



An AIA Industries Company

DÄLYTE

an AIA Industries Company

290 E 56th Avenue

Denver, CO 80216

Phone: (303) 296-9696

www.dalyteusa.com

SECTION 08 63 00 METAL FRAMED SKYLIGHTS

DÄLYTE Infinite Sky Structural Skylight System

PART 1 - GENERAL

1.01 SCOPE

- A. Design and fabrication of entire skylight system to include all extruded aluminum framing, anchors, and metal flashings.
- B. Glazing and glazing materials including gaskets, sealants, setting blocks, backer rods, and related materials.
- C. Finish on metal components.

1.02 RELATED WORK

- A. Section 05120: Structural Steel.
- B. Section 05500: Metal Fabrications.
- C. Section 07620: Sheet Metal Flashing and Trim.
- D. Section 08800: Glazing.

1.03 REFERENCES

- A. American Architectural Manufacturers Association (AAMA).
- B. American Society for Testing and Materials (ASTM).
- C. Flat Glass Manufacturers Association (FGMA).



An AiA Industries Company

1.04 PERFORMANCE REQUIREMENTS

- A. Skylight system shall be designed to support loads as specified by local building codes for the location of the project, described and/or specified herein as:
 - 1. Loading:
 - a. Wind Load.....120mph
 - b. Dead Load.....3.00 PSF
 - c. Live Load.....30.00 PSF
 - 2. The maximum allowable deflection of any framing member normal to the plane of the glass shall not exceed L/175 per IBC.
 - 3. Manufacturer's system shall meet or exceed all performance standards as outlined by the following tests:
 - a. ASTM E 283
 - b. ASTM E331 & AAMA 501(water penetration)
 - c. AAMA 1502.7 (condensation resistance)
 - 4. Thermal movement of system caused by ambient temperature ranges of ± 70 degrees F without causing buckling, undue stress on structural elements, stresses on glass, failure of seals, performance reduction or other detrimental effects.
 - 5. Thermal Transmittance (U-Factor): Fixed glazing and framing areas shall have U-factor of not more than 0.55 Btu/sq. ft. x h x deg F as determined according to NFRC 100.

1.05 SUBMITTALS

- A. Shop drawings as required to fully describe the skylight system shall be submitted and approved by the architect prior to starting any fabrication.
- B. Finished aluminum samples (color charts or range samples), and glazing samples shall be submitted and approved by the architect prior to starting any fabrication.
- C. Submit manufacturer's written warranty as outlined in paragraph 1.07 of this specification.

1.06 QUALITY ASSURANCE

- A. The skylight manufacturer shall be responsible for the design and fabrication of the skylight assembly.
- B. Substitute manufacturer's will be considered only when all of the following conditions have been satisfied:
 - 1. Alternate manufacturer's must be approved by architect to bid not less than twenty (20) days prior to bid date.
 - 2. Detailed drawings for alternate skylight system are submitted to architect for review.
 - 3. Structural calculations, showing sizes of framing members and loads applied to the support structure, based on the design loads of this specification are submitted for review.
 - 4. Prospective manufacturer's must furnish evidence of their ability to perform, including a list of projects of similar design and complexity within the last ten (10) years.
 - 5. Prospective skylight systems must be manufactured by a firm with a minimum of ten (10) years' experience in the fabrication and installation of custom aluminum framed skylights.



An AiA Industries Company

1.07 WARRANTY

- A. The skylight system shall be warranted for a period of one (1) year after substantial completion against defects in materials and workmanship.
- B. All glazing shall be warranted pursuant to the glazing manufacturer's standard 10-year warranty.
 - 1. Glass breakage is not covered by these warranties.
- C. All aluminum finishes are warranted pursuant to manufacturer's standard 10-year warranty.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- A. Basis of Design Manufacturer:
 - 1. **DALYTE Skylights**
 - a. **Infinite Sky Structural Skylights**
 - 2. Substitutions: See Section 01 6000- Product Requirements

2.02 MATERIALS

- A. Components:
 - 1. Structural Skylight System: Insulated laminated glazing with extruded aluminum pressure bar framing, shop fabricated, battens, hidden fasteners, related flashings, anchorage and attachment devices.
- B. Glazing Material:
 - 1. Vitro Solarban Low-E Insulated:
1/4" Tempered Low-E (SB-60, 70, 90, R100) / air space / 5/16" heat-strengthened laminated (1/8" HS + .060" PVB + 1/8" HS)
 - 2. Viracon Low-E (VE-__) Insulated Tempered over Laminated Glass
 - 3. Gallina Structural Polycarbonate sheet (16mm, 25mm, 40mm) (3-wall, 7-wall) (clear, bronze, opal, custom color. IR, matte)
- C. Finishes:
 - 1. All exposed aluminum shall receive one or more of the following finishes (architect to select):
 - a. Manufacturer's standard Class 1 Dark Bronze or Clear anodized
 - b. AAMA 2604 Powder Coat (Selected from manufacturer's standard color)
 - c. AAMA 2605 70% KYNAR (Selected from manufacturer's standard color)
- D. Framing members:
 - 1. Extruded aluminum shall have minimum mechanical properties equal to or greater than 6063-T6 alloy and temper.
 - 2. Snap on covers and miscellaneous non-structural trim shall be the minimum thickness recommended by the manufacturer



An AiA Industries Company

E. Flashing:

1. All formed aluminum sheet shall be the required alloy and temper to make compatible with the specified finish, with a minimum thickness of .040".
2. Aluminum sill flashing to be provided by manufacturer.

F. Fasteners and Anchors:

1. Fasteners shall be stainless steel or zinc coated, unless otherwise noted.

G. Glazing Gaskets:

1. Extruded black EPDM. meeting or exceeding the following:
 - a. Hardness (Shore A) = $50 \pm$ durometer
 - b. Tensile strength = 2000 psi
 - c. Elongation = 50%

H. Sealants:

1. Selection of sealants shall be the responsibility of the skylight manufacturer.
2. All surfaces shall be cleaned and primed within the sealant manufacturers guidelines.

2.03 FABRICATION

- A. Skylights shall be shop fabricated to the greatest extent possible.
- B. All welding shall be done by inert gas process, exposed welds to be ground and sanded smooth.
- C. System to be fabricated using integral condensate gutters and weep systems allowing any water penetration to drain to the outside.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. General: Comply with manufacturer's written instructions.
- B. DALYTE may authorize a third party to install the skylight.
- C. Prior to installation, installer, shall notify the general contractor of obvious deficiencies or dimensional errors in the support system and/or construction. No installation work shall proceed until all errors and deviations are corrected. Written authorization may be given to proceed with the as-built construction along with any price corrections.
- D. ADJACENT AND SUPPORT CONSTRUCTION MUST SUPPORT FORCE IMPOSED BY SKYLIGHT SYSTEM.
- E. Skylight materials shall be installed in strict accordance with manufacturer's installation instructions and drawings.
- F. Install skylights plumb, level and true to line, without warp or rack of frames or panels and anchor securely in place in accordance with approved shop drawings.



An AiA Industries Company

- G. Contact areas between dissimilar metals shall be isolated with a protective coating or plastic strip to prevent electrolytic corrosion.
- H. Upon completion of installation, installer shall remove all labels, part number markings and excess sealants from skylight components. Weep system shall be clear of any and all obstructions.

3.02 FINAL CLEANING

- A. Final cleaning and physical protection of all installed materials shall be the responsibility of the general contractor.

END OF SECTION