

# GRISM SPECIFICATION SHEET

## TITLE, DATE

J650GRISM\_20080819

## ORGANIZATION

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## CONTACT PERSON

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## GENERAL

Intended Use:	Astronomical Spectrograph
Wavelength Range:	0.8 - 1.3 $\mu\text{m}$
Transmission Peak Wavelength	1.2 $\mu\text{m}$
Operating Temperature:	~100 K

## PRISM SPECIFICATION

Material:	IR grade Fused Silica
Dimension:	70 $\pm$ 0.1 mm x 67 $\pm$ 0.1 mm
Thickness:	52.0 $\pm$ 0.1 mm
Apex Angle:	38 $\pm$ 0.2 °(Right Angle Prism)
Bevel Size:	1.0 mm (Required on all edges)
Surface Quality:	40/20 (S/D)
Surface Accuracy	< $\lambda$ /2P-V(power), < $\lambda$ /5P-V(irregularity) w/633nm at incidence plane and grating plane
Cosmetic Statement:	No bubbles and striae
AR Coating	<1%, 0.8-1.5 $\mu\text{m}$ , Coated only on incidence plane

## GRATING SPECIFICATION

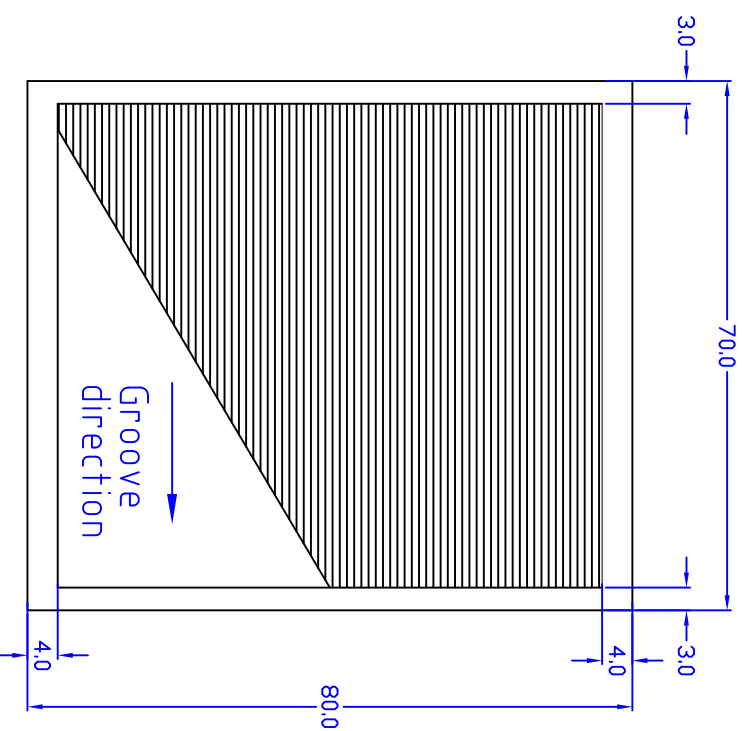
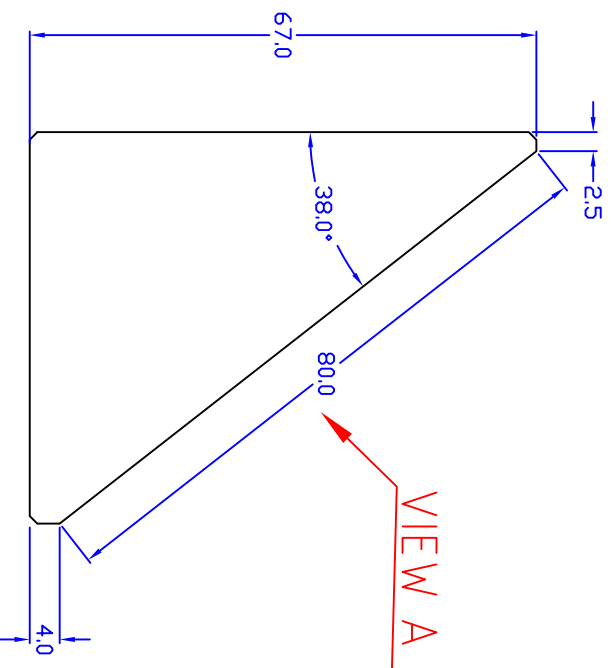
Material:	Regular Resin
Grating Area Dimension:	64 mm x 72 mm (64x64 mm for ④53-*-825R) ※ Please see attached drawing.
Groove Frequency:	①240, ②210, ③210, ④245 grooves/mm
Braze Angle:	①26.7°, ②26.7°, ③31.7°, ④34°
Catalog Number:	①53-*-820R, ②53-*-866R, ③53-*-877R, ④53-*-825R From Newport Catalog ver. 06/08

## OVERALL PERFORMANCE

Efficiency:	>70% on the operating wavelength
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## OTHERS

Required literature upon delivery:	1, Measured quantity of surface accuracy or transmission wavefront error
	2, Measured dimensions at 20°C (0.1mm,0.1°accuracy)
	3, Measured efficiency



VIEW A

MATERIAL: IR Fused Silica, Regular resin  
 PRISM ANGLE: 38.0 +/- 0.2 degree  
 BLAZE ANGLE: 34 degree  
 GROOVE ANGLE: 90 degree  
 GROOVE NUMBER: 240 grooves/mm  
 CATALOG NO.: 53-x-825R  
 BEVEL: 1mm on all edges

 <small>TOLERANCE UNLESS OTHERWISE NOTED</small> .X +/- .1 .XX +/- .01 L +/- .5		<b>TITLE</b> MOIRCS GRISM J650	<b>ORGANIZATION</b> ASTRONOMICAL INSTITUTE, TOHOKU UNIVERSITY
	<b>MATERIAL</b> IR Fused Silica, Regular Resin	<b>DESIGN</b> CHIHIRO TOKOKU	
<b>DIMENSIONS</b> mm	<b>REVISED DATE</b> 8/11/2008		
<b>QUANTITY</b> 2	<b>DRAWING SIZE</b> A4		