Pre-Delivery Resonon Test Report

Identification Data	
Date	December 1st, 2017
Resonon SN	100114-6
Instrument Name	BS6
Andor Camera SN	CCD-20476

Configuration	
Filters Installed	
1. There is no filter on the PGP, only an AR coating. See Figure 1a 2. Filter on rear tilted substrate: See Fig. 1b.	
Sensors Installed	
1. 10K Ohm Thermister: Digikey part # 615-1010-ND; 3 units. 2. Humidity Sensor: Digikey part # 480-3294-1-ND	
Fiber bundle info: Leoni 800 µm core fibers. See Figure 2.	
Grating: Aug. 2016 batch.	

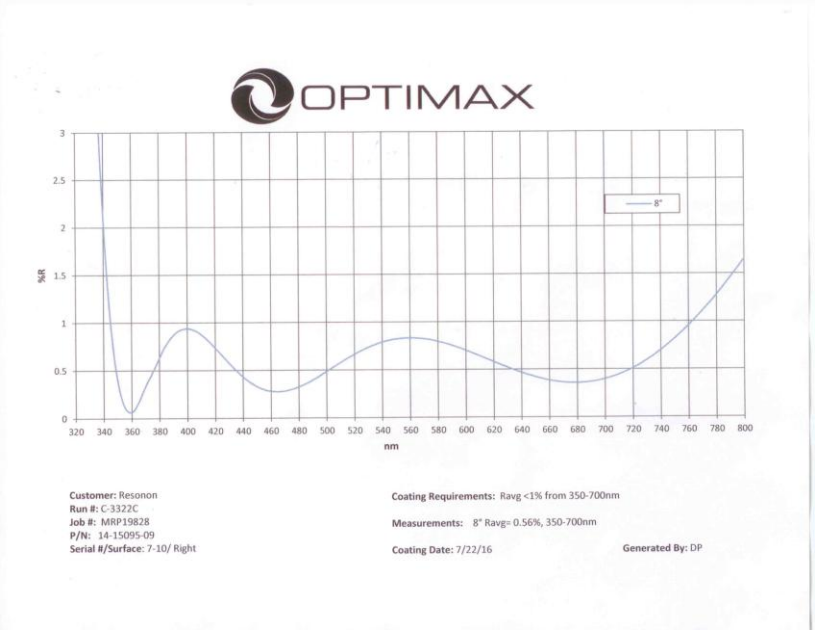


Figure 1a: AR coating on front face of 1st prism

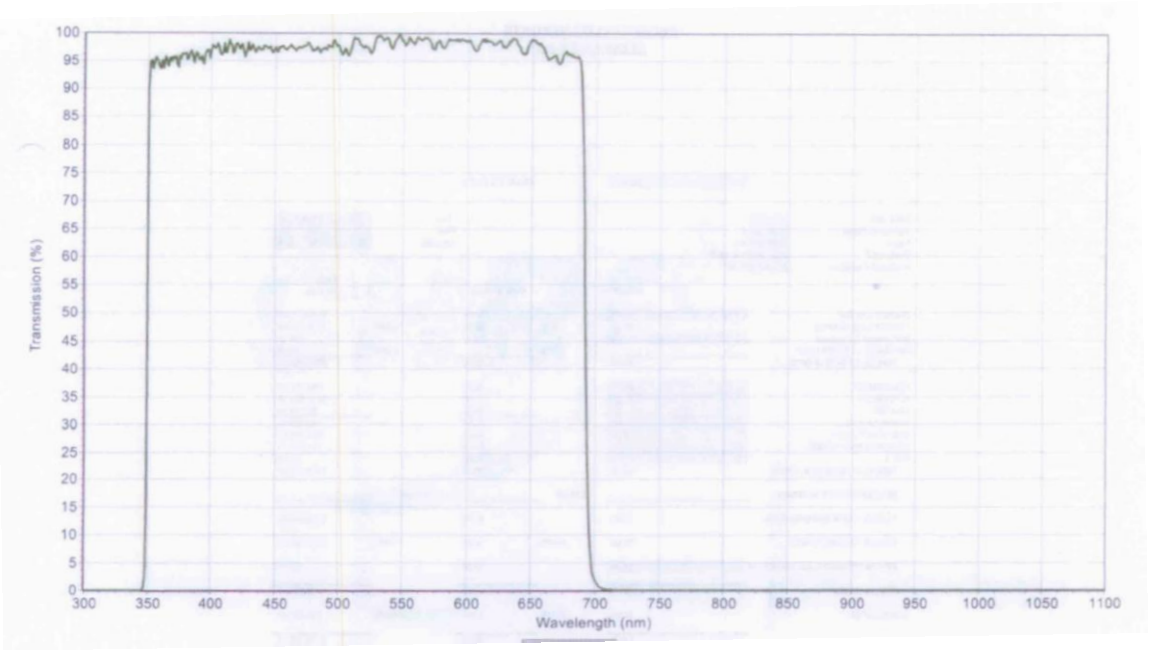


Figure 2b: Bandpass filter on rear tilted substrate

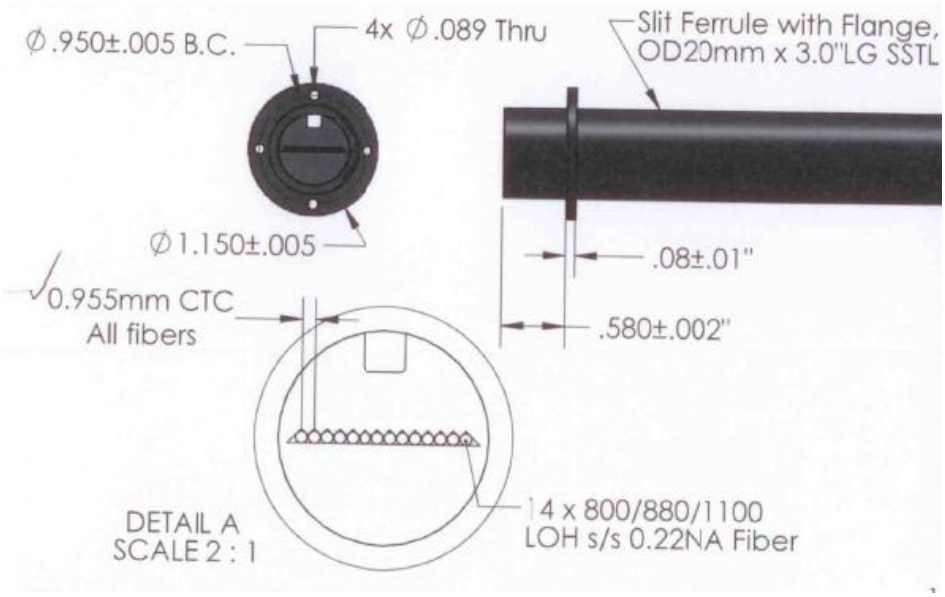


Figure 3: Leoni Fiber details

Test Summary	
Smile (Peak to Trough)	
@ 387 nm	<1 pixel
@ 587 nm	<1 pixel
Keystone (Peak to Trough)	
Channel 1	2 pixel
Channel 7	1 pixel
Channel14	3 pixels
Spectral Resolution (FWHM)	
@ 587 nm	<.1.4 nm See Figure 8
@ 387 nm	< 1 nm See Figure 8

Stability (“shake” test)
<.1 nm shift. See Table 2

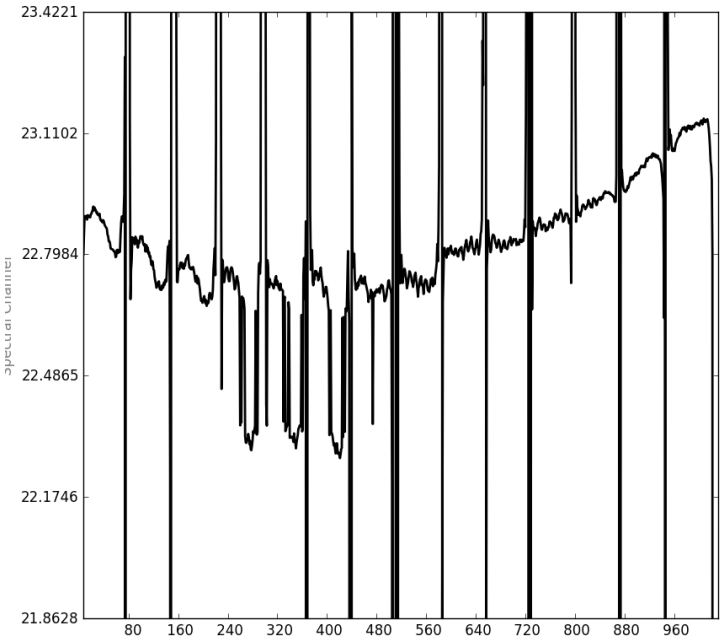


Figure 4: Smile at 387 nm. Horizontal axis is spatial channels and vertical axis is spectral.

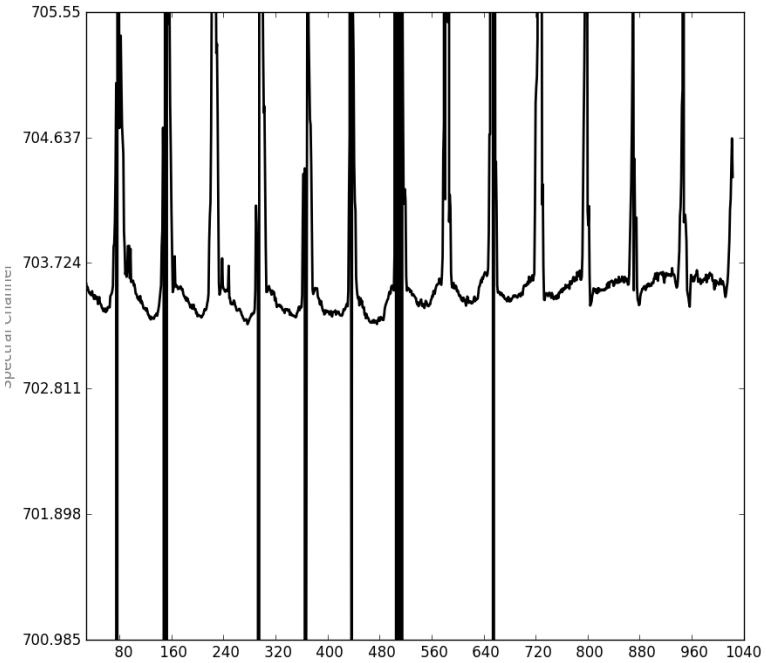


Figure 5: Smile at 587 nm.

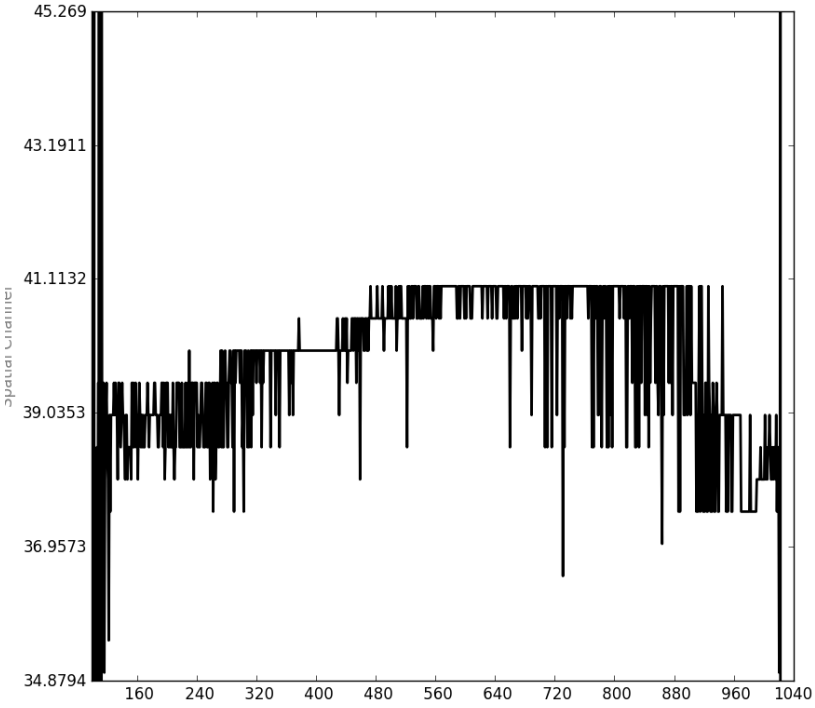


Figure 6: Channel 1 keystone. Horizontal axis is spectral channels and vertical axis is spatial.

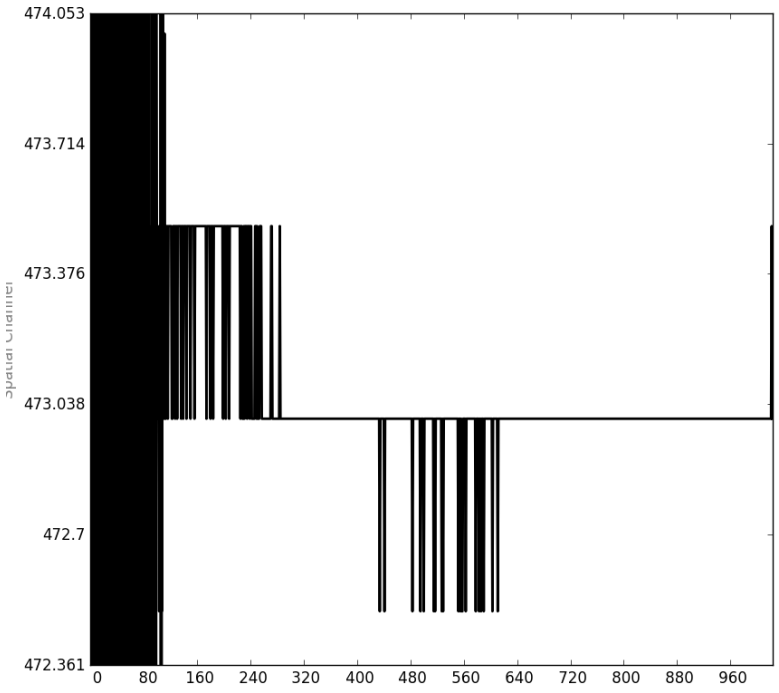


Figure 7: Channel 7 tilt

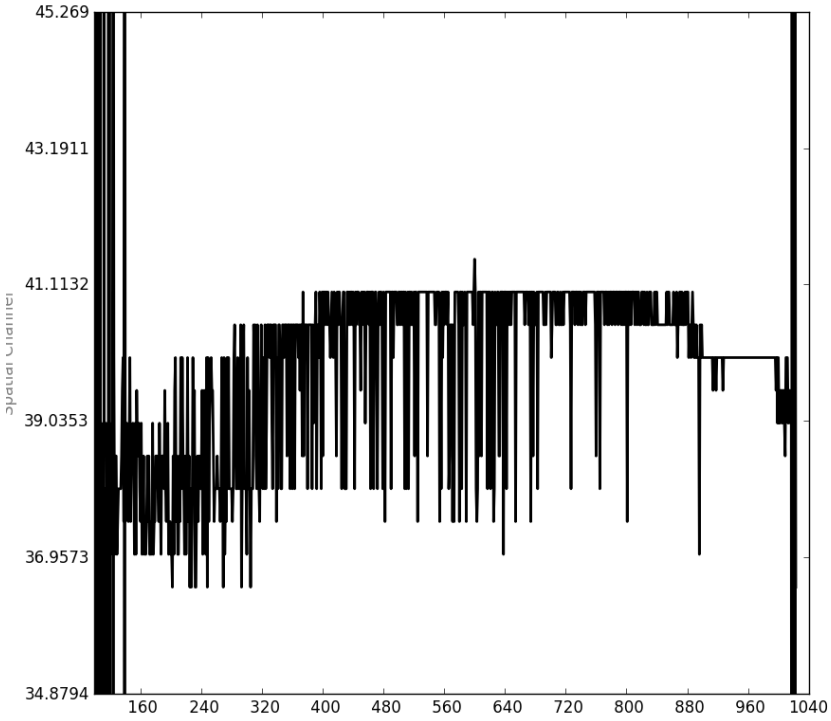


Figure 8: Channel 14 keystone.

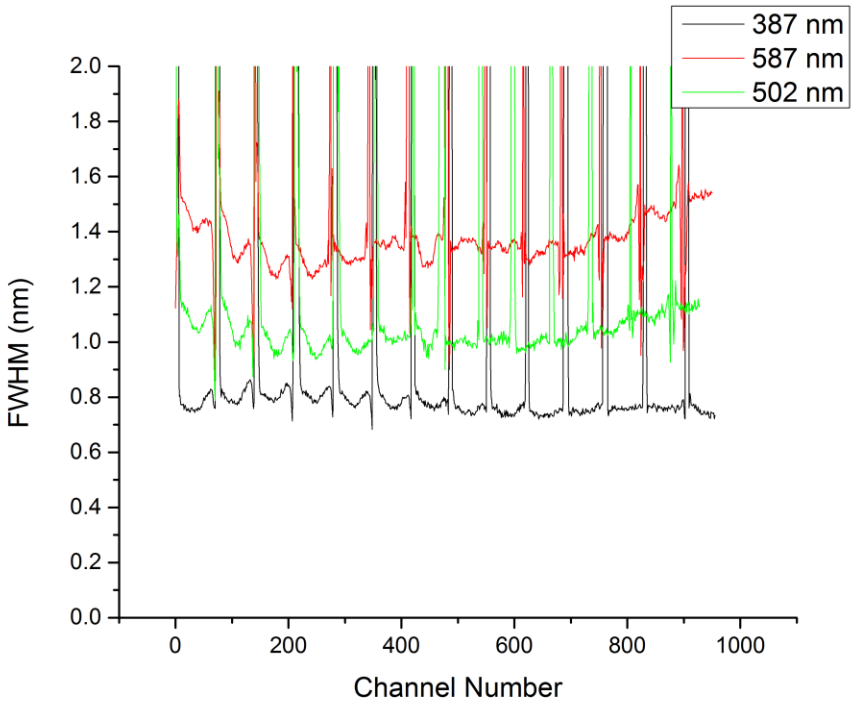


Figure 9: Spectral widths vs. spatial position

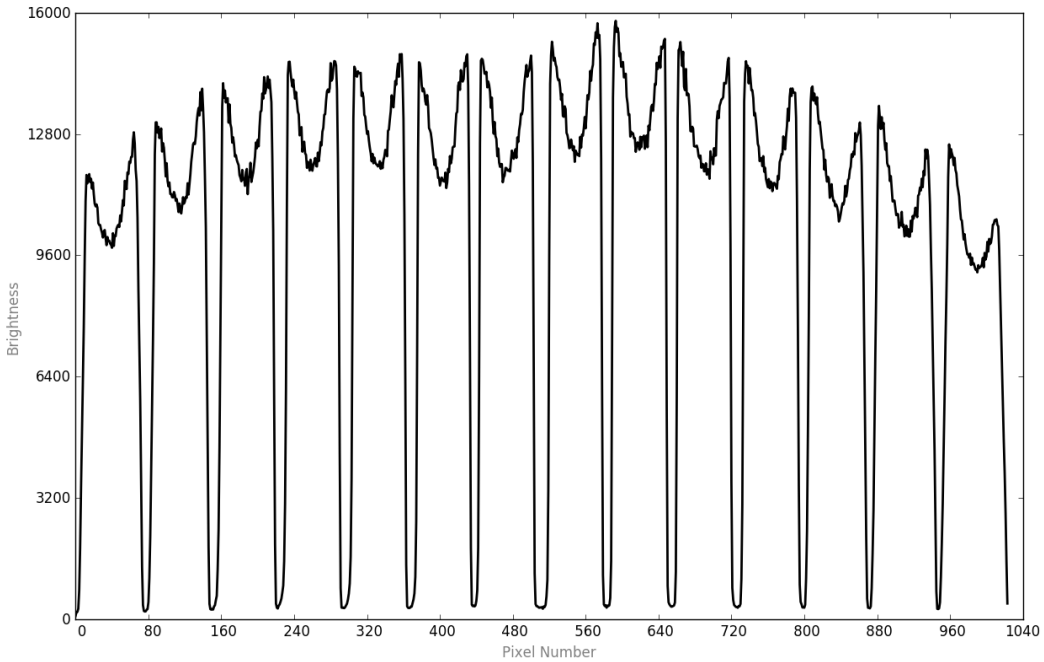
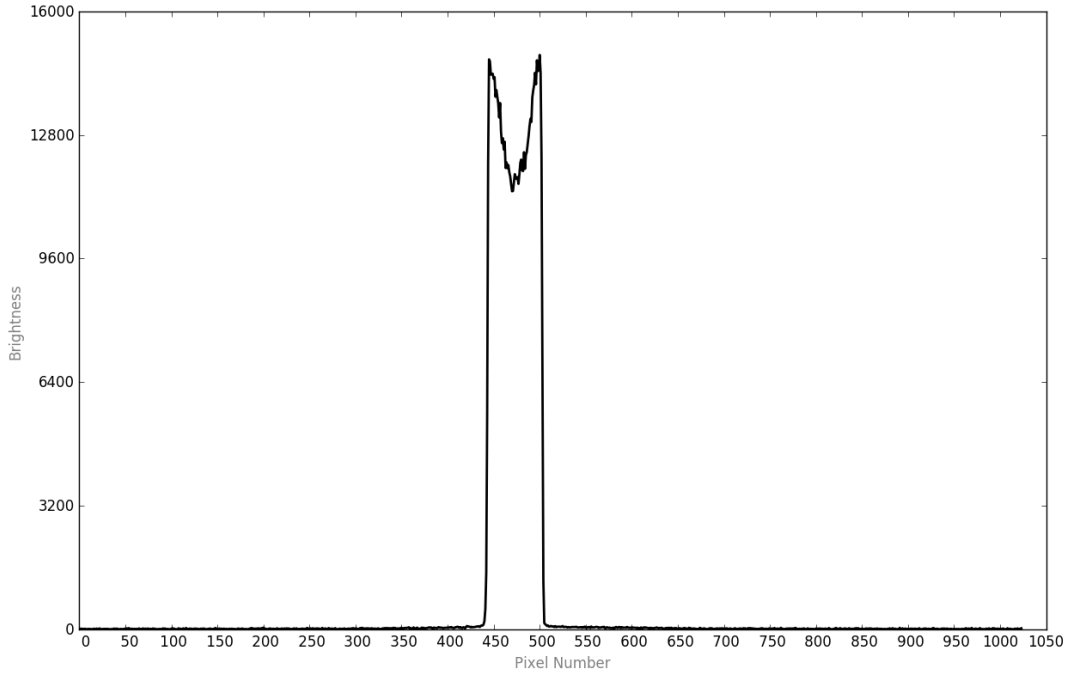


Figure 10: Cross section of fibers.

Table 2: Results of shaker test before and after a four hour "shake" on the shaker table.						
	Pre Shake Pixel Position	Pre Shake FWHM	Post Shake Pixel Position	Post Shake FWHM	Change in Position	Change in FWHM
387 nm	134	<1 nm	134	<1 nm	0	0
502 nm	460	<1 nm	460	<1 nm	0	0
587 nm	703	<1.4 nm	703	<1.4 nm	0	0



387

Figure 11: Cross section of channel 7.