



Your Clear Choice

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SKYLITES • SUNROOMS • RAILINGS

SPECIFICATIONS: SECTION 8630 – METAL FRAME SKYLIGHTS

PART 1 – GENERAL

1.1 Scope

- A. This section covers all work necessary to the execution and completion of skylight(s) as shown on drawings and specified herein.
- B. Work includes but is not limited to the following: design, fabrication, glazing, and erection of skylight(s) as required to make a complete and watertight installation.

1.2 Submittals

- A. Submit full scale shop drawings indicating methods of construction, location and spacing of anchorage, joinery, finishes, size, shape, thickness of framing members, relationship to adjoining work and glazing materials used.
- B. (If required) Submit structural calculations by a structural engineer licensed in the state. Calculations must demonstrate compliance with the structural requirements of these specifications.
- C. Submit samples of each type of glazing material and finish as required by architect.

1.3 Approved Manufacture

- A. The drawings and specifications are based on products manufactured by:

CrystaLite, Inc.
3307 Cedar Street
Everett, WA 98201
Phone: (800) 666-6065
Fax: (425) 258-6734

- B. Product substitutions of other manufacturers proposed as equivalent must be submitted with supporting technical data, samples and engineering calculations for written architectural approval ten days prior to bid date.

1.4 Structural Design

- A. Skylight structural members shall be designed for the following loads:

Fill in per local code requirements.

- B. Deflections in structural members shall be limited to L/175 under fully loaded conditions, per ASTM E 330 at 150% of positive and negative wind load design pressures for a duration required by design wind velocity without assembly evidencing material and deflection failures or permanent deformation of structural members exceeding 0.2% of span. Compliant to International Building Code 2006, section 2405 Sloped Glazing and Skylights.
- C. Air infiltration per ASTM E 283. Air leakage shall not exceed 0.06 cfm/sq. ft. of assembly surface when tested with a pressure of 6.24 psf. Compliant to IECC 402.4 Air Leakage.
- D. Water penetration per ASTM E 331. No water penetration when tested with a pressure differential of 6.24 psf. System designed to drain migrating moisture occurring from condensation to exterior through weep drainage network. Compliant to International Building Code 2006, section 1403.2 Weather Protection

1.5 Warranty

- A. All CrystaLite glass skylights are warranted against manufacturer's defects in materials and workmanship for a period of ten years from date of purchase. All acrylic skylights are warranted for a period of five years from date of purchase. Defects include: structural failures, sealant failures, system performance requirement failures, deterioration of metals, metal finishes, and other materials beyond normal weathering, water leakage (defined as uncontrolled water appearing on normally exposed interior surfaces of skylights from sources other than condensation. Water controlled by flashings and gutters and drained back to exterior so not to damage adjacent materials or finishes is **not** water leakage.) Warranty replacement unit will be remanufactured in the same size and description as the original unit only. Warranty does not include removal of defective unit or installation of replacement unit. Warranty time period will remain in effect from the original date of order. Warranty orders will be chargeable items, and the proper credit will be given upon return and inspection of original item.

- B. Glazing materials shall be warranted against seal failure, delamination or defects in manufacturing per the standard warranty offered by the glazing manufacturer.
- C. Flat glazed skylights mounted on slopes less than 2/12 pitch or 9.46° shall void all warranties.

PART 2 – PRODUCTS

2.1 Materials

- A. Aluminum:
 - 1. Aluminum extruded components shall be alloy 6063-T5 or 6063-T6, of sufficient thickness for this application, and as required per structural calculations. ASTM B 221
 - 2. Aluminum sheet and plate shall be alloy 5052-H32 per ASTM B 209.
- B. Glazing Materials:

CrystaLite can supply almost any variation or combination of glazing products. If you have a special requirement, please contact our sales department.

 - 1. 1” overall dual seal silicone insulated glass units. Made up of (clear, bronze, white, other) tempered glass exterior, airspace (or argon filled airspace) and clear laminated glass interior. Glass thickness as required by the span and loads.
 - 2. Polycarbonate Multi-wall sheet. Color shall be (clear, bronze, white, other). Thickness as required by the span and loads. Fire Rating per application.
 - 3. Polycarbonate Monolithic (extended life) sheet. Color shall be (clear, bronze, opal, other). Thickness as required by the span and loads. Class CC1 Fire Rating.
 - 4. Acrylic sheet. Shall be used in all heat formed dome and pyramid shaped skylights. Color shall be (clear, bronze, grey, other). Thickness as required by the span and loads. Class CC2 Fire Rating
- C. Fasteners:
 - 1. Exterior fasteners and fasteners exposed to wet areas in frame shall be 300 series stainless steel per ASTM 193/A 193M, except pop rivets used on glazing cap are aluminum or stainless steel per manufacturer.
 - 2. Dry area fasteners shall be cadmium-plated steel per ASTM F 1135 or stainless steel.

- 3. All welding shall be by the TIG process. All exposed welds to be finished to match frame color where practical.
- D. Glazing Accessories:
 - 1. Glazing tapes per ASTM D 1667, 2240, 412, 925; ASTM C 518; NPT 11, 5, 57 Thermal Bond V 2100 high strength polyurethane foam substrate double sided tape. All other gaskets, setting blocks, and other materials used in glazing shall be of a type, quality and compatibility to provide performance of the skylight(s) covered in this section.
 - 2. Silicone sealant per CAN/CGSB 19.13-M87; TT-S-001543A/ASTM C 920, Type S, NS, Class 25 use NT, G, A&O test requirements.

E. Exposed Aluminum Finish

- 1. Class II color anodic finish per AA_M12C22A32/A34 complying with AAMA 611. Mechanical finish non-specular as fabricated. Chemical finish etched medium matte. Anodic coating architectural Class II integrally colored or electrolytically deposited color coating 0.4 mil or thicker.

2.2 Fabrication

- A. Skylight(s) shall be factory fabricated and preassembled in largest size assemblies possible with considerations for shipping and jobsite handling.
- B. Skylight(s) shall have properly designed weep systems for drainage to exterior.

PART 3 – EXECUTION

3.1 Installation

Framing shall be installed and glazed by experienced workmen in accordance with the approved shop drawings, manufacturer’s instructions and glazing standards.

3.2 Final Cleaning and Protection

Subsequent to installation of skylight(s) the General Contractor shall be responsible for the cleanup and protection of all materials provided per this section, including, but not limited to glazing materials and framing members. No abrasive materials of any kind shall be used in cleaning of skylight surfaces.