Pre-Delivery Resonon Test Report

Identification Data				
Date	February 3, 2017			
Resonon SN	100114-3			
Instrument Name	BS3			
Andor Camera SN	CCD-16346			

Configuration					
Filters Installed					
1. Filter on face of front prism: Replaced with AR coating. See					
Figure 1a for coating curve.					
2. Filter on rear tilted substrate: See Figure 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. See Figure 3.					



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



2b: Bandpass filter on rear tilted substrate. This is Chroma Technology filter Batch 300205, dated 2015-12-22.



Figure 3: Leoni Fiber details

GRATING SPECTRAL TEST REPORT

VPH-576-430-UNP

Serial Number SN 0064070

Unpolarized Incident Light at 3.6°





Figure 3: Grating efficiency.

Test Summary						
Smile (Peak to Trough)						
@ 387 nm	887 nm <1 pixel (Fig. 4)					
@ 587 nm	<1 pixel (Fig. 5)					
Keystone (Peak to Trough)						
Channel 1	2 pixels (Fig. 6)					
Channel 7	2 pixels (Fig. 7)					
Channel14	2 pixels (Fig. 8)					
Spectral Resolution (FWHM)						
@ 387 nm	~1.3 nm See Figure 9					
@ 587 nm	587 nm < 1 nm See Figure 9					
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	Pre Shake	Post Shake	Post Shake	Change	Change			
	Pixel	FWHM	Pixel	FWHM	in	in			
	Position		Position		Position	FWHM			
387 nm	150	<1.4 nm	150	<1.3 nm	0	.1 nm			
502 nm	475	<.8 nm	475	<.8 nm	0	0			
587 nm	718	<.8 nm	718	<.8 nm	0	0			