



SECTION 08620
SKYMAX MODEL (GSM) GLASS GLAZED UNIT SKYLIGHT

PART 1-GENERAL

1.1 SUMMARY

- A. This section includes the following:
 - 1. Curb-mounted insulating glass glazed unit skylights.
 - a. Model GSM with 1 1/16" insulating glass
- B. Related Sections: The following sections contain requirements that relate to this section:
 - 1. Division Six Section "Rough Carpentry" for wood curbs and nailers.
 - 2. Division Seven Section "Roof Accessories" for curbs, roof hatches, and smoke vents.
 - 3. Division Seven Section "Flashing and Sheet Metal" for metal flashing for skylights.
- C. Refer to roofing system sections for roofing accessories to be built into the roofing system to accommodate work of this section.

1.2 PERFORMANCE REQUIREMENTS

- A. General: Provide unit skylights capable of withstanding loads as defined by the local codes having jurisdiction where units are to be installed without failure.
- B. Units shall be tested to compliance with AAMA\WDMA\CSA\101\I.S.2\A440 as required by the International Building Code.
- C. Provide units tested to AAMA\WDMA\CSA\101\I.S.2\A440 with the following rating:
SKG-PG80 1803 x 1803 (71 x 71).

1.3 SUBMITTALS

- A. Product Data Sheet: For each type of skylight specified, include details of construction and installation, relative to applicable roofing materials.
- B. Samples for Selection: Manufacturer's color charts showing a full range of colors available for each type of skylight glazing and aluminum finish.

1.4 WARRANTY

- A. General: Warranties specified in this section shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.
- B. Skylight Warranty: Provide written warranty signed by manufacturer, agreeing to repair or replace work that exhibits defects in materials or workmanship and guaranteeing weather-tight and leak-free performance. "Defects" is defined as uncontrolled leakage of water and abnormal aging or deterioration.

- 1. Warranty Period: 2 years from date of Substantial Completion.

- C. Glass Warranty: Provide written warranty signed by manufacturer agreeing to repair or replace work that has or develops defects in the insulating glass. "Defects" is defined as seal failure or delamination.
 - 1. Warranty Period for Insulating Glass: 5 years from date of Substantial Completion.
- D. Finish Warranty: Provide written warranty signed by manufacturer agreeing to repair or replace work with finish defects. "Defects" is defined as peeling, chipping, chalking, fading, abnormal aging or deterioration, and failure to perform as required. **(EDIT AS REQUIRED)**
 - 1. Warranty Period for Anodized Finish: 1 year from date of Substantial Completion.
 - 2. Warranty Period for Powder Coat Finish: 5 years from date of Substantial Completion.
 - 3. Warranty Period for Kynar 500 Finish: 5 years from date of Substantial Completion. (10 and 20 years available if specified)

PART 2- PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by **VELUX America Inc.**, Greenwood, SC 29648; www.VELUXusa.com; (800) 878-3589, specifications@VELUXusa.com.
- B. Substitutions: Manufactures shall not be considered without prior approval in writing no later than ten (10) calendar days prior to bid. Substitute manufacturers must have been in the custom skylight business for not less than a period of 15 years and must submit to the Architect the following:
 - 1. List of similar projects successfully completed within the last five years.
 - 2. Proof of financial capability.
 - 3. Complete details of proposed skylight.
 - 4. Complete specifications for Architect's review.

2.2 MATERIALS

- A. Curb Frame: Bright white high performance PVC with neutral gray cap stock and minimum effective external wall thickness of 0.060 inch (1.5mm). Provide integral condensation gutter system with corners fully welded for waterproof quality.
- B. Retainer Frame: Extruded neutral gray aluminum alloy 6063-T5 (min). ASTM B 221 (ASTM B 221 M) with minimum effective thickness of 0.060 inch (1.5 mm).
 - 1. Curbs: Minimum 1 ½" wide field built or pre-fabricated curb (By Others)
- C. Thermal Break: Fabricate skylight units with thermal chambered PVC frame.
- D. Fasteners: Same metal as metals being fastened, or nonmagnetic stainless steel or other non-corrosive metal as recommended by manufacturer.

2.3 INSULATING GLASS SKYLIGHT UNITS

- A. General: Factory-assembled, curb-mounted unit consisting of insulating glass, gasketing, and inner frame designed to mount on separate curb.
 - 1. Products: Provide Model GSM meeting the requirements of this section.
- B. Curb: Minimum 1 ½" wide field built or pre-fabricated (By Others).
- C. Condensation Control: Fabricate skylight units with integral internal gutters to collect condensation.
- D. Thermal Break: Fabricate skylight units with thermal chambered PVC.
- E. Shape and Size: As indicated by model number. Custom sizes available, not to exceed 32 SF.
- F. Insulating Glass: 1 1/16" IG comprised of a ¼" tempered SB70XL on #2 surface, 3/8" air, and an inner pane of clear heat strengthened laminated glass.
- G. Optional 1 1/16" insulating glass available. Contact manufacturer.

2.4 FABRICATION

A. Framing Components: As follows:

1. Factory fit and assemble components.
2. Fabricate components that, when assembled, will have accurately fitted joints with ends coped or mitered to produce hairline joints free of burrs and distortion.
3. Fabricate components to accommodate expansion, contraction, and field adjustment, and to provide for minimum clearance and shimming at skylight perimeter.
4. Fabricate components to ensure that glazing is thermally and physically isolated from framing members.
5. Fit and secure PVC frame joints by thermal welding.
6. Fit and secure aluminum retainer joints with corner keys.

2.5 ALUMINUM FINISHES (EDIT AS REQUIRED)

A. General: Comply with NAAMM “Metal Finishes Manual” recommendations for application and designations of finishes.

B. Finish designations prefixed by AA conform to the system for designations of aluminum finishes established by the Aluminum Association.

1. Mill Finish: Manufacturer’s standard mill finish.
2. Clear-Anodized Finish, Class I: AA-C22A41 complying with AAMA 611.
3. Clear-Anodized Finish, Class II: AA-C22A31 complying with AAMA 611.
4. Color –Anodized Finish Class I: AA-C22A42/A44 complying with AAMA 611.
Color: _____
5. Kynar Fluoropolymer Two-Coat System: (70% PVDF) complying with AAMA 2605.
Color: _____ (3coat and 4 coat available)
6. Powder Coat High-Performance Architectural Coating: comply with AAMA 2604.
Color: _____

PART 3- EXECUTION

3.1 EXAMINATION

- #### A. Examine substrates and conditions, with installer present, for compliance with requirements for installation tolerances and other conditions affecting skylight performance.
1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- #### A. General: Comply with manufacturer’s written instructions for protecting, handling, and installing skylight components.
- #### B. Coordinate with installation of roof deck and other substrates to receive skylight units.
- #### C. Coordinate with installation of vapor barriers, roof insulation, roofing, and flashing as required to assure that each element of the work performs properly and that combined elements are waterproof and weather tight. Anchor units securely to supporting structural substrates, adequate to withstand lateral and thermal stresses as well as inward and outward loading pressures.
- #### D. Counter Flashing: Where counter flashing is required as component of the skylight, install to provide an adequate waterproof overlap with roofing or roof flashing (as counter flashing). Seal with thick bead of mastic sealant, except where overlap is indicated to be left open for ventilation.

3.3 CLEANING AND PROTECTION

- #### A. Clean exposed metal and glass surfaces according to manufacturer’s instructions during installation. Touch up damaged metal coatings.
- #### B. Final cleaning by others.

END OF SECTION