ACRILICO COLATO CRYLUX® Vision

CRYLUX®

1. PRODUCT IDENTIFICATION

CRYLUX® Vision is the brand name for a range of products that have been developed for use as projection screens. Their special characteristics will revolutionize the audiovisual sector.

CRYLUX® Vision front (3014 MAT*/ARD**) for frontal projection
CRYLUX® Vision rear (2950 MAT*/ARD**) specially designed for rear projection CRYLUX® Vision through (2051) rear projection with low contrast

* MAT: matt one side
**ARD matt two sides

2. CHARACTERISTICS

- CRYLUX® Vision front is a white opaque rigid screen to be used in frontal projections. Matt finish in both surfaces would be used in two -sided –projection applications.

- CRYLUX® Vision rear is a neutral grey coloured sheet specially developed for rear projection, but due to its special transmission values, images can be seen on both sides of the screen simultaneously. In rear projection applications bright and clear images completely eliminate the “hot spots” often seen with conventional projection screens. The neutral colour of CRYLUX Vision Rear 2950 makes it suitable for applications under different light conditions and images can be viewed without colour bias. The satin surface allows a reflection free image and reduces the risk of finger marking during fabrication or set up.

- CRYLUX® Vision through is an almost transparent sheet that allows the projection of images but also permits a clear view through the sheet in zones where no image is projected. This screen has a very low contrast, and it would be the right choice in areas with low ambient light.

- CRYLUX® Vision’s properties, like impact strength, mechanical and chemical resistance make it an excellent choice in applications where vandalism could be an issue (compared to traditional textile projection screens). It can be used in external applications without any risk of colour fading and is easy to clean. In rear projection applications, CRYLUX® Vision also helps to absorb distracting projector fan and motor noise.

3. APPLICATIONS

- Ultra-slim frames for Point of Sale
- Frontal projection screens.
- Rear projection screens.
- Double-sided projection screens for images without text (due to reversal of lettering).

4. FABRICATION AND FINISHING TECHNIQUES

CRYLUX® Vision sheets are as easy to handle as standard material.

Sawing, drilling, gluing, printing, milling, mechanical polishing, thermoforming, or hot bending does not offer any problems to this special product.

More detailed information on these items can be found in the “USER GUIDE”, available on request.

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5. TECHNICAL DATA

GENERAL			
Property	**Method**	**Units**	**CRYLUX®**
Density	ISO 1183	g/cm³	1.19
Water absorption	ISO 62, Method A	%	0,2
Rockwell Hardness	ISO 2039-2	M scale	100
MECHANICAL			
Property	**Method**	**Units**	**CRYLUX®**
Tensile Strength	ISO 527	MPa	75
Elongation	ISO 527	%	6
Tensile Modulus	ISO 527	MPa	3400
Flexural Strength	ISO 178	MPa	120
Flexural Modulus	ISO 178	MPa	3200
Charpy (unnotched)	ISO 179	kJ/m²	17
Charpy (notched)	ISO 527	MPa	2
THERMAL			
Property	**Method**	**Units**	**CRYLUX®**
Vicat Temp. (VST/B 50)	ISO 306	°C	110
Specific Heat Capacity	ISO 3146-C-60ºC	J/g.K	2.16
Linear thermal expansion	ISO 11359-2	mm/mºC	0.07
Thermal conductivity	DIN 52612	W/m.K	0.19
Max. service temperature continuous use		°C	80
Max service temperature short term use		°C	90
Degradation temperature		°C	>280
OPTICAL			
Property	**Method**	**Units**	**CRYLUX®**
Light transmission)	EN 13468-2	%	92
Refractive index	ISO 489	n^{D}_{20}	1.492
ELECTRICAL			
Property	**Method**	**Units**	**CRYLUX®**
Surface resistivity	IEC 60093	Ω	10^{14}
Volume resistivity	IEC 60093	Ω x m	10^{15}
Electrical strength	IEC 60243-1	kV/mm	10
Dielectric strength	DIN EN 60243-1	kV/mm	30
Dielectrical dissipation factor 50 Hz	DIN 53483-2		0.06
Dielectrical dissipation factor 1 KHz	DIN 53483-2		0.04
Dielectrical dissipation factor 1 MHz	DIN 53483-2		0.02
Relative permittivity 50 Hz	DIN 53483-2		2.7
Relative permittivity 1 KHz	DIN 53483-2		3.1
Relative permittivity 1MHz	DIN 53483-2		2.7

Resistance to chemicals
CRYLUX® Vision sheets are – at room temperature – resistant to saturated hydrocarbons, aromatic free fuel and mineral oils, vegetable and animal fats and oils, water, aqueous salt solutions as well as diluted acids and alkalis. Aromatic hydrocarbons and hydrogen chlorides, ester, ether and ketones attack CRYLUX® Vision.

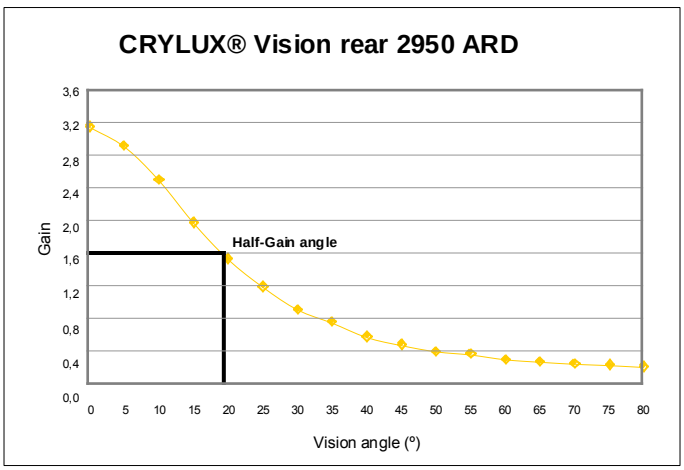
6. COLOUR RANGE

- **Gain Data:**

Gain is a measure of the brightness of a screen compared to a standard white matt screen1. In frontal projection, the reflected light is measured. For rear projection, light transmission is measured.

Product	Reference	Gain
CRYLUX® Vision front	3014 ARD	1
CRYLUX® Vision rear	2950 ARD	3, 2:1
CRYLUX® Vision rear	2950 MAT	6:1
CRYLUX® Vision through	2051	8:1

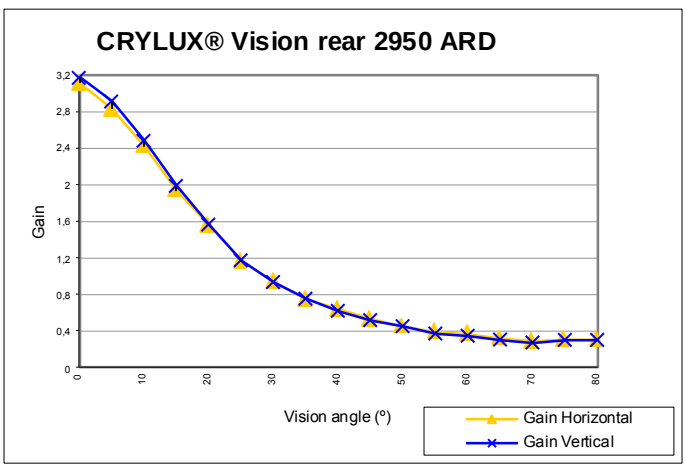
- **CRYLUX® Vision rear:**



NOTE: the curve is symmetrical for negative angles.

- **Visual angle:**

Horizontal and vertical visual angle is the same due to the homogeneous satin surface. Visual angle is defined as the angle where gain value has been reduced by half (Half-Gain angle).



1 Normally reference screen is a block of Magnesium Carbonate. In this case, measures have been done taking as reference CRYLUX 3014 ARD (Departament d'Òptica, UAB)

- **Contrast**
  Contrast value depends on the ambient light. We show some values obtained with a 2500W power projector with a CRYLUX® Vision rear 2950ARD screen:

  - 400:1 (dark room)
  - 50:1 (high ambient lighting)

- **Image quality/resolution:**

Image quality depends on the projector used. The lower the thickness of the screen, the better the quality of the image (4mm thickness is optimal when allowed by the installation).

- **Screen brightness:**

Due to its matt surface, CRYLUX® Vision avoids reflections produced by external lighting.

Matt finish	Gloss (60°) ASTM D2457
CRYLUX® ARD	10
CRYLUX® MAT	10

- **Maximum size:**

- Aspect ratio 4:3 — 2706 x 2030 mm (133” screen)
- Aspect ratio 16:9 — 3050 x 1716 mm (138” screen)

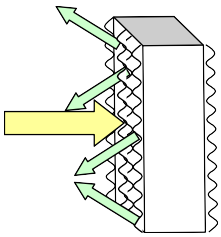
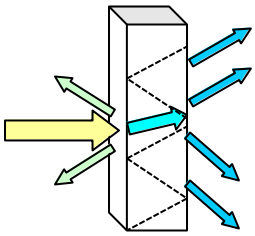
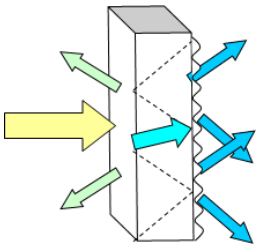
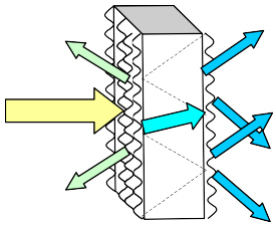
NOTE: Sheets are supplied in dimensions 3050 x 2030 mm.

	Height (mm)	Width (mm)	Diagonal (in)	Screen weight (kg)		
				Screen thickness		
				4 mm	5 mm	6 mm
Format 4 :3	750	1000	49.2”	3.6	4.5	5.4
Format 4:3	1500	2000	98.4”	14.3	17.8	21.4
Format 4:3	1800	2400	118.1”	20.6	25.7	30.8

	Height (mm)	Width (mm)	Diagonal (in)	Screen weight (kg)		
				Screen thickness		
				4 mm	5 mm	6 mm
Format 16:9	625	1111	50”	3.3	4	5
Format 16:9	1250	2222	100”	13.2	16.5	19.8
Format 16:9	1500	2666	120.5”	19	23.8	28.6

All technical data measured on a 4 mm thickness screen.

6. COLOUR RANGE

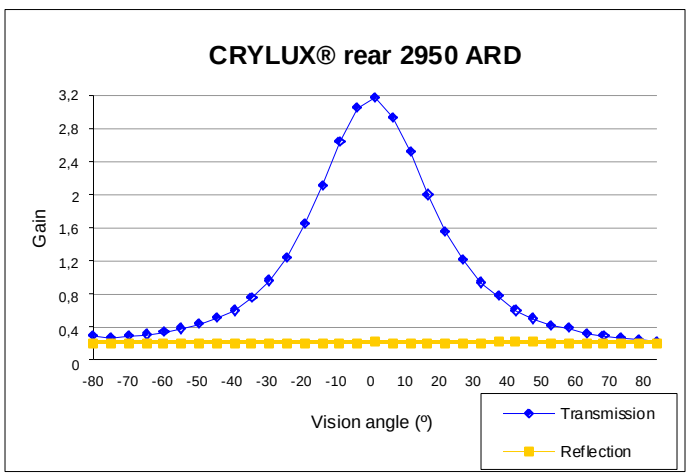
Front 3014 ARD	Through 2051	Rear 2950 MAT	Rear 2950 ARD
			
☐ 96% LR	☐ 85% LT	☐ 69.5% LT	☐ 63.5% LT

Values of light transmission/light reflection for a standard in 4 mm.

8. SPECIAL RECOMMENDATIONS

In order to optimise the performance of CRYLUX vision, the following points should be noted:

- Due to the special properties of transmission/reflection of CRYLUX® Vision 2950 ARD, images can be seen on both sides of the screen. By projecting onto one side, images would be inverted on the opposite side. Therefore, CRYLUX® Vision 2950 ARD should only be used for double side projection where no text is present in the images. In any case, the quality of the image is always better on the opposite side to the projector side.



- **Maximum size:**
  - Aspect ratio 4:3 2706 x 2030 mm (133” screen)
  - Aspect ratio 16:9 3050 x 1716 mm (138” screen)

- Distance from the projector to the screen depends on the screen size and the projector itself. As illustrative values:

Screen size	Distance
50”	1.500-2.000mm
100”	2.600-4.500mm
120”	2.600-5.000mm

- The projection distance can be reduced by the use of special optical quality mirrors. Conventional mirrors are not suitable as they will produce double images. First surface or front surface mirrors need to be used (float glass flatness, optical grade, 94% reflective). Each mirror can reduce the projection distance by half.

- The contrast of an image displayed by CRYLUX® Vision depends on the ambient lighting and the power and quality of the projector. For these reasons, the values included in this technical catalogue are only illustrative.

- As a rule of thumb, the following indications should be considered when installing a projection screen: Viewers: should be placed at a distance between 1.5 to 2 times the width of the screen. Viewers' line of vision: should be 1/3 of the height from the bottom of the screen.

  These are only illustrative data; space considerations will determine actual distances.

- CRYLUX® Vision can be laser cut to almost any shape - allowing designers to break free from the usual rectangular viewing screen format.

- CRYLUX® Vision can also be curved, giving further design possibilities and widening visual angle.

For information not included in this catalogue, please contact our technical department.

Note: These technical data of our products are typical ones; the actually measured values are subject to production variations.