CRYSTAL STRUCTURES™
commercial division of sunshine rooms inc. Since 1980

1. **Product Name**
   SkyView 40 Wall Systems

2. **Manufacturer**
   Crystal Structures, division of Sunshine Rooms, Inc.
   3333 N. Mead
   Wichita KS 67219
   800.222.1598 316.838.0033

3. **Product Description**

BASIC USE

Crystal Structures offers the SkyView 40 translucent wall system for the primary purpose of creating a cost-effective method to build an energy-efficient, structural wall that allows translucent (diffused) light to enter into a designed space. Typically used in large open buildings that are traditionally dark and difficult to illuminate. Commercial building applications include manufacturing and maintenance facilities, warehouses, schools, gymnasiums, and large hallways; often in clerestory configurations.

BENEFITS

SkyView 40 panels can reduce energy and lighting costs while creating a comfortable ambience within a building. Panels come in widths of 19 11/16". Lengths and heights are customized to fit job site requirements. The polycarbonate panels are virtually unbreakable and should be considered in high crime or heavy hail areas.

COMPOSITION AND MATERIAL

The panels are co-extruded with a high performance UV coating on all surfaces to ensure excellent protection against UV rays. Standard color options are clear, white (opal), and bronze.

IR CO-EXTRUSION

The glazing panels can be co-extruded with an infra-red (IR) treatment that absorbs part of the light relative to the IR rays (from 780 to 1400nm). This effectively blocks the solar heat, while letting the solar light through. The result is a reduction of the internal transmission of heat and a reduction of the cost for cooling the area. Based

on test runs, it can be evaluated that the panels with the protective IR filter can reduce internal heating by around 25% compared to the same color panel without the IR co-extrusion.

All gaskets are UV stabilized Santoprene™ with a low friction surface composition that allows the polycarbonate to expand and contract within the framing system.

The perimeter frame is thermally broken aluminum to help support the superior R-Value performance of the panel system.

ACCESSORY FRAMING SYSTEM

LEED CREDITS

SkyView 40 wall panels are an ideal project for projects striving to achieve LEED Certification. The product is more energy efficient, more durable and requires less maintenance than similar products. It contains pre and post-consumer recycled content and is almost 100% recyclable. Achievable points include the following:

Sustainable Sites:

SS Credit 7.1 - Reduce heat islands , non roof.

SS Credit 7.2 - Reduce heat islands, roof.

SS Credit 8 - Light pollution reduction.

Energy and Atmosphere:

EA Credit 1 - Optimize energy performance.

Materials and Resources:

MR Credit 4 - Recycled and recyclable content

MR Credit 5 - Local / Regional materials

Indoor Environmental Quality:

EQ Credit 4 - Low-E emitting materials

EQ Credit 6 - System Controls

4. **Techical Data**

ENERGY & LIGHTING PERFORMANCE

See Table 1 below.

STRUCTURAL & LOADING PERFORMANCE
All systems will be designed to meet or exceed the loading

Table 1. ENERGY AND LIGHTING PERFORMANCE*

SKYVIEW 40	Daylight Transmission	Solar Heat Gain	Shading Coefficient	U-Value
Clear	67%	0.68	0.78	0.188
Opal	30%	0.45	0.52	0.188
Bronze	45%	0.50	0.57	0.188
Clear w/ IR	41%	0.35	0.40	0.240
Opal w/ IR	26%	0.24	0.75	0.260

*Values are estimated for the center of panel, based on individual panel testing calculations and computer analysis.

requirements called for per specific project. Contact our technical support department for additional information and assistance.

APPLICABLE STANDARDS & TESTING
Policarbonate panels have been tested to the following specifications.

ASTEM D638-03 - Tensile properties of plastic.

ASTM E84-01 - Standard flame spread test. Meets Class-A standards

ASTM D635-98 - Standards for rate of burning.

ASTM G154-04 - Standard practice for operating fluorescent light and UV exposure.

ASTM E308-01 - Test method for computing colors of objects by using the CIE system.

ASTM E133-96 - Reflectance factor and color by spectrophotometer

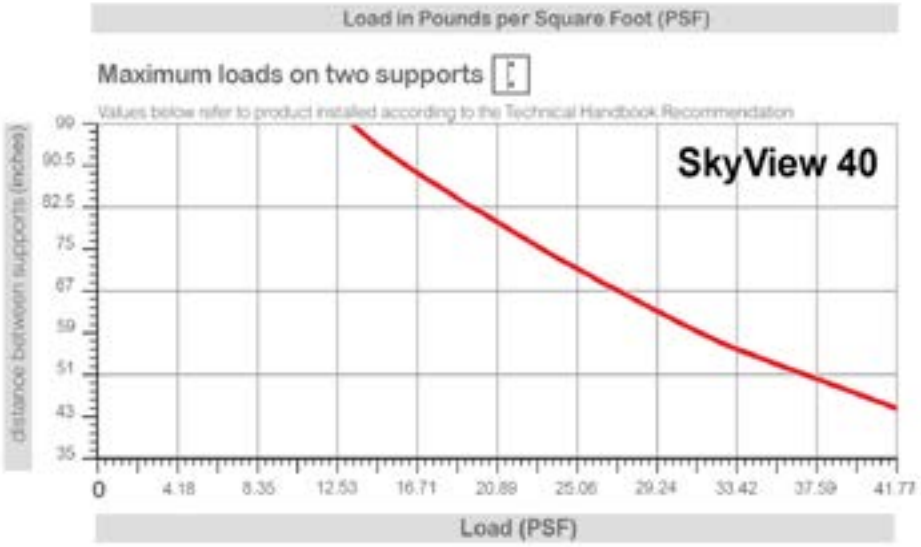
ASTM D790-03 - Test method for flexural properties of unreinforced and reinforced plastics.

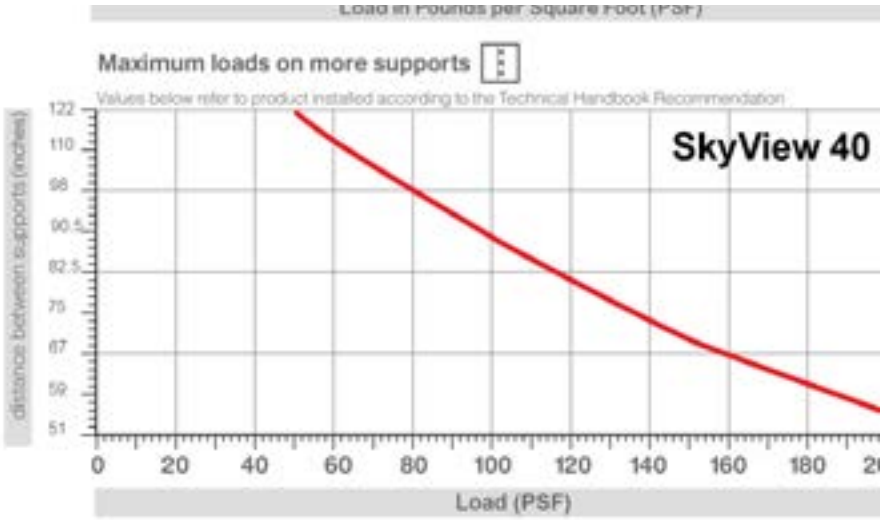
Aluminum framing members and components have been extruded to meet or surpass the following standards and tests.

ASTM B221 - Standard specification for aluminum extrusions

ASTM B209 - Standard specification for aluminum extrusion in mill finish

ASTM F593-01 - Standard specification for stainless





steel screws
ASTM D471-01 - Standard test for rubber properties.

The SkyView 40 system will meet or exceed the following specifications.

ASTM E3331-00 Water penetration resistance

ASTM E283-04 Air filtration

ASTM E330 - Uniform load and structural test pressure.

5. Installation

PREPATORY WORK
All areas must be clean, dry and structurally sound. All surrounding areas must be square, level, plumb, and prepared as described within the job specific shop drawings that will be provided. The wall blocking must be designed to resist the transferred loads from the glazing system.

STORAGE & HANDLING
Store all materials in a dry, safe space protected from inclement weather. DO NOT store panels in direct sunlight or high heat conditions. Supported, sloped stacking recommended, but panels may be stacked up to 3' high on flat, even, supported area. Do not remove packaging materials until you are ready to install the panels. Remove protective film after complete installation (pull film's edges back during installtion). Do not open boxes using sharp knives, box cutters, etc.

INSTALLATION
Install panels and system according to the job specific shop drawings. There shall be no cutting or drilling of the panels during installation. Panels should be installed with the fluted cells in a vertical position. The general sequence of installation is as follows:

1. Install flashing at perimeter.
2. Install base frame after caulking accordingly.
3. Insert panels.
4. Attach perimeter pressure cap and cover.
5. Be sure weep holes and covers at sill are clear of debris and not caulked over.

Final cleaning shall be done using a mild soap and lukewarm water. Harsh chemicals and solvents should never be used on the polycarbonate. See the maintenance section for more information.

6. Availabilty and Costs

AVAILABILITY
SkyView 40 panels and systems are manufactured in Wichita, Kansas and are available throughout the world on a per project basis. Product(s) is designed, manufactured, packaged, shipped, and installed per project specifications. Most projects are sold and installed by the company. To obtain additional information, please contact the company directly.

COST
Product is competitively priced. Design and structural capabilities of the product allows many projects to reduce related

building costs in the areas of steel, masonry, lighting and etc. Contact the manufacturer for estimating and pricing.

7. Warranty

   POLYCARBONATE
   The polycarbonate panels are warranted by the manufacturer for 10 years against breakage and yellowing per light transmission and a 15 year warranty index per ATSM E 313-00.

   RELATED COMPONENTS
   Panels are warranted for 10 years against deliminating and surface finishes of the framing system. Installations are warranted for 5 years against leakage because of improper manufacturing or installation. Contact the manufacturer for complete warranty information.

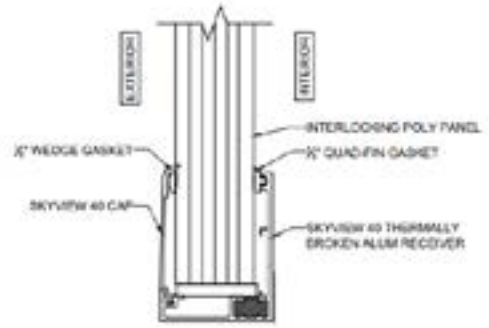
8. Maintenance
   Polycarbonate panels should be cleaned using a mild soap and lukewarm water. Use only a soft cloth or clean sponge for cleaning tools . Do not scrub or scrape plastic with abrasive or sharp objects.

   Many chemicals are harmful to the polycarbonate panels or the UV coatings. Read the cleaning instructions carefully before cleaning.

   Panels and system should be checked periodically to ensure weepage system is working properly. In regions that have high dust and other airborne impurities, we recommend regular cleaning schedules.

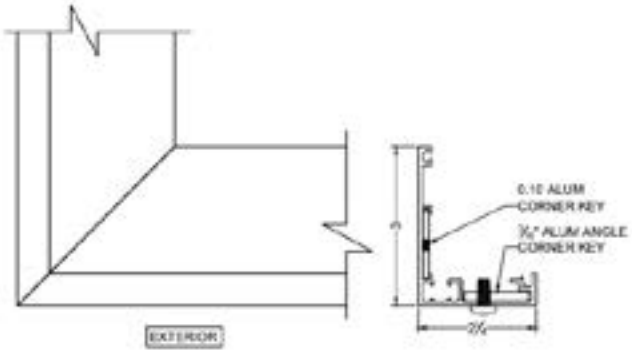
9. Technical Services
   Complete technical and design assistance is available from the company.

10. Filing systems
    Sweets Source
    Reed Construction Data/ Smart Building Index
    Construction Data/Smart Building Index
    Arcat



-/1 TYP. FRAMING

SCALE: 3/8" = 1"



-/1 FRAME CORNER (TYP)

SCALE: 3/8" = 1"