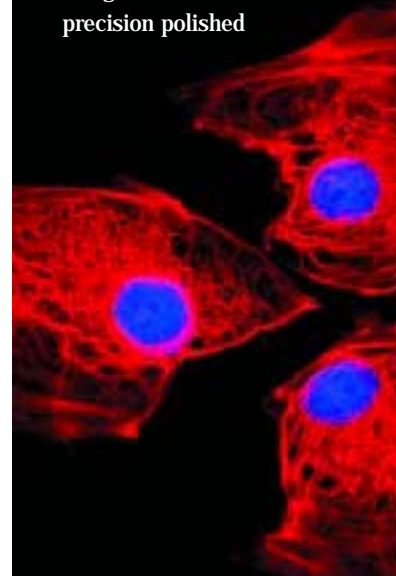
ALPHA bandpass designs

Dichroic Beamsplitters

Hard-surface & AR coated

Emission Filters

ALPHA bandpass/longpass designs are AR coated and precision polished



Vivid Plus Sets

Application

Bright signal & low auto-fluorescence for most fluorophores

Design Features

ALPHA Technology emission filters provide steep edges, increased blocking, and reduced auto-fluorescence

Excitation Filters

Bandpass designs

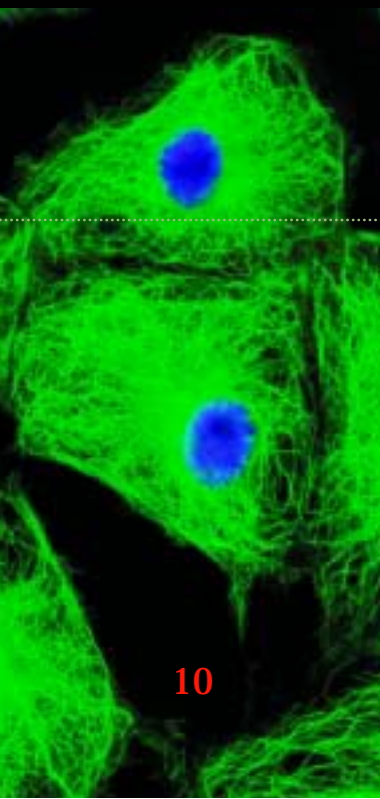
Dichroic Beamsplitters

Hard-surface & AR coated

Emission Filters

ALPHA bandpass/longpass designs are AR coated and precision polished

Product #	Fluorophores	Application	Components		
			Type	Part #	Description
XF02-2	DAPI Hoechst 33342 & 33258 AMCA / AMCA-X	Wide band exciter	Exciter Dichroic Emitter	XF1001 XF2001 XF3097	330WB80 400DCLP 400ALP
XF05-2	DAPI Hoechst 33342 & 33258 AMCA / AMCA-X	Good with mercury arc lamp	Exciter Dichroic Emitter	XF1005 XF2001 XF3097	365WB50 400DCLP 400ALP
XF13-2	Cascade Yellow™ SpectrumAqua® SYTOX® Blue		Exciter Dichroic Emitter	XF1008 XF2040 XF3091	405DF40 435DRLP 460ALP
XF14-2	Alexa Fluor® 430 Cascade Yellow™ Lucifer Yellow	Greener emission than XF15	Exciter Dichroic Emitter	XF1009 XF2007 XF3105	425DF45 475DCLP 545AF75
XF18-2	Fura Red™ (high calcium) DiA (4-Di-16-ASP)	Broad exciter	Exciter Dichroic Emitter	XF1012 XF2008 XF3093	455DF70 515DRLP 515ALP
XF19-2	Acridine orange (+RNA) Auramine O-Feulgen		Exciter Dichroic Emitter	XF1013 XF2008 XF3093	470DF35 515DRLP 515ALP
XF40-2	XRITC Cy3.5®, MitoTracker® Red SNARF®-1 (high pH), Alexa Fluor® 568 / 594		Exciter Dichroic Emitter	XF1022 XF2019 XF3094	560DF40 590DRLP 610ALP
XF48-2	Cy5.5® Alexa Fluor® 680	Non-visual detection	Exciter Dichroic Emitter	XF1028 XF2024 XF3095	670DF20 690DRLP 700ALP
XF77-2	Fura Red™, Lucifer Yellow LysoSensor™ Green (pH5)		Exciter Dichroic Emitter	XF1031 XF2027 XF3092	450DF55 485DRLP 500ALP
XF106-2	CCF2 (GeneBLAzer™)	Combines blue and green	Exciter Dichroic Emitter	XF1076 XF2040 XF3088	400AF30 435DRLP 435ALP
XF131	BFP, LysoSensor™ Blue (pH5)		Exciter Dichroic Emitter	XF1075 XF2004 XF3002	387AF28 410DRLP 450DF65



Set #	Fluorophores	Application	Components		
			Type	Part #	Description
XF01	Deep UV Combinations	Deep UV excitation/Near UV emission	Exciter Dichroic Emitter	XF1000 XF2000 XF3000	254WB25 290DCLP 330WB60
XF03	DAPI Hoechst 33342 & 33258 AMCA / AMCA-X	Wide band exciter	Exciter Dichroic Emitter	XF1001 XF2001 XF3002	330WB80 400DCLP 450DF65
XF06	DAPI Hoechst 33342 & 33258 AMCA / AMCA-X	Optimized for Hg Lamp	Exciter Dichroic Emitter	XF1005 XF2001 XF3002	365WB50 400DCLP 450DF65
XF09	Fluoro-Gold™ (high pH) Aniline Blue	Excellent for multiwavelength work in red	Exciter Dichroic Emitter	XF1005 XF2001 XF3007	365WB50 400DCLP 535DF35
XF10-2	Cascade Blue® LysoSensor™ Blue		Exciter Dichroic Emitter	XF1094 XF2001 XF3002	380AF15 400DCLP 450DF65
XF11	SpectrumBlue® Cascade Blue® CPM, Pacific Blue™	Good for Hg lamp	Exciter Dichroic Emitter	XF1006 XF2059 XF3002	400DF15 415DRLP 450DF65
XF20	Auramine	Narrow band emitter	Exciter Dichroic Emitter	XF1013 XF2008 XF3014	470DF35 515DRLP 560DF15
XF21	Acridine orange (+rRNA) Di-4 ANEPPS		Exciter Dichroic Emitter	XF1014 XF2009 XF3015	480DF60 550DCLP 635DF55
XF22	Fluorescein (FITC) Alexa Fluor® 488 Cy2®, BODIPY® FL	Lower bkgd than XF25	Exciter Dichroic Emitter	XF1099 XF2010 XF3017	485DF20 505DRLP 530DF30
XF23	Fluorescein (FITC) Alexa Fluor® 488 Cy2®, BODIPY® FL	Better photopic color rendition	Exciter Dichroic Emitter	XF1099 XF2010 XF3007	485DF20 505DRLP 535DF35
XF27	Fura Red™		Exciter Dichroic Emitter	XF1011 XF2009 XF3012	490DF20 550DCLP 660DF50
XF28	Ethidium homodimer-1 (EthD-1)		Exciter Dichroic Emitter	XF1080 XF2009 XF3019	510DF25 550DCLP 605DF50
XF32	TRITC, SpectrumOrange® Cy3®, MitoTracker® Orange Alexa Fluor® 555	Yellow emission	Exciter Dichroic Emitter	XF1019 XF2015 XF3024	535DF35 570DRLP 590DF35
XF33	TRITC, SpectrumOrange® Cy3®, MitoTracker® Orange Alexa Fluor® 555	Photomicrography	Exciter Dichroic Emitter	XF1019 XF2015 XF3019	535DF35 570DRLP 605DF50
XF35	Propidium Iodide Ethidium bromide Nile Red		Exciter Dichroic Emitter	XF1019 XF2016 XF3015	535DF35 560DCLP 635DF55
XF36	7-Aminoactinomycin D (7-AAD) SensiLight P-1		Exciter Dichroic Emitter	XF1019 XF2016 XF3029	535DF35 560DCLP 660DF32
XF37	TRITC, SpectrumOrange® Cy3®, Alexa Fluor® 555 MitoTracker® Orange	Optimized for Hg lamp	Exciter Dichroic Emitter	XF1020 XF2062 XF3022	546DF10 555DRLP 580DF30
XF39	Rhodamine B, Rhodamine Red™ X-Rhodamine (XRITC) Nile Red, CryptoLight CF-5		Exciter Dichroic Emitter	XF1021 XF2018 XF3025	550DF30 580DRLP 615DF45
XF41	Cy3.5® MitoTracker® Red	Orange emitter	Exciter Dichroic Emitter	XF1022 XF2019 XF3027	560DF40 590DRLP 610DF20
XF42	Texas Red®/Texas Red®-X SpectrumRed® Alexa Fluor® 594, CryptoLight CF-6		Exciter Dichroic Emitter	XF1022 XF2019 XF3015	560DF40 590DRLP 635DF55
XF43	Texas Red®/Texas Red®-X Alexa Fluor® 594		Exciter Dichroic Emitter	XF1044 XF2020 XF3028	575DF25 600DRLP 630DF30
XF44	APC (allophycocyanin) BODIPY® 630 / 650-X CryptoLight CF-2		Exciter Dichroic Emitter	XF1024 XF2021 XF3029	590DF45 630DRLP 660DF32

Application

Good overall performance and dark background for most fluorescent dyes

Design Features

High quality sets at affordable cost

Excitation Filters

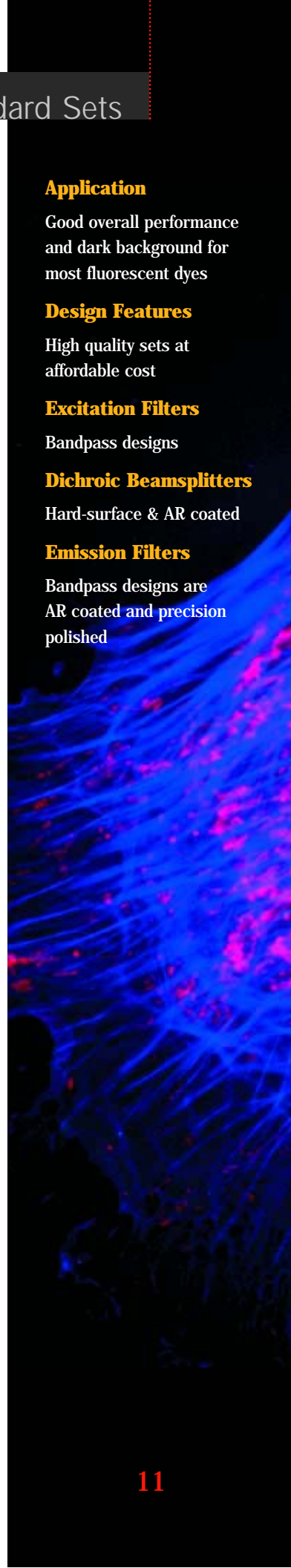
Bandpass designs

Dichroic Beamsplitters

Hard-surface & AR coated

Emission Filters

Bandpass designs are AR coated and precision polished



More Vivid Standard Sets

Set #	Fluorophores	Application	Components		
			Type	Part #	Description
XF45	APC (allophycocyanin) BODIPY® 630/650-X CryptoLight CF-2, SensiLight P-3		Exciter Dichroic Emitter	XF1025 XF2021 XF3030	610DF20 630DRLP 670DF40
XF46	Cy5® BODIPY® 630/650-X Alexa Fluor® 633/647	HeNe exciter	Exciter Dichroic Emitter	XF1026 XF2022 XF3030	633NB3.0 640DRLP 670DF40
XF47	Cy5® BODIPY® 630/650-X Alexa Fluor® 660	Non-visual (narrow emission)	Exciter Dichroic Emitter	XF1027 XF2035 XF3031	640DF20 650DRLP 682DF22
XF70	Cy5® BODIPY® 630/650-X Alexa Fluor® 660	Non-visual Broad excitation	Exciter Dichroic Emitter	XF1030 XF2023 XF3034	610DF70 660DRLP 690DF40
XF71	LysoSensor™ Green (pH 5) Auramine O-Feulgen		Exciter Dichroic Emitter	XF1031 XF2026 XF3007	450DF55 495DRLP 535DF35
XF76	GFP (sapphire) Cascade Yellow™		Exciter Dichroic Emitter	XF1008 XF2006 XF3003	405DF40 450DCLP 520DF40
XF99	Alexa Fluor® 532	Yellow emitter	Exciter Dichroic Emitter	XF1080 XF2012 XF3014	510DF25 540DRLP 560DF15
XF144	Spectrum Green®		Exciter Dichroic Emitter	XF1011 XF2008 XF3007	490DF20 515DRLP 535DF35
XF145	Spectrum Gold®		Exciter Dichroic Emitter	XF1019 XF2017 XF3022	535DF35 560DRLP 580DF30
XF146	Spectrum Orange®		Exciter Dichroic Emitter	XF1017 XF2018 XF3025	555DF27 580DRLP 615DF45
XF147	SpectrumFRed®		Exciter Dichroic Emitter	XF1027 XF2035 XF3034	640DF20 650DRLP 690DF40

Vivid Classic Sets

Set #	Fluorophores	Application	Components		
			Type	Part #	Description
XF08	Fluoro-Gold™ (high pH) LysoSensor™ Yellow/Blue (pH 3)	Brighter emission/bkgd than XF09	Exciter Dichroic Emitter	XF1005 XF2001 XF3006	365WB50 400DCLP 0G515
XF15	Alexa Fluor® 430 LysoSensor™ Green (pH 5) Quinacrine Mustard	Yellower emission than XF14	Exciter Dichroic Emitter	XF1009 XF2007 XF3006	425DF45 475DCLP 0G515
XF25	Fluorescein (FITC) Cy2®, Alexa Fluor® 488 BODIPY® FL	Not suitable for multicolor imaging	Exciter Dichroic Emitter	XF1099 XF2010 XF3018	485DF20 505DRLP 0G530
XF30	SpectrumGreen® #2 Alexa Fluor® 532 BODIPY® 530/550	Brighter emission/bkgd than XF99	Exciter Dichroic Emitter	XF1080 XF2012 XF3021	510DF25 540DRLP 0G550
XF34	TRITC, Cy3®, SpectrumOrange® MitoTracker® Orange Alexa Fluor® 555	Red emission	Exciter Dichroic Emitter	XF1019 XF2015 XF3016	535DF35 570DRLP 0G590
XF38	TRITC, Cy3®, SpectrumOrange® Alexa Fluor® 555 MitoTracker® Orange	Optimized for Hg Lamp	Exciter Dichroic Emitter	XF1020 XF2015 XF3016	546DF10 570DRLP 0G590

Application

Generally for single color imaging

Design Features

Good quality at lowest cost

Excitation Filters

Bandpass designs

Dichroic Beamsplitters

Hard-surface & AR coated

Emission Filters

Longpass Schott absorption glass designs are AR coated and precision polished

Omega Optical has an exclusive agreement with Quantum Dot Corporation for the development of filter sets optimized for the imaging of Qdot™ semi-conductor nanocrystals. These filter sets

Quantum Dot Sets

utilize emission filters centered on quantum dot emission center wavelengths. The result is bright signal and excellent signal-to-noise at an economical price, without utilizing more expensive, steep-edged filter components. This design strategy is possible as a result of the large Stokes shift inherent in quantum dot technology, differentiating it from filter set designs required for the closely spaced excitation and emission spectra of organic fluorophores.

Set #	Fluorophores	Components		
		Type	Part #	Description
XF300	Qdot™ All Conjugates	Exciter 1	XF1009	425DF45
		Exciter 2	XF1301	415WB100
		Dichroic	XF2007	475DCLP
		Emitter 1	XF3301	525WB20
		Emitter 2	XF3302	565WB20
		Emitter 3	XF3303	585WB20
		Emitter 4	XF3304	605WB20
		Emitter 5	XF3305	655WB20
		Emitter 6	XF3113	710AF40
XF301-1 or XF301-2	Qdot™ 525 Conjugate (Substitute Exciter 2 for Exciter 1)	Exciter 1	XF1009	425DF45
		Exciter 2	XF1301	415WB100
XF302-1 or XF302-2	Qdot™ 565 Conjugate (Substitute Exciter 2 for Exciter 1)	Dichroic	XF2007	475DCLP
		Emitter 2	XF3302	565WB20
XF303-1 or XF303-2	Qdot™ 585 Conjugate (Substitute Exciter 2 for Exciter 1)	Exciter 1	XF1009	425DF45
		Exciter 2	XF1301	415WB100
XF304-1 or XF304-2	Qdot™ 605 Conjugate (Substitute Exciter 2 for Exciter 1)	Dichroic	XF2007	475DCLP
		Emitter 4	XF3304	605WB20
XF305-1 or XF305-2	Qdot™ 655 Conjugate (Substitute Exciter 2 for Exciter 1)	Exciter 1	XF1009	425DF45
		Exciter 2	XF1301	415WB100
XF306-1 or XF306-2	Qdot™ 705 Conjugate (Substitute Exciter 2 for Exciter 1)	Dichroic	XF2007	475DCLP
		Emitter 6	XF3113	710AF40
XF307-1 or XF307-2	Qdot™ 800 Conjugate For single color (Substitute Exciter 2 for Exciter 1)	Exciter 1	XF1009	425DF45
		Exciter 2	XF1301	415WB100
XF308-1 or XF308-2	Qdot™ 800 Conjugate For multiplexing (Substitute Exciter 2 for Exciter 1)	Dichroic	XF2007	475DCLP
		Emitter 8	XF3308	840WB80
XF320	For simultaneous multi-color viewing to minimize DAPI	Exciter	XF1009	425DF45
XF02-2	For simultaneous multi-color viewing with Xenon excitation	Dichroic	XF2001	400DCLP
		Emitter	XF3097	400ALP
XF05-2	For simultaneous multi-color viewing with Hg excitation	Exciter	XF1005	365WB50
		Dichroic	XF2001	400DCLP
		Emitter	XF3097	400ALP

Application

For imaging all UV-excited QDot conjugates

Design Features

Sets include a choice of two exciters, a single dichroic, and emitters optimized for each QDot

Excitation Filters

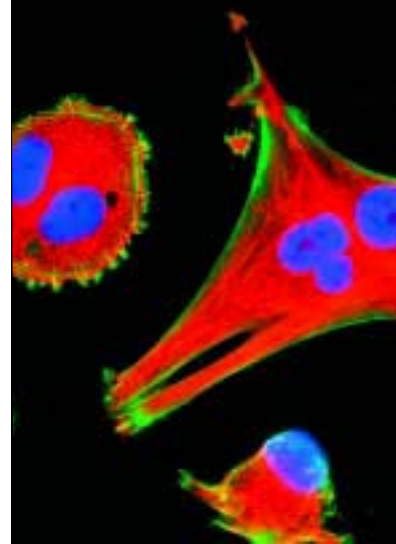
Wide-band excitation filter for maximum signal or narrower bandpass design to minimize photodamage

Dichroic Beamsplitters

Single dichroic functions for all colors

Emission Filters

Bandpass designs for high signal-to-noise and discrimination, are AR coated and precision polished



► Choose a fluorophore and a filter set using **Curvomatic**, our interactive database.

► Then simply order online.

See page 28.

Fluorescent Protein Sets

Omega Optical has developed filter sets exclusively for EGFP spectral mutants. Since their original cloning, these unique reporters have allowed researchers to visualize gene expression and intracellular protein localization in living cells. With the introduction of optimized spectral variants of fluorescent proteins, researchers now have the flexibility to use multiple fluorescent protein reporters.

Application

High signal-to-noise imaging applications

Design Features

ALPHA Technology excitation and emission filters provide steep edges, increased blocking, and reduced auto-fluorescence

Excitation Filters

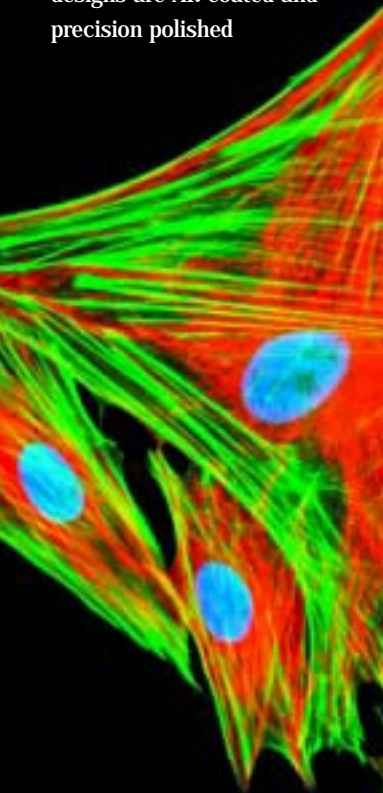
ALPHA bandpass designs

Dichroic Beamsplitters

Hard-surface & AR coated

Emission Filters

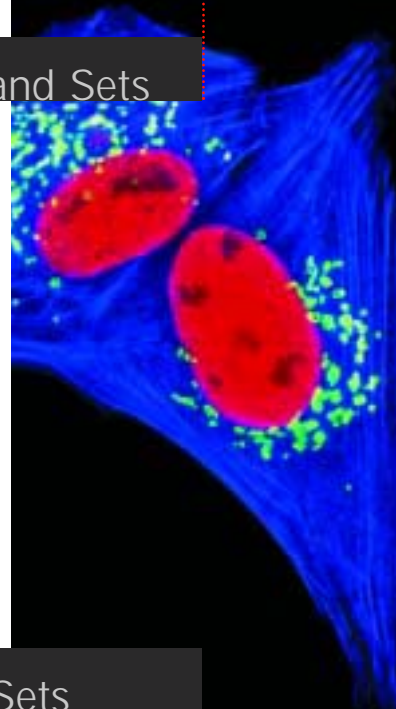
ALPHA bandpass/longpass designs are AR coated and precision polished



Set #	Fluorophores	Application	Components		
			Type	Part #	Description
EGFP					
XF100-2	EGFP, FITC, Cy2®, AlexaFluor® 488 DIO, Fluo-4	See XF115-2 for longpass emitter	Exciter Dichroic Emitter	XF1073 XF2010 XF3084	475AF40 505DRLP 535AF45
XF100-3	EGFP		Exciter Dichroic Emitter	XF1087 XF2077 XF3105	470AF50 500DRLP 545AF75
XF115-2	EGFP	Longpass Emitter	Exciter Dichroic Emitter	XF1073 XF2010 XF3086	475AF40 505DRLP 510ALP
XF116-2	EGFP set for minimizing intrinsic cellular auto-fluorescence		Exciter Dichroic Emitter	XF1072 XF2037 XF3080	475AF20 500DRLP 510AF23
GFP (sapphire)					
XF76	GFP (Sapphire)	UV Excitation	Exciter Dichroic Emitter	XF1008 XF2006 XF3003	405DF40 450DCLP 520DF40
BFP					
XF113-2	BFP		Exciter Dichroic Emitter	XF1075 XF2004 XF3073	387AF28 410DRLP 450AF58
XF129-2	BFP	Longpass Emitter	Exciter Dichroic Emitter	XF1075 XF2004 XF3088	387AF28 410DRLP 435ALP
CFP					
XF114-2	CFP	Bandpass Emitter	Exciter Dichroic Emitter	XF1071 XF2034 XF3075	440AF21 455DRLP 480AF30
XF130-2	CFP	Longpass Emitter	Exciter Dichroic Emitter	XF1071 XF2034 XF3087	440AF21 455DRLP 480ALP
YFP					
XF104-2	YFP	Bandpass Emitter	Exciter Dichroic Emitter	XF1068 XF2030 XF3074	500AF25 525DRLP 545AF35
XF105-2	YFP	Longpass Emitter	Exciter Dichroic Emitter	XF1068 XF2030 XF3082	500AF25 525DRLP 530ALP
DsRed2					
XF101-2	DsRed2	See XF108-2 for bandpass emitter	Exciter Dichroic Emitter	XF1074 XF2017 XF3085	525AF45 560DRLP 565ALP
XF108-2	DsRed2	See XF101-2 for longpass emitter	Exciter Dichroic Emitter	XF1074 XF2017 XF3083	525AF45 560DRLP 595AF60
XF111-2	DsRed2		Exciter Dichroic Emitter	XF1077 XF2015 XF3089	540AF30 570DRLP 575ALP
HcRed					
XF102-2	HcRed		Exciter Dichroic Emitter	XF1067 XF2029 XF3081	560AF55 595DRLP 645AF75

Fluorescent Protein Multi-band Sets

Set #	Fluorophores	Application	Components		
			Type	Part #	Description
XF50	BFP / EGFP	Dual Band	Exciter	XF1048	400-500DBEX
			Dichroic	XF2041	385-502DBDR
			Emitter	XF3054	460-550DBEM
XF52	EGFP / DsRed2	Dual Band	Exciter	XF1050	490-550DBEX
			Dichroic	XF2043	490-550DBDR
			Emitter	XF3056	520-580DBEM
XF154	CFP / YFP / DsRed2	Triple Band	Exciter	XF1100	436-495-582TBEX
			Dichroic	XF2090	445-510-600TBDR
			Emitter	XF3118	465-535-640TBEM
XF135	CFP / YFP	Dual Band	Exciter	XF1078	436-510DBEX
			Dichroic	XF2065	436-510DBDR
			Emitter	XF3099	475-550DBEM



Fluorescence Resonance Energy Transfer determines proximity in a sample. Using EGFP spectral mutants provides the ability to localize and monitor ion-binding and molecular protein-protein interactions in living cells.

FRET Sets

Set #	Fluorophores	Application	Components		
			Type	Part #	Description
XF88-2	CFP / YFP	FRET	Exciter	XF1071	440AF21
			Dichroic	XF2034	455DRLP
			Emitter 1	XF3075	480AF30
			Emitter 2	XF3079	535AF26
XF89-2	BFP / EGFP	FRET	Exciter	XF1005	365WB50
			Dichroic	XF2001	400DCLP
			Emitter 1	XF3002	450DF65
			Emitter 2	XF3084	535AF45
XF151-2	EGFP / DsRed2	FRET	Exciter	XF1072	475AF20
			Dichroic	XF2037	500DRLP
			Emitter 1	XF3080	510AF23
			Emitter 2	XF3083	595AF60
XF152-2	CFP / DsRed2	FRET	Exciter	XF1071	440AF21
			Dichroic	XF2034	455DRLP
			Emitter 1	XF3075	480AF30
			Emitter 2	XF3022	580DF30

Application

For determining physical proximity

Design Features

Multiple emission filters

Excitation Filters

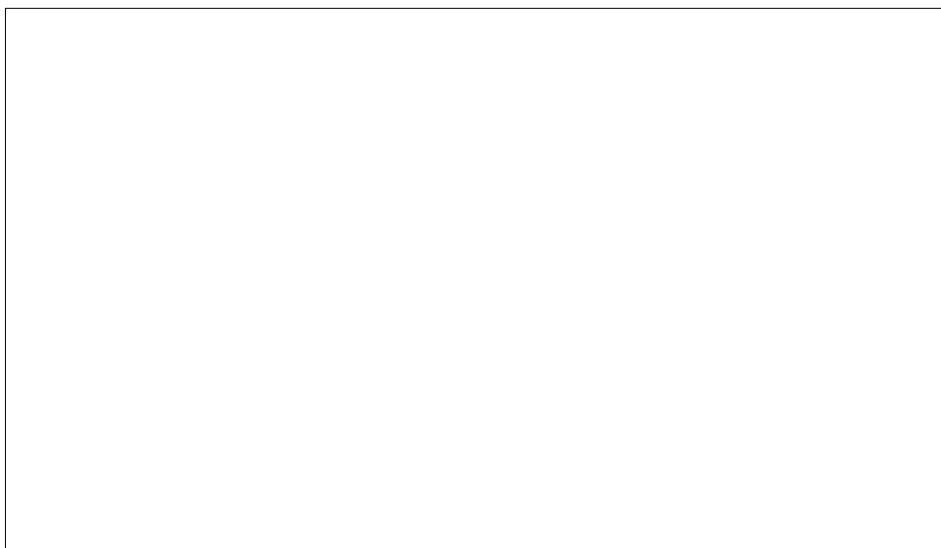
Bandpass designs

Dichroic Beamsplitters

Hard-surface and AR coated

Emission Filters

Bandpass designs



M-FISH Sets

M-FISH applications are utilizing an increasing number of probes. To maximize multi-color labeling, we have organized fluorophores into 10 different color groupings and designed sets for each group. Edges are steep and bandwidth is narrow allowing maximization of both emission energy and color discrimination. Recommended for CGH, SKY, and Co-localization studies.

Application

For maximizing multi-color labeling

Design Features

Filter edges are steep and bandwidth is narrow allowing maximization of both emission energy and color discrimination

Excitation Filters

Narrow bandpass designs to maximize discrimination

Dichroic Beamsplitters

Steep transition designs, hard-surface and AR coated

Emission Filters

Narrow bandpass designs to maximize discrimination

Set #	Fluorophores	Components		
		Type	Part #	Description
XF06 *	DAPI, AMCA, Cascade Blue® SpectrumBlue®	Exciter	XF1005	365WB50
		Dichroic	XF2001	400DCLP
		Emission	XF3002	450DF65
XF201 *	SpectrumAqua®, CFP, DEAC	Exciter	XF1201	436AF8
		Dichroic	XF2034	455DRLP
		Emission	XF3075	480AF30
XF202 *	SpectrumGreen®, FITC, EGFP, Cy2® Alexa Fluor® 488, Oregon Green® 488 Rhodamine Green™	Exciter	XF1202	485AF20
		Dichroic	XF2010	505DRLP
		Emission	XF3017	530DF30
XF203 *	SpectrumGold®, Alexa Fluor® 532 YFP	Exciter	XF1203	520AF18
		Dichroic	XF2203	545DRLP
		Emission	XF3302	565DF20
XF204 *	Cy3®, TRITC, Alexa Fluor® 546 5-TAMRA, BODIPY® TMR / X SpectrumOrange®	Exciter	XF1204	546AF10
		Dichroic	XF2062	555DRLP
		Emission	XF3022	580DF30
XF206 *	Cy3.5®	Exciter	XF1206	572AF15
		Dichroic	XF2019	590DRLP
		Emission	XF3020	620DF35
XF207 *	SpectrumRed®, Texas Red® Alexa Fluor® 568, BODIPY® TR / X Alexa Fluor® 594	Exciter	XF1207	580AF20
		Dichroic	XF2020	600DRLP
		Emission	XF3028	630DF30
XF208 *	Cy5®, BODIPY® 650 / 665-X Alexa Fluor® 647	Exciter	XF1208	640AF20
		Dichroic	XF2035	650DRLP
		Emission	XF3031	682DF22
XF210 *	Cy5.5®	Exciter	XF1210	665AF32
		Dichroic	XF2082	692DRLP
		Emission	XF3112	710AF40
XF143-2 *	Cy7®	Exciter	XF1097	730AF45
		Dichroic	XF2084	760DRLP
		Emission	XF3115	770ALP
XF231	DAPI / FITC / TRITC	Exciter 1	XF1005	365WB50
		Exciter 2	XF1006	400DF15
		Exciter 3	XF1099	485DF20
		Exciter 4	XF1045	560DF15
		Dichroic	XF2050	400-485-580TBDR
		Emission	XF3063	457-528-633TBEM
XF232	DAPI / FITC / Texas Red®	Exciter 1	XF1005	365WB50
		Exciter 2	XF1006	400DF15
		Exciter 3	XF1099	485DF20
		Exciter 4	XF1044	575DF25
		Dichroic	XF2045	385-485-560TBDR
		Emission	XF3058	460-520-602TBEM

* **Zero Pixel Shift (ZPS) Sets:** A selection of filter sets are available in a Zero Pixel Shift (ZPS) option for those demanding multi-labeling applications that require critical registration. To order add ZPS to the filter set part number. There is an additional charge of \$100 for this option. The M-FISH ZPS sets are recommended for applications such as M-FISH (fluorescence *in situ* hybridization), CGH (comparative genomic hybridization), SKY (spectral karyotyping), and co-localization studies.

The Kaede filter set for fluorescence real-time imaging employs an optical marking technique useful for studying cell dynamics. Fluorescence from Kaede, a coral protein, changes from bright green to bright red when exposed to UV light. This filter set accommodates both green and red fluorescences as well as UV conversion. Designed in collaboration with Atsushi Miyawaki (R. Ando, et al., PNAS, 99(20), 12651-12656 (2002)).

Kaede Set

Part #	Fluorophores	Components		
		Type	Part #	Description
XF153	Green to Red Conversion	Exciter Red	XF1072	475AF20
		Exciter Green	XF1021	550DF30
		Dichroic	XF2038	430DRLP
		Emitter Red	XF3017	530DF30
		Emitter Green	XF3089	575ALP
		Conversion Exciter-UV R to G	XF1401	380DF30
Conversion Dichroic-UV R to G	XF2001	400DCLP		

Application

For real-time imaging

Excitation Filters

Two filters in an excitation filter wheel.

Dichroic Beamsplitters

Remains the same for both red and green fluorescence.

Emission Filters

Two emission filters in an emission filter wheel

Conversion Filters

UV excitation and dichroic filters for green and red

The Sedat filter sets are recommended for multi-color applications and result in minimal image shift and increased signal-to-noise in comparison to standard multi-band and Pinkel sets. Single band excitation and emission filters are normally installed in automated filter wheels with a stationary multiband dichroic in the microscope, for quick color changes. These sets were first conceived by Dr. John Sedat at UCSF.

Sedat Sets

Part #	Fluorophores	Components		
		Type	Part #	Description
Dual Band				
XF156	FITC / TRITC	Exciter 1	XF1099	485DF20
		Exciter 2	XF1043	555DF10
		Dichroic	XF2043	490-550BBAR
		Emitter 1	XF3084	535AF45
		Emitter 2	XF3024	590DF35
Triple Band				
XF157	DAPI / FITC / TRITC	Exciter 1	XF1006	400DF15
		Exciter 2	XF1009	485DF20
		Exciter 3	XF1045	560DF15
		Dichroic	XF2050	400-485-580TBDR
		Emitter 1	XF3002	450DF65
		Emitter 2	XF3084	535AF45
Emitter 3	XF3025	615DF45		
Quad Band				
XF155	DAPI / FITC / TRITC / Cy5 [®] DAPI / FITC / TRITC / Alexa Fluor [®] 647	Exciter 1	XF1005	365WB50
		Exciter 2	XF1006	400DF15
		Exciter 3	XF1099	485DF20
		Exciter 4	XF1045	560DF15
		Exciter 5	XF1208	640AF20
		Dichroic	XF2046	400-485-558-640QBDR
		Emitter 1	XF3002	450DF65
		Emitter 2	XF3084	535AF45
		Emitter 3	XF3024	590DF35
		Emitter 4	XF3076	695AF55

Application

For multi-color imaging

Excitation Filters

Multiple single band filters in automated filter wheel.

Dichroic Beamsplitters

Stationary dichroic mounted in filter cube.

Emission Filters

Multiple single band filters in automated filter wheel

Ratio Imaging Sets

Single-dye sets are designed to achieve sensitive ratiometric measurements of indicator dyes and are divided into excitation and emission ratio imaging. For control measurement at dye's isosbestic point, please contact us.

Dual ratio imaging set is designed for simultaneous measurement of intracellular Ca⁺⁺ and pH. An extended-reflection longpass dichroic can accommodate dual exciters for both indicator dyes (Fura-2 and BCECF). Dichroic and emission filters are available individually for use with a monochromator.

Application

Ratiometric measurements of dyes

Design Features

Multiple excitation and multiple emission filter sets

Excitation Filters

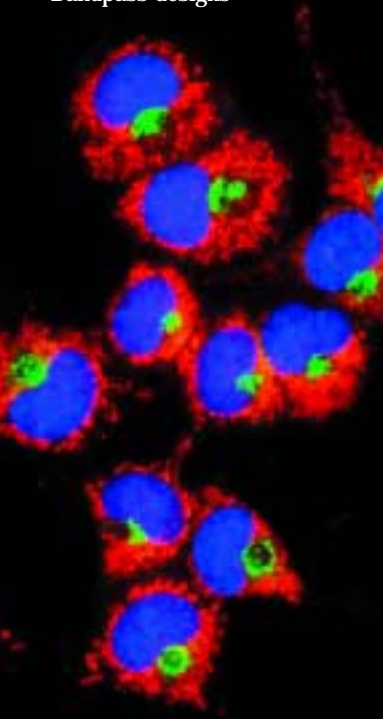
Bandpass designs

Dichroic Beamsplitters

Hard-surface and AR coated

Emission Filters

Bandpass designs



Set #	Fluorophores	Application	Components		
Single Dye Excitation Sets			Type	Part #	Description
XF04-2	Fura-2, Mag-Fura-2 PBFI, SBF1		Exciter 1	XF1093	340AF15
			Exciter 2	XF1094	380AF15
			Dichroic	XF2002	415DCLP
			Emitter	XF3043	510WB40
XF16	BCECF		Exciter 1	XF1071	440AF21
			Exciter 2	XF1011	490DF20
			Dichroic	XF2058	515DRLPXR
			Emitter	XF3011	535DF25
XF17	Fura Red™		Exciter 1	XF1071	440AF21
			Exciter 2	XF1011	490DF20
			Dichroic	XF2009	550DCLP
			Emitter	XF3012	660DF50
XF29	SNAFL [®] -1, SNAFL [®] -2		Exciter 1	XF1080	510DF25
			Exciter 2	XF1017	555DF27
			Dichroic	XF2011	585DRLP
			Emitter	XF3020	620DF35
XF133	BTC		Exciter 1	XF1006	400DF15
			Exciter 2	XF1099	485DF20
			Dichroic	XF2061	400-485DBDR
			Emitter	XF3011	535DF25
Single Dye Emission Sets					
XF07	Indo-1, Mag-Indo-1 LysoSensor™ Yellow/Blue (pH 4.2)		Exciter	XF1004	355HT15
			Dichroic 1	XF2003	390DRLP
			Dichroic 2	XF2006	450DCLP
			Emitter 1	XF3004	405DF43
			Emitter 2	XF3005	495DF20
XF26	BODIPY [®] FL-Ceramide, JC-1		Exciter	XF1099	485DF20
			Dichroic	XF2010	505DRLP
			Emitter 1	XF3016	OG590
			Emitter 2	XF3017	530DF30
XF31	SNARF [®] -1	Confocal	Exciter	XF1018	515NB2.0
			Dichroic 1	XF2013	540DCLP
			Dichroic 2	XF2014	610DRLP
			Emitter 1	XF3022	580DF30
			Emitter 2	XF3023	640DF35
XF72	SNARF [®] -1	Widefield	Exciter	XF1080	510DF25
			Dichroic 1	XF2013	540DCLP
			Dichroic 2	XF2014	610DRLP
			Emitter 1	XF3022	580DF30
			Emitter 2	XF3023	640DF35
XF124	GeneBLAzer™ (CCF2)		Exciter	XF1006	400DF15
			Dichroic	XF2059	415DRLP
			Emitter 1	XF3002	450DF65
			Emitter 2	XF3007	535DF35
			Dual Dye Set		
XF79-2	Fura-2 / BCECF		Exciter 1	XF1093	340AF15
			Exciter 2	XF1094	380AF15
			Exciter 3	XF1071	440AF21
			Exciter 4	XF1011	490DF20
			Dichroic	XF2031	505DRLPXR
			Emitter	XF3007	535DF35

Caged Compound sets use extended reflection dichroics to enable the use of an uncaging filter and an excitation filter with the same dichroic. Both filters are mounted in a motorized filter wheel in the excitation path so that imaging can follow immediately after uncaging.

Caged Compound Sets

Set #	Fluorophores	Components		
		Type	Part #	Description
XF73-2	FITC	Uncaging Exciter	XF1001	330WB80
		Dye Exciter	XF1073	475AF40
		Dichroic	XF2031	505DRLPXR
		Dye Emitter	XF3084	535AF45
XF74-2	TRITC	Uncaging Exciter	XF1001	330WB80
		Dye Exciter	XF1074	525AF45
		Dichroic	XF2032	565DRLPXR
		Dye Emitter	XF3085	565ALP
XF75	FITC / TRITC	Uncaging Exciter	XF1001	330WB80
		Dye Exciter	XF1050	490-550DBEX
		Dichroic	XF2039	485-555DBDR
		Dye Emitter	XF3056	520-580DBEM
Extended Reflection Dichroic Only				
	FITC	Extended Reflection Dichroic	XF2031	505DRLPXR
	TRITC	Extended Reflection Dichroic	XF2032	565DRLPXR
	FITC / TRITC	Dual Dichroic with UV Reflection	XF2039	485-555DBDR

Application

UV excitation uncages fluorophores for controlled viewing

Excitation Filters

All excitation filters mounted in motorized filter wheel

Dichroic Beamsplitters

Extended reflection design mounted in conventional filter holder

Emission Filters

Mounted in conventional filter holder

Multiphoton filters are used in conjunction with two- and three-photon IR laser excitation of fluorophores for imaging deeper into samples with minimal photobleaching and photo-damage to cells. Call us for custom designs.

Multiphoton Filters

Component		
Part #	Type	Description
XF2033	Dichroic	675DCSPXR
XF3100	Laser Blocking Filter	710ASP

Application

Used in conjunction with two- and three-photon IR laser

Dichroic Beamsplitters

Extended reflection shortpass designs for tunable laser applications

Emission Filters

Deep laser blocking designs

➤ Choose a fluorophore and a filter set using **Curvomatic**, our interactive database.

➤ Then simply order online.

See page 28.

Multi-band Sets

Multi-band sets are used for multiple labeling and simultaneous viewing of multiple fluorophores. Each exciter, dichroic, and emitter has multiple isolated passbands of excitation and emission energy. Stock sets include dual, triple, and quadruple bandpass designs, and are available for a variety of applications. Omega is the co-holder of the patent on all multi-band filter designs.

Application

Simultaneous viewing of multiple fluorophores

Design Features

Dual, triple, & quad bandpass designs

Excitation Filters

Multi-band designs with multiple passbands and rejection bands

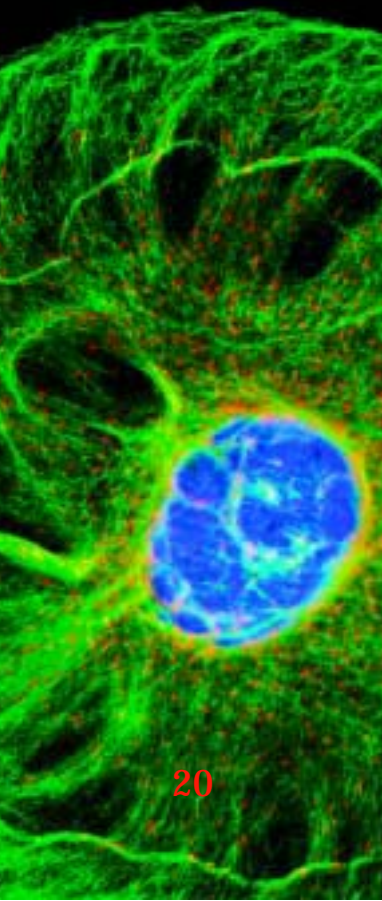
Dichroic Beamsplitters

Multi-band designs with multiple passbands and reflection bands

Emission Filters

Multi-band designs with multiple passbands and rejection bands

Set #	Fluorophores	Components		
Dual Band		Type	Part #	Description
XF50	DAPI / FITC BFP / EGFP	Exciter	XF1048	400-500DBEX
		Dichroic	XF2041	385-502DBDR
		Emitter	XF3054	460-550DBEM
XF51	FITC / APC	Exciter	XF1049	490-605DBEX
		Dichroic	XF2042	490-600DBDR
		Emitter	XF3055	522-637DBEM
XF52	FITC / TRITC EGFP / DsRed2	Exciter	XF1050	490-550DBEX
		Dichroic	XF2043	490-550DBDR
		Emitter	XF3056	520-580DBEM
XF53	FITC / Texas Red®	Exciter	XF1051	490-577DBEX
		Dichroic	XF2044	490-575DBDR
		Emitter	XF3057	528-633DBEM
XF59	DAPI / TRITC	Exciter	XF1054	390-520DBEX
		Dichroic	XF2047	395-540DBDR
		Emitter	XF3060	470-590DBEM
XF92	Cy3® / Cy5®	Exciter	XF1062	550-640DBEX
		Dichroic	XF2053	555-640DBDR
		Emitter	XF3066	595-700DBEM
XF135	CFP / YFP	Exciter	XF1078	436-510DBEX
		Dichroic	XF2065	436-510DBDR
		Emitter	XF3099	475-550DBEM
Triple Band				
XF56	DAPI / FITC / Texas Red®	Exciter	XF1052	390-486-577TBEX
		Dichroic	XF2045	400-485-580TBDR
		Emitter	XF3058	457-528-633TBEM
XF63	DAPI / FITC / Texas Red®	Exciter	XF1055	400-477-580TBEX
		Dichroic	XF2048	400-477-575TBDR
		Emitter	XF3061	445-525-650TBEM
XF66	DAPI / FITC / TRITC	Exciter	XF1057	385-485-560TBEX
		Dichroic	XF2050	385-485-560TBDR
		Emitter	XF3063	460-520-602TBEM
XF67	DAPI / FITC / Texas Red®	Exciter	XF1058	390-486-577TBEX
		Dichroic	XF2045	400-485-580TBDR
		Emitter	XF3058	457-528-633TBEM
XF68	DAPI / FITC / TRITC	Exciter	XF1059	386-485-560TBEX
		Dichroic	XF2050	385-485-560TBDR
		Emitter	XF3063	460-520-602TBEM
XF69	DAPI / FITC / Propidium Iodide	Exciter	XF1098	400-495-575TBEX
		Dichroic	XF2051	400-495-575TBDR
		Emitter	XF3116	470-530-620TBEM
XF93	FITC / Cy3® / Cy5®	Exciter	XF1063	485-555-650TBEX
		Dichroic	XF2054	485-555-650TBDR
		Emitter	XF3067	515-600-730TBEM
XF94	DAPI / Cy3® / Cy5®	Exciter	XF1064	415-535-630TBEX
		Dichroic	XF2055	400-535-635TBDR
		Emitter	XF3068	495-575-700TBEM
XF95	DAPI / FITC / Cy5®	Exciter	XF1065	400-510-630TBEX
		Dichroic	XF2056	390-510-630TBDR
		Emitter	XF3069	460-560-690TBEM
XF154	CFP / YFP / DsRed2	Exciter	XF1100	436-495-582TBEX
		Dichroic	XF2090	445-510-600TBDR
		Emitter	XF3118	465-535-640TBEM
Quad Band				
XF57	DAPI / FITC / TRITC / Cy5® DAPI / FITC / TRITC / Alexa Fluor® 647	Exciter	XF1053	405-490-555-650QBEX
		Dichroic	XF2046	400-485-558-640QBDR
		Emitter	XF3059	460-520-603-710QBEM



Pinkel sets, recommended for multi-color applications where discrimination is important, use a series of single exciters instead of multi-band excitation filters. The multiple excitation filters are mounted in a filter wheel or slider and are used in conjunction with multi-band dichroics and multi-band emission filters mounted in a cube to create composite images while minimizing registration shift that can result from changing single-dye sets. Developed in collaboration with Dr. Dan Pinkel at UCSF.

Pinkel Sets

Set #	Fluorophores	Components		
Dual Band		Type	Part #	Description
XF50-1	DAPI / FITC BFP / EGFP	Exciter 1	XF1006	400DF15
		Exciter 2	XF1099	485DF20
		Dichroic	XF2041	385-502DBDR
		Emitter	XF3054	460-550DBEM
XF52-1	FITC / TRITC Cy2 [®] / Cy3 [®] EGFP / DsRed2	Exciter 1	XF1099	485DF20
		Exciter 2	XF1043	555DF10
		Dichroic	XF2043	490-550DBDR
		Emitter	XF3056	520-580DBEM
XF53-1	FITC / Texas Red [®]	Exciter 1	XF1099	485DF20
		Exciter 2	XF1044	575DF25
		Dichroic	XF2044	490-575DBDR
		Emitter	XF3057	528-633DBEM
XF59-1	DAPI / TRITC	Exciter 1	XF1094	380AF15
		Exciter 2	XF1045	560DF15
		Dichroic	XF2047	395-540DBDR
		Emitter	XF3060	470-590DBEM
XF135-1	CFP / YFP	Exciter 1	XF1079	436DF10
		Exciter 2	XF1080	510DF25
		Dichroic	XF2065	436-510DBDR
		Emitter	XF3099	475-550DBEM
Triple Band				
XF63-1	DAPI / FITC / Texas Red [®]	Exciter 1	XF1006	400DF15
		Exciter 2	XF1099	485DF20
		Exciter 3	XF1044	575DF25
		Dichroic	XF2048	400-477-575TBDR
		Emitter	XF3061	445-525-650TBEM
XF67-1	DAPI / FITC / Texas Red [®] DAPI / Alexa Fluor [®] 488 / 546 DAPI / Cy2 [®] / Cy3 [®]	Exciter 1	XF1006	400DF15
		Exciter 2	XF1099	485DF20
		Exciter 3	XF1044	575DF25
		Dichroic	XF2045	400-485-580TBDR
		Emitter	XF3058	457-528-633TBEM
XF68-1	DAPI / FITC / TRITC DAPI / FITC / Cy3 [®]	Exciter 1	XF1006	400DF15
		Exciter 2	XF1099	485DF20
		Exciter 3	XF1045	560DF15
		Dichroic	XF2050	385-485-560TBDR
		Emitter	XF3063	460-520-602TBEM
XF69-1	DAPI / FITC / MitoTracker Red	Exciter 1	XF1006	400DF15
		Exciter 2	XF1099	485DF20
		Exciter 3	XF1044	575DF25
		Dichroic	XF2051	400-495-575TBDR
		Emitter	XF3116	470-530-620TBEM
XF93-1	FITC / Cy3 [®] / Cy5 [®] FITC / TRITC / Cy5 [®]	Exciter 1	XF1099	485DF20
		Exciter 2	XF1043	555DF10
		Exciter 3	XF1046	655DF30
		Dichroic	XF2054	485-555-650TBDR
		Emitter	XF3067	515-600-730TBEM
XF154-1	CFP / YFP / DsRed2	Exciter 1	XF1201	436AF8
		Exciter 2	XF1099	485DF20
		Exciter 3	XF1044	575DF25
		Dichroic	XF2090	455-510-600TBDR
		Emitter	XF3118	465-535-640TBEM
Quad Band				
XF57-1	DAPI / FITC / TRITC / Cy5 [®]	Exciter 1	XF1006	400DF15
		Exciter 2	XF1099	485DF20
		Exciter 3	XF1045	560DF15
		Exciter 4	XF1046	655DF30
		Dichroic	XF2046	400-485-558-640QBDR
		Emitter	XF3059	460-520-603-710QBEM

Application

For multi-color high discrimination applications.

Excitation Filters

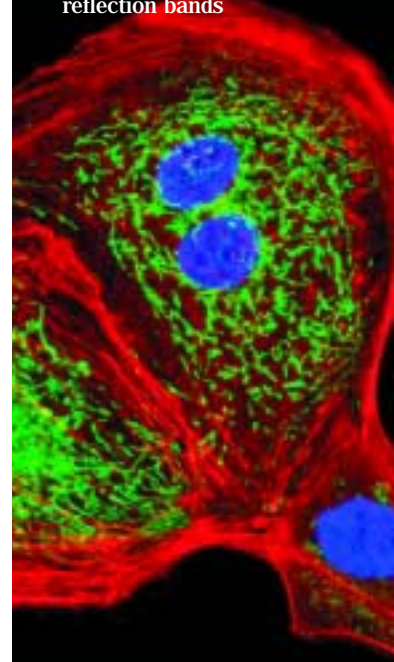
Multiple filters in filter wheel or slider

Dichroic Beamsplitters

Multi-band designs with multiple passbands and rejection bands

Emission Filters

Multi-band designs with multiple passbands and reflection bands



Filter Holders

Omega® Optical offers holders or cubes for the most common fluorescence microscopes offered by Leica, Nikon, Olympus, and Zeiss. We can mount filters either in a factory supplied holder or a customer supplied holder. In both cases, mounting is included in the price of the filter set. If it is determined that there is some difficulty involved in removing old filters from a customer supplied holder, there will be an additional mounting charge.

Set #	Microscope Manufacturer & Model	Exciter	Dichroic	Emitter
Nikon				
XC100	Original	18mm	18 x 26mm	18mm
XC101	Modified	20mm	18 x 26mm	22mm
XC102	Quadfluor	25mm	25.7 x 36mm	25mm
XC104	TE2000	25mm	25.7 x 36mm	25mm
Olympus				
XC110	IMT-2	22mm	21 x 29mm	20mm
XC111	BH2 (cube style—not barrel)	18mm	18 x 26mm	18mm
XC113	BX2 (BX, IX, AX)	25mm	25.7 x 36mm	25mm
XC114	CK-40	20mm	21 x 29mm	20mm
XC115	SZX-FL Stereo Exciter Holder (Holds 1 exciter filter)	25mm	N/A	N/A
XC116	SZX-FL Stereo Emission Holder (Holds 2 emission filters)	N/A	N/A	20mm
Leica				
XC120	Ploemopak	18mm	18 x 26mm	18mm
XC121	DM	22mm	21 x 29mm	22mm
XC122	DMIRB	20mm	18 x 26mm	20mm
XC123	DM4000, DM5000, DM6000	22mm	21 x 29mm	22mm
XC124	MZ FL III Stereo (Holds 2 emission filters)	18mm	N/A	18mm
Zeiss				
XC131	Axio Exciter Slider	18mm	N/A	N/A
XC132	Axioskop 2 (old)	25mm	25.7 x 36mm	25mm
XC133	Axiovert 3FL Slider	25mm	25.7 x 36mm	25mm
XC134	Axioskop 4FL Slider	25mm	25.7 x 36mm	25mm
XC135	Axioskop 6FL Slider	25mm	25.7 x 36mm	25mm
XC136	Axio 2 Push-and-Click	25mm	25.7 x 36mm	25mm
XC137	Axioskop 5FL Slider	25mm	25.7 x 36mm	25mm
XC138	Axioskop 8FL Slider	25mm	25.7 x 36mm	25mm
XC139	Standard 2FL Slider	25mm	25.7 x 36mm	25mm

Available in standard dichroic sizes and designed to function at 45 degree angle of incidence from 400–700nm. Performance in two planes of polarization can be very different. Mirrors minimize the impact on a randomly polarized sample.

Beamsplitters/Mirrors

Part #	Description	Application	Size
XF121	50/50 Beamsplitter	50%T, 50%R	Standard dichroic
XF122	70/30 Beamsplitter	70%T, 30%R	Standard dichroic
XF123	30/70 Beamsplitter	30%T, 70%R	Standard dichroic
XF125	Reflecting Mirror	Opaque backing prevents transmission, ≥90% Reflection	Standard dichroic

Note: Pricing is for standard microscope sizes. See page 22.

For reducing excitation energy.

Neutral Density Filters

Sizes:	180	250	320	450	500	50 x 50
Apertures:	130	200	270	400	450	45 x 45
Description	Product Numbers					
ND 0.05	XB19/18R	XB193/25R	XB193/32R	XB193/45R	XB193/50R	XB193/50S
ND 0.1*	XB13/18R	XB13/25R	XB13/32R	XB13/45R	XB13/50R	XB13/50S
ND 0.2	XB194/18R	XB194/25R	XB194/32R	XB194/45R	XB194/50R	XB194/50S
ND 0.3*	XB14/18R	XB14/25R	XB14/32R	XB14/45R	XB14/50R	XB14/50S
ND 0.4	XB195/18R	XB195/25R	XB195/32R	XB195/45R	XB195/50R	XB195/50S
ND 0.5*	XB15/18R	XB15/25R	XB15/32R	XB15/45R	XB15/50R	XB15/50S
ND 0.6	XB196/18R	XB196/25R	XB196/32R	XB196/45R	XB196/50R	XB196/50S
ND 0.7	XB197/18R	XB197/25R	XB197/32R	XB197/45R	XB197/50R	XB197/50S
ND 0.8	XB198/18R	XB198/25R	XB198/32R	XB198/45R	XB198/50R	XB198/50S
ND 1.0*	XB16/18R	XB16/25R	XB16/32R	XB16/45R	XB16/50R	XB16/50S
ND 2.0*	XB17/18R	XB17/25R	XB17/32R	XB17/45R	XB17/50R	XB17/50S
ND 3.0*	XB27/18R	XB27/25R	XB27/32R	XB27/45R	XB27/50R	XB27/50S
Set of 6	XB28/18R	XB28/25R	XB28/32R	XB28/45R	XB28/50R	XB28/50S
Set of 12	XB199/18R	XB199/25R	XB199/32R	XB199/45R	XB199/50R	XB199/50S

* Included in the set of 6 filters; all individual items are included in the set of 12 filters.

- Choose a fluorophore and a filter set using **Curvomatic**, our interactive database.
 - Then simply order online.
- See page 28.

IR Blocking Filters

Used to reduce Infrared energy from the light source in the excitation path (XF83) or in front of the detector in the emission path (XF85 and XF86).

Part	Description	Application	Typical T%	Size
XF83	KG5	Blocks infrared energy at the light source	80% avg.	12R, 18R, 20R, 22R, 25R 32R, 45R, 50R, 50S
XF85	550CFSP	99+% Near IR Attenuation, 600-1200nm	>75%T	12R, 18R, 20R, 22R, 25R 32R, 45R, 50R, 50S
XF86	700CFSP	99+% Near IR Attenuation, 750-1100nm	>90%T	12R, 18R, 20R, 22R, 25R 32R, 45R, 50R, 50S

IR-DIC Filters

Used for simultaneous capture of fluorescence and infrared DIC images.

Part	Description	Application	Size
XF117/32R	780DF35	IR-DIC	32mm
XF117/45R	780DF35	IR-DIC	45mm

Polarizing Filter

Used to polarize incident light in both the excitation and emission path.

Part	Description	Size
XF120	Polarizing Filter	50 x 50 mm

Note: Custom sizes available; call our application specialists.

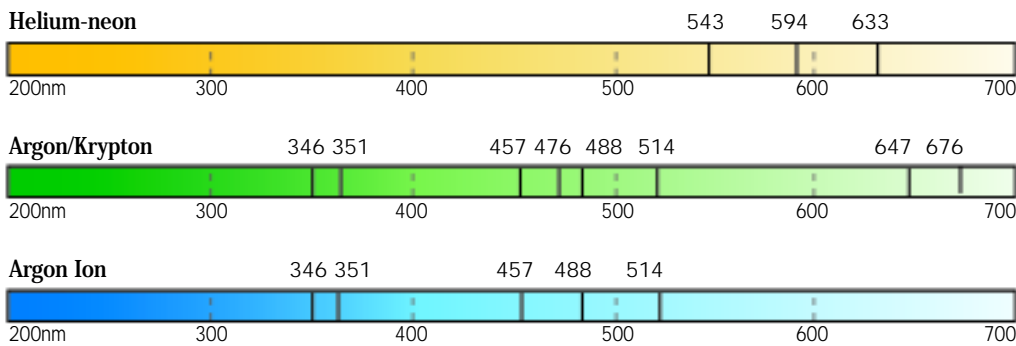
Fluorescence Reference Slides

Omega is offering Fluor-Ref slides to provide a quick, easy-to-use method of calibrating and standardizing fluorescence imaging systems. This set of slides helps to: center and adjust the fluorescence illuminator; verify uniformity of fluorescence staining; monitor and adjust laser output and PMT settings; and avoid microspheres and photobleaching.

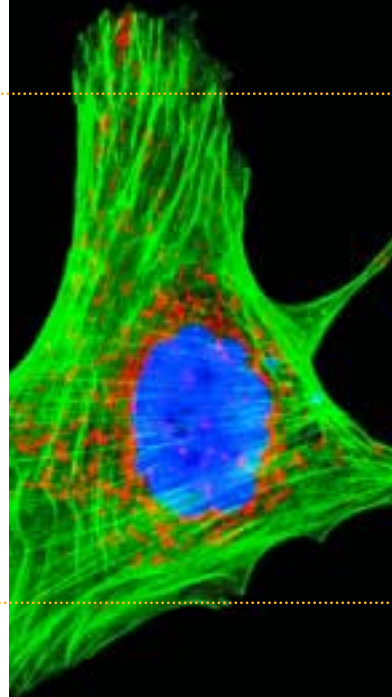
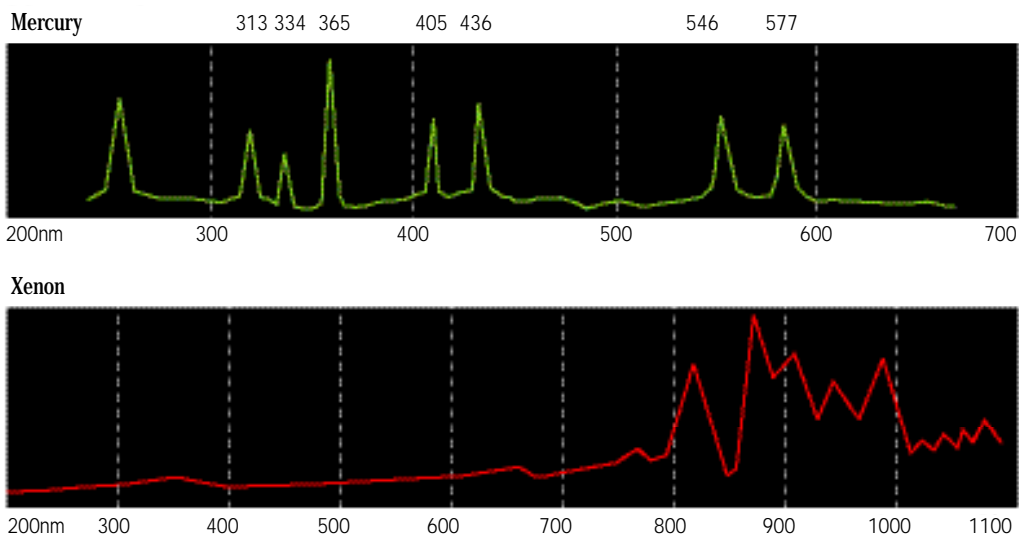
The set contains four slides with spectra approximating the most commonly used fluorophores: DAPI/Indo-1/Fura (Blue emission); FITC/GFP (Green emission); Acridine Orange (Yellow emission); and Rhodamine/Texas Red (Red emission).

Part #	Set of 4 Slides	Description
XF900	Blue emission Green emission Yellow emission Red emission	DAPI/Indo-1/Fura FITC/GFP Acridine Orange Rhodamine/Texas Red®

Lasers



Arc Lamps



For more detailed information and examples regarding the appropriate filters/sets for your light source and detector, consult our web site: www.omegafilters.com or contact one of our application specialists: (802) 254-2690 Toll Free: (866) 488-1064 email: labsales@omegafilters.com

Listing of Components

The following chart contains a complete listing of filter components organized by wavelength.

Part #	Descriptor	Part #	Descriptor
Exciters		XF1043	555DF10
XF1000	254WB25	XF1017	555DF27
XF1001	330WB80	XF1067	560AF55
XF1093	340AF15	XF1090	560AF55
XF1004	355HT15	XF1045	560DF15
XF1005	365WB50	XF1022	560DF40
XF1094	380AF15	XF1206	572AF15
XF1401	380DF30	XF1044	575DF25
XF1057	385-485-560TBEX	XF1045	575DF25
XF1059	386-485-560TBEX	XF1207	580AF20
XF1075	387AF28	XF1024	590DF45
XF1052	390-486-577TBEX	XF1082	607AF75
XF1058	390-486-577TBEX	XF1025	610DF20
XF1054	390-520DBEX	XF1030	610DF70
XF1055	400-477-580TBEX	XF1069	630AF50
XF1098	400-495-575TBEX	XF1091	630AF50
XF1048	400-500DBEX	XF1026	633NB3.0
XF1065	400-510-630TBEX	XF1208	640AF20
XF1076	400AF30	XF1027	640DF20
XF1006	400DF15	XF1095	655AF30
XF1053	405-490-555-650QBEX	XF1046	655DF50
XF1008	405DF40	XF1210	665AF32
XF1064	415-535-630TBEX	XF1028	670DF20
XF1301	415WB100	XF1085	680ASP
XF1009	425DF45	XF1096	685AF30
XF1100	436-495-582TBEX	XF1097	730AF45
XF1078	436-510DBEX	Dichroics	
XF1201	436AF8	XF2000	290DCLP
XF1079	436DF10	XF2050	385-485-560TBDR
XF1071	440AF21	XF2041	385-502DBDR
XF1031	450DF55	XF2056	390-510-630TBDR
XF1012	455DF70	XF2003	390DRLP
XF1087	470AF50	XF2047	395-540DBDR
XF1013	470DF35	XF2048	400-477-575TBDR
XF1072	475AF20	XF2046	400-485-558-640QBDR
XF1073	475AF40	XF2045	400-485-580TBDR
XF1014	480DF60	XF2061	400-485DBDR
XF1063	485-555-650TBEX	XF2051	400-495-575TBDR
XF1202	485AF20	XF2055	400-535-635TBDR
XF1042	485DF15	XF2001	400DCLP
XF1099	485DF20	XF2004	410DRLP
XF1050	490-550DBEX	XF2002	415DCLP
XF1051	490-577DBEX	XF2059	415DRLP
XF1049	490-605DBEX	XF2038	430DRLP
XF1011	490DF20	XF2040	435DRLP
XF1068	500AF25	XF2065	436-510DBDR
XF1080	510DF25	XF2090	445-510-600TBDR
XF1018	515NB2.0	XF2006	450DCLP
XF1203	520AF18	XF2034	455DRLP
XF1074	525AF45	XF2007	475DCLP
XF1019	535DF35	XF2054	485-555-650TBDR
XF1077	540AF30	XF2039	485-555DBDR
XF1204	546AF18	XF2027	485DRLP
XF1020	546DF10	XF2043	490-550DBDR
XF1062	550-640DBEX	XF2044	490-575DBDR
XF1021	550DF30	XF2042	490-600DBDR

Part #	Descriptor	Part #	Descriptor
XF2026	495DRLP	XF3108	502ALP
XF2037	500DRLP	XF3080	510AF23
XF2077	500DRLP	XF3086	510ALP
XF2010	505DRLP	XF3043	510WB40
XF2031	505DRLPXR	XF3067	515-600-730TBEM
XF2008	515DRLP	XF3093	515ALP
XF2058	515DRLPXR	XF3006	OG515
XF2030	525DRLP	XF3056	520-580DBEM
XF2013	540DCLP	XF3003	520DF40
XF2012	540DRLP	XF3055	522-637DBEM
XF2203	545DRLP	XF3301	525WB20
XF2009	550DCLP	XF3057	528-633DBEM
XF2053	555-640DBDR	XF3082	530ALP
XF2062	555DRLP	XF3017	530DF30
XF2016	560DCLP	XF3018	OG530
XF2017	560DRLP	XF3079	535AF26
XF2032	565DRLPXR	XF3084	535AF45
XF2015	570DRLP	XF3011	535DF25
XF2018	580DRLP	XF3007	535DF35
XF2011	585DRLP	XF3074	545AF35
XF2019	590DRLP	XF3106	545AF35
XF2029	595DRLP	XF3105	545AF75
XF2020	600DRLP	XF3021	OG550
XF2014	610DRLP	XF3014	560DF15
XF2021	630DRLP	XF3085	565ALP
XF2022	640DRLP	XF3111	565ALP
XF2035	650DRLP	XF3302	565WB20
XF2072	650DRLP	XF3089	575ALP
XF2023	660DRLP	XF3022	580DF30
XF2033	675DCSPXR	XF3303	585WB20
XF2024	690DRLP	XF3024	590DF35
XF2075	690DRLP	XF3016	OG590
XF2082	692DRLP	XF3066	595-700DBEM
XF2083	708DRLP	XF3083	595AF60
XF2084	760DRLP	XF3112	595AF60
Emitters		XF3019	605DF50
XF3000	330WB60	XF3304	605WB20
XF3097	400ALP	XF3094	610ALP
XF3004	405DF43	XF3027	610DF20
XF3088	435ALP	XF3025	615DF45
XF3061	445-525-650TBEM	XF3020	620DF35
XF3073	450AF58	XF3028	630DF30
XF3002	450DF65	XF3015	635DF55
XF3058	457-528-633TBEM	XF3023	640DF35
XF3063	460-520-602TBEM	XF3081	645AF75
XF3059	460-520-603-710QBEM	XF3305	655WB20
XF3054	460-550DBEM	XF3029	660DF32
XF3069	460-560-690TBEM	XF3012	660DF50
XF3091	460ALP	XF3030	670DF40
XF3118	465-535-640TBEM	XF3031	682DF22
XF3078	465AF30	XF3104	690ALP
XF3116	470-530-620TBEM	XF3034	690DF40
XF3060	470-590DBEM	XF3076	695AF55
XF3099	475-550DBEM	XF3095	700ALP
XF3075	480AF30	XF3113	710AF40
XF3087	480ALP	XF3100	710ASP
XF3065	485-540-620TBEM	XF3114	730AF30
XF3068	495-575-700TBEM	XF3115	770ALP
XF3005	495DF20	XF3007	800WB80
XF3092	500ALP	XF3308	840WB80

