

Interference Filter Specification  
 Ted Williams  
**SALT-3120AS0022**

1. Size (two different options):
  - a. 3.5 inches square (preferred) or 3.5 inch diameter round (acceptable), with central clear aperture 80 mm minimum diameter.
  - b. 3.5 x 4.0 inch rectangular, with central clear aperture 80 x 98 mm minimum
2. 4-cavity design.
3. "Image Quality" Polished flat to better than 1/4 wave per inch.
4. Both outer surfaces anti-reflection coated for less than 1% reflection over the FWHM of the filter.
5. Blocked from 3000 angstroms to 1.2 microns at 0.001% transmission, average; 0.01% maximum.
6. All filters must have the same optical thickness, equivalent to 8.1 +/- 0.1 mm fused silica.
7. Central wavelengths and bandwidths specified in an f/2.2 converging beam at temperature 10 °C.
8. Minimum transmission at central wavelength: 80%.
9. All filters hermetically sealed.
10. Filter curve for each filter.

| Filter | Center Wavelength (Angstroms) | Bandwidth (Angstroms) | Filter | Center Wavelength (Angstroms) | Bandwidth (Angstroms) |
|--------|-------------------------------|-----------------------|--------|-------------------------------|-----------------------|
| 1      | 4340                          | 80                    | 21     | 6055                          | 155                   |
| 2      | 4400                          | 85                    | 22     | 6170                          | 155                   |
| 3      | 4465                          | 90                    | 23     | 6290                          | 160                   |
| 4      | 4530                          | 90                    | 24     | 6410                          | 160                   |
| 5      | 4600                          | 95                    | 25     | 6530                          | 160                   |
| 6      | 4670                          | 100                   | 26     | 6645                          | 160                   |
| 7      | 4740                          | 100                   | 27     | 6765                          | 160                   |
| 8      | 4820                          | 105                   | 28     | 6885                          | 160                   |
| 9      | 4895                          | 110                   | 29     | 7005                          | 165                   |
| 10     | 4975                          | 110                   | 30     | 7130                          | 170                   |
| 11     | 5060                          | 115                   | 31     | 7260                          | 180                   |
| 12     | 5145                          | 120                   | 32     | 7390                          | 190                   |
| 13     | 5235                          | 120                   | 33     | 7535                          | 200                   |
| 14     | 5325                          | 125                   | 34     | 7685                          | 210                   |
| 15     | 5420                          | 130                   | 35     | 7840                          | 215                   |
| 16     | 5520                          | 135                   | 36     | 8005                          | 225                   |
| 17     | 5620                          | 140                   | 37     | 8175                          | 235                   |
| 18     | 5725                          | 145                   | 38     | 8350                          | 245                   |
| 19     | 5830                          | 145                   | 39     | 8535                          | 260                   |
| 20     | 5945                          | 150                   | 40     | 8730                          | 275                   |

## PFIS-UV filter set specifications

1. Size (two different options):
  - a. 3.5 inches square (preferred) or 3.5 inch diameter round (acceptable), with central clear aperture 80 mm minimum diameter.
  - b. 3.5 x 4.0 inch rectangular, with central clear aperture 80 x 98 mm minimum
2. 4-cavity design.
3. "Image Quality" Polished flat to better than 1/4 wave per inch.
4. Both outer surfaces anti-reflection coated for less than 1% reflection over the FWHM of the filter.
5. Blocked from 3000 angstroms to 1.2 microns at 0.001% transmission, average; 0.01% maximum.
6. All filters must have the same optical thickness, equivalent to 8.1 +/- 0.1 mm fused silica.
7. Central wavelengths and bandwidths specified in an f/2.2 converging beam at temperature 10 °C.
8. Minimum transmission at central wavelength: 80%.
9. All filters hermetically sealed.
10. Filter curve for each filter.

| Filter | Center Wavelength (Angstroms) | Bandwidth (Angstroms) |
|--------|-------------------------------|-----------------------|
| 41     | 3727                          | 75                    |
| 42     | 3783                          | 80                    |
| 43     | 3843                          | 80                    |
| 44     | 3903                          | 80                    |
| 45     | 3963                          | 80                    |
| 46     | 4023                          | 80                    |
| 47     | 4083                          | 85                    |
| 48     | 4147                          | 85                    |
| 49     | 4211                          | 85                    |
| 50     | 4275                          | 85                    |