

### 3M Vikuiti™ Rigid

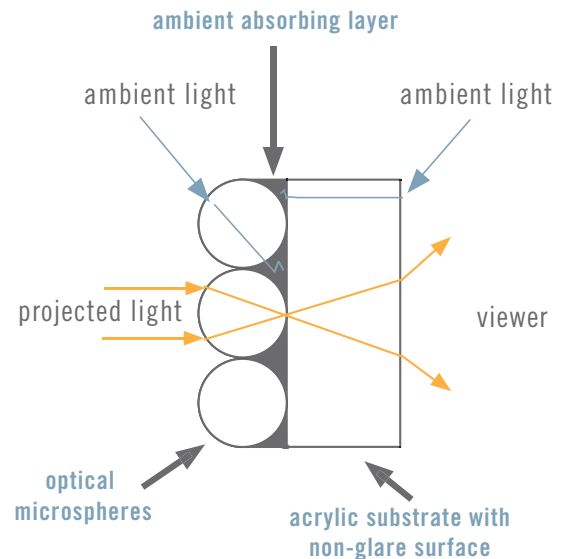
#### Screen Materials

The true test of any rear projection screen is how well projected images look in unfavorable lighting conditions, when viewed from a poor angle or up close. Even in challenging situations like these, 3M Vikuiti™ Rigid technology enables an exceptional visual experience, maintaining a consistent level of brightness across the screen removing all “hot spots” and dark corners. These pages cover the technical information on the 3M Vikuiti™ Rigid non-glare acrylic screen material.

#### How it works

Optical microspheres focus projected light through a black layer that prevents the image from washing out in harsh ambient light conditions. One of the toughest barriers to maintaining a crisp image on rear projection screens is preventing ambient light from degrading the black level of the image.

To counter this, 3M Vikuiti™ Rigid screens are coated with millions of optical microspheres seated in a black chemical layer. The microspheres focus the projected light so it exists at just one point (or plane) on the acrylic substrate while the black layer absorbs any ambient light. To further enhance the viewing experience, the screen system also features a durable acrylic nonglare surface. The result of this process is a brilliant high contrast image that can be seen from any angle.



#### XRVS recommended throw distance:

For projection systems such as that shown in Figure 1 (pg. 2), with the projector placed off-axis to the screen, a ratio of at least 1.8 is recommended. For ratios less than 1.8 a Fresnel lens is recommended to ensure consistent contrast and brightness on the outer edges of the screen.

For projection systems such as that shown in Figure 2, with the projector placed on-axis (centered) to the screen, a ratio of at least 1.2 is recommended. For ratios less than 1.2 a Fresnel lens is recommended to insure consistent contrast and brightness on the outer edges of the screen.



Figure #1

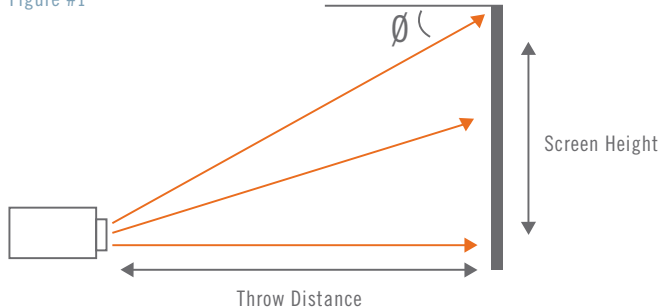


Figure #2

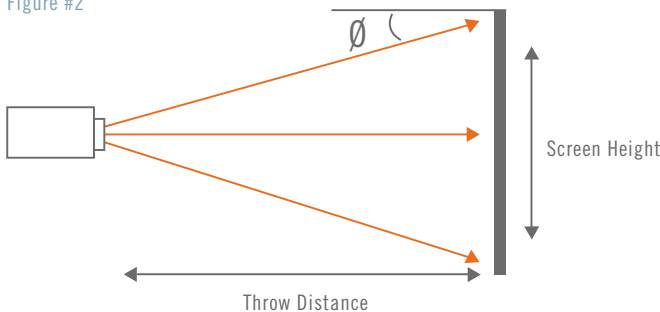


Figure #	Throw Distance / Screen Diagonal
1	1.80-2.00
2	1.20-1.35

### Why is this important?

The unique characteristics of the 3M Vikuiti™ Rigid screen material have enabled rear projection technology to be applied in environments that had previously been deemed unfit for this type of visual system. These qualities not only increase performance and usability of the screens, they allow a much weaker, i.e. less expensive, projector to produce the same perceived brightness and more importantly contrast, that in the past could only be produced by overlighting a lower quality screen material with a more powerful, (i.e. more expensive) projector.

### Cleaning and Care

The 3M Vikuiti™ Rigid (beaded side) can be cleaned by washing with a solution of mild soap or detergent and lukewarm water. Use a clean soft lint-free microfiber cloth, applying only light pressure. Rinse with clean water and dry by blotting with a damp cloth or chamois. Do not use window cleaning sprays, kitchen scouring compounds or solvents such as acetone, gasoline, benzene, alcohol, carbon tetrachloride, or lacquer thinner. These can scratch/deteriorate the screen surface.

**Note:** Pure IPA (isopropyl alcohol) along with a 3M microfiber cloth can be used on both sides (beaded side and smooth side) to clean finger prints and smudges, contact your Spyglass dealer directly for any questions or to obtain a cleaning kit specific to this material.

The Anti-Reflection coating of 3M Vikuiti™ Rigid (front smooth side) can be cleaned using a standard window cleaning spray such as Windex Glass Cleaner with Vinegar or Windex Glass and Surface Cleaner using a soft, clean cloth.

(Window cleaning sprays should not be used to clean the beaded side of the projection screen.)

### 3M Vikuiti™ Rigid Storage and Cutting instructions:

3M Vikuiti™ Rigid screens should be stored vertically or in special racks where the sheets can lean at an angle of approximately 10 degrees. If 3M Vikuiti™ Rigid screens are stored horizontally, they must not be allowed to sag. Care must be taken to prevent chips or dirt from becoming lodged between screens as they may damage the screens surface.

3M Vikuiti™ Rigid screens can be cut using circular saws or by routing (both requiring special blade/bits to be used). The screen material

softens quickly and it is necessary to keep the cutting tool and the machined edge of the screen as cool as possible. Spyeglass employs experienced professionals that are equipped with special training, tooling and capabilities for machining and finishing this material. Unless you have both the knowledge and custom equipment you should not attempt to cut the screen yourself, if you are unsure, please call your Spyeglass dealer first.

and Spyeglass shall not be liable for any loss or damages, whether non specified direct, indirect, special, incidental or consequential (including downtime, loss of profits or goodwill) in any way related to the Products regardless of the legal theory asserted.

### D. Warranty and Disclaimers

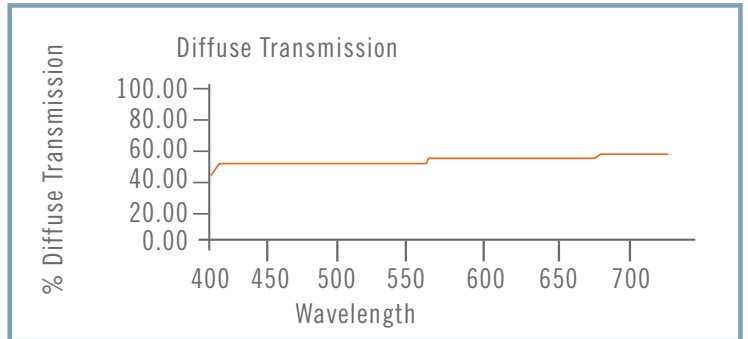
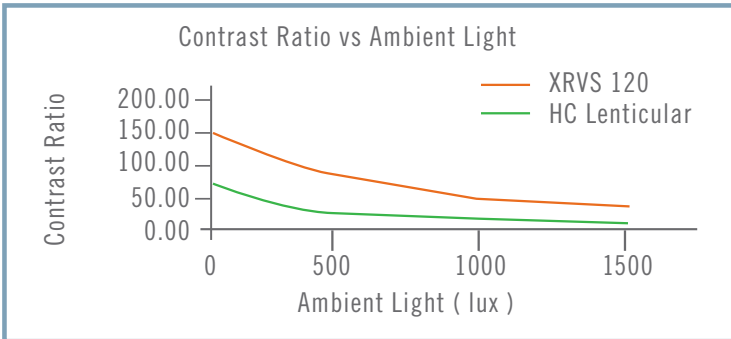
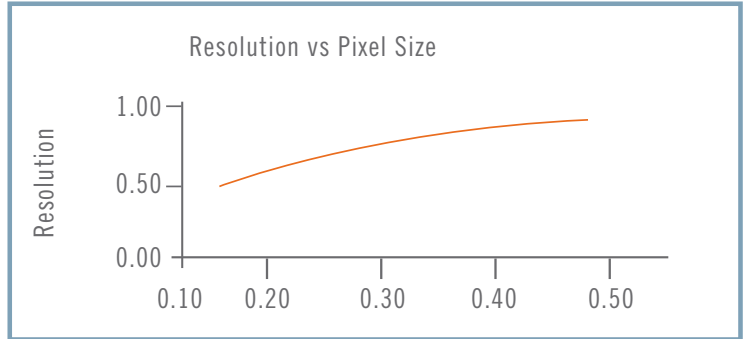
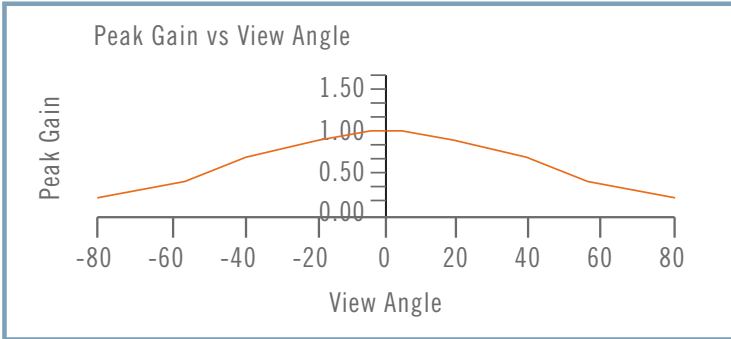
3M warrantees that its 3M Vikuiti™ Rear Projection Screen will meet its published specification at the time of shipment and for one year and three months after the date of shipment provided the Product is stored in the original package at a temperature of 20 degrees C +/- 10 degrees C and at a relative humidity of 50% +/- 15%.

If Product is shown not to meet its published specification during this warranty period, Spyeglass sole liability and purchaser's exclusive remedy is, at 3Ms or Spyeglass's option, for 3M or Spyeglass to either refund the purchase price of the Product or provide replacement Product in the quantity shown not to meet the specification.

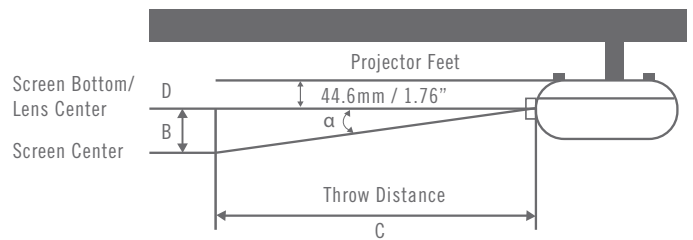
Spyeglass and 3M makes no additional warranties, express or implied, including but not limited to any implied warranties of merchantability or fitness for a particular purpose. In particular, but without limitation, 3M and Spyeglass makes no representations or warranties concerning the effective life of the Product or its ability to survive user's environmental testing.

User is responsible for determining whether the 3M Product is fit for the user's particular purpose and suitable for the user's method of production. Other than as set out in this limited warranty, 3M





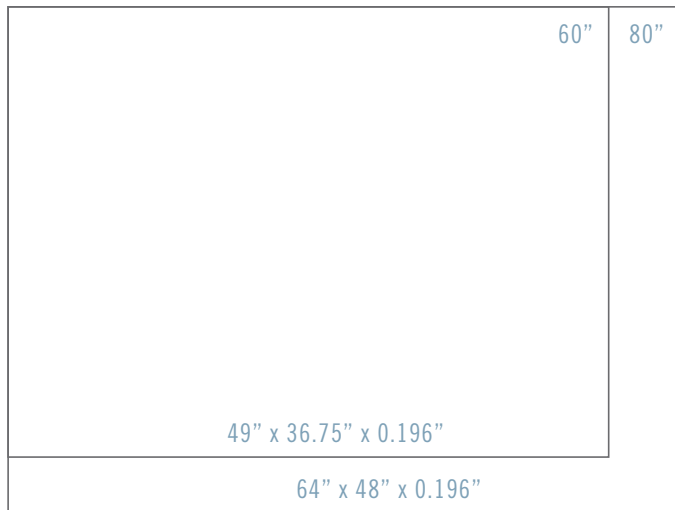
Screen Properties	XRVS 120 NG
On Axis Gain	~1.10
Nominal Viewing Angle (V/H)	~35° / 35°
Diffuse Transmission	~50°
Diffuse Reflectance	~3.75%
Specular Reflectance	~0.50%
Resolution @ .450mm pixel pitch	~35° / 35°
Color Shift (D65 Standard)	$[\Delta u'] \sim 0.007$ $[\Delta v'] \sim 0.003$
Nominal Thickness	0.118 inch (3.00mm)



B-Vertical distance between lense center and screen center  
 C-Throw distance  
 D-Vertical distance between lense center and top of screen  
 $\alpha$ -Throw angle

The 3M Vikuiti™ Rigid Screens are stocked in a range of standard sizes.  
 Our Screens can also be custom cut to any size or shape specific to your needs.  
 Our standard sizes are below:

### Screen Sizes 4:3 Aspect Ratio



### Screen Sizes 16:9 Aspect Ratio

