

## SECTION 08620—UNIT SKYLIGHTS

### Dade County/FBC/TDI/Fall Protection Approved Model DCM & Maxim(um) Insulated or Thermally Broken & Insulated Curb 9” Height, 12” Height or Custom Height

#### PART 1: General

##### 1.01 Section Includes:

###### A. Scope:

This section includes everything necessary for and incidental to the execution and completion of the polycarbonate glazed unit skylight assembly as shown on all drawings and specified herein that is approved for, or complies with; Miami-Dade County, the 5<sup>th</sup> Edition of the Florida Building Code (v2014), the Texas Department of Insurance, and OSHA Fall Protection Guidelines.

###### B. Work Included:

Work included, and is limited to, the skylight materials only and includes the following:

1. Sealed double domed polycarbonate unit skylights complete with Maxim(um) insulated Curb; 1.75” thick with concealed 2X4 wood nailer and 1.5” polyisocyanurate insulation. Curb height to be 9” wall, 12” wall or height as specified. All curbs include an integral 3” counterflashing for anchoring to roof system as specified.

###### C. Related Work:

1. Division 7: Thermal & Moisture Protection.
2. Division 8: Windows & Doors.
3. Section \_\_\_\_\_ final cleaning.

##### 1.02 References and Approvals:

Architectural Testing, Inc., 130 Derry Court, York, PA 17402 – **REPORT#: D1032.01-801.18**

**Performance Protocols: TAS 201, TAS 202, TAS 203**

Architectural Testing, Inc., 130 Derry Court, York, PA 17402 – **REPORT#: D1032.03-801.44**

**AAMA/WDMA/CSA 101/LS.2/A440-08 including: ASTM E283, ASTM E330, ASTM E331  
ASTM E547—Standard specification for windows, doors & skylights**

Miami-Dade County Building Code Compliance Office

**Product Control Notice of Acceptance (NOA): 15-0715.08**

Sheffield Plastics, Inc., 119 Salisbury Road Sheffield, MA 01257

**Product Control Notice of Acceptance (NOA): 12-0605.05**

PalRam Americas, Inc., 9735 Commerce Circle Kutztown, PA 19530

**Product Control Notice of Acceptance (NOA): 12-0110.04**

Florida Building Commission 2555 Shumard Oak Blvd., Tallahassee, FL 32399-2100

**2014 Version of the Florida Building Code (5<sup>th</sup> Edition): FBC Approval: FL #2418-R9**

Texas Department of Insurance 333 Guadalupe Austin, TX 78714-9104

**Texas Department of Insurance Evaluation Report SK-13 approved for use in all zones of the designated catastrophe area**

National Accreditation & Management Institute 11870 Merchants Walk Newport News VA 23606

**Product, Manufacturing and Quality Assurance Certification No.: NI009198 & NI009198A**

Construction Consulting Lab 1601 Luna Road Carrollton, Texas 75006 – **REPORT CCLI-13-106**

**OSHA Fall Protection Guidelines: OSHA 29 CFR 1910.23 & 1926.501 Fall Protection Protocols**

**Required for Roof Openings with no additional coverage/screen required**  
Architectural Testing, Inc., 130 Derry Court, York, PA 17402 – **REPORT#: D1032.02-801.18**  
**ASTM E1886-05; Missile Impact & Cyclic Pressure Differential**  
**ASTM E1996-05; Impact Performance Protocol for Wind Borne Debris in Hurricane Zones**  
Architectural Testing, Inc., 130 Derry Court, York, PA 17402 – **REPORT#: D1032.02-801.18**  
**ASTM F588 Type D Forced Entry Protection, (including UL972 forced entry glazing)**

1.03 Performance Criteria:

A. Impact Resistance:

Polycarbonate glazed unit skylights must meet the requirements of Protocol TAS—201-94. Impact resistance conforming to ASTM E1886 & ASTM E1996 Missile Level D, wind zone 4.

B. Static Air Pressure:

Polycarbonate glazed unit skylights must meet the requirements of Protocol TAS—202-94. Test Load = +120 psf/ -150 psf, Design Load = +40.0 psf/ -75.0 psf

C. Cyclic Wind Pressure Loading:

Polycarbonate glazed unit skylights must meet the requirements of Protocol TAS—203-94. Test Load = +120 psf/ -150 psf, Design Load = +40.0 psf/ -75.0 psf

D. Structural Loads:

Polycarbonate glazed unit skylights must meet the requirements of Protocol TAS—202-94; Test Load = +120 psf/ -150 psf, Design Load = +40.0 psf/ -75.0 psf

E. Cyclic Wind Pressure Loading:

Polycarbonate glazed unit skylights must meet the requirements of Protocol TAS—203-94; Test Load = +120 psf/ -150 psf, Design Load = +40.0 psf/ -75.0 psf

F. Forced Entry Protection:

Polycarbonate glazed unit skylights must meet the requirements of ASTM F588, including UL972 for all glazing materials.

1.04 Submittals:

A. Shop Drawings:

Submit \_\_\_\_\_ copies of manufacturers standard approval sheet for architects review and approval.

1.05 Warranty:

Skylight manufacturer shall provide a written warranty against defects in materials and workmanship for a period of five (5) years from date of installation for frame and finish, ten (10) years for polycarbonate glazing.

1.06 Manufacturer:

Dade Curb Mount skylight(s), with or without thermal break, frame as required shall be Maxim Industries, Inc. Model DCM and Maxim(um) Insulated Curb as manufactured by **Maxim Industries, Inc., 1630 Terre Colony Dallas, Texas, 888-222-4898** with sizes as shown on drawings. Thermal break shall be specified where required.

## **Part 2: Products:**

### **2.01 Materials:**

#### **A. Curb Mount or Thermal Break Curb Mount Frame:**

Curb mount frame shall be fabricated from 6063-T5/T6 extruded aluminum with a minimum thickness of .060 and include a condensation gutter. All corners shall be welded using the heliarc process. Thermal break curb mount frame with urethane filled pocket will be provided de-bridged by Maxim Industries, Inc.

#### **B. Maxim(um) Insulated Curb:**

Insulated Curb shall be fabricated from 3003 or 5052 alloy aluminum with a minimum .050 outer curb wall (.063" or .080" as required) and minimum .040 inner curb wall. Curb to be 1.75" thick with concealed 2X4 wood nailer and 1.5" polyisocyanurate insulation. Curb height to be 9" wall, 12" wall or height as specified. All curbs will include an integral 3" counterflashing for anchoring to roof system as specified. All corners shall be welded using the heliarc process.

#### **C. Makrolon SL UV Enhanced Polycarbonate Domes:**

Sheffield Makrolon SL® sealed Polycarbonate domes shall be double domes consisting of any combination of Clear (92% vlt), White (27% vlt), High Light Transmission White (74% vlt), Bronze (25% vlt), Light Gray (50% vlt), or Dark Gray (25% vlt). Domes shall be secured to frame with a fully welded extruded aluminum retaining angle with a minimum thickness of .060 and maximum of .125" as required.

#### **D. Aluminum Finish:**

All exposed aluminum to be Mill Finish, Clear Anodized, Bronze Anodized, or Powder Coated. Custom colors as selected by architect. Powdercoat finished meet or exceed the following ASTM and AAMA standards: Gloss: ASTM D-523, Adhesion: ASTM D-3359, Flexibility: ASTM D-522, Pencil Hardness: ASTM D-3363, Impact Resistance: ASTM D-279, Corrosion Resistance: ASTM G-85, Salt/Fog Spray: AAMA 2605 (4000 hrs), Humidity: ASTM D-4585

#### **E. Sealants:**

##### **1. Dow Corning 795 sealant:**

Dow Corning 795 structural sealant applied continuously around perimeter of skylight between 1.75" X 1.75" T6063 extruded aluminum retaining angle and Sheffield Makrolon SL® Polycarbonate top dome.

##### **2. Schnee-Morehead 5127 sealant tape:**

Schnee-Morehead 5127 Sealant Tape applied continuously between polycarbonate domes and polycarbonate bottom dome and T6063 extruded aluminum frame.

#### **F. Fasteners:**

All fasteners used in the factory assembly process shall be stainless steel. All fasteners and screws used for securing skylight to structure shall be by others and are recommended to be stainless steel.

### **2.02 Assembly:**

All skylights shall be factory assembled and factory glazed.

### **Part 3 Installation:**

#### **3.01 Site Inspection:**

Installer shall notify the architect, specifier or consultant of any structural or dimensional deficiencies immediately. No work shall proceed without the correction of all deficiencies or written authorization is given to proceed.

#### **3.02 Installation:**

Skylight shall be installed in strict accordance with drawings and/or details on Miami-Dade County Product Control Notice of Acceptance, The Florida Building Commission FBC approval drawings, The Texas Department of Insurance Evaluation Report, and installation drawings and instructions provided by Maxim Industries Inc. Any deviation must be within the product approvals and shall only be through written authorization from Maxim Industries, Inc. and approved by the architect, specifier or consultant.

##### **A. Sealants:**

No sealants shall be applied to aluminum if temperature is below 32 degrees F.

#### **3.03 Protection:**

Protection of skylights during construction shall be the responsibility of the general contractor or project manager. \*\*\*The protective masking on the exterior dome must not be exposed to sunlight and removed immediately after installation. Exposure of the masking to sunlight will permanently bond the masking to the dome and this is not covered under any warranty under any circumstance.

#### **3.04 Cleaning:**

##### **A. General Cleaning:**

Installer shall remove all protective coverings immediately from frames and/or domes and prevent exposure to sunlight or UV light and shall leave installation free from heavy debris and/or sealant markings.

##### **B. Polycarbonate Cleaning:**

Final cleaning must be in strict accordance with skylight and thermoplastic manufacturers recommendations and shall be by the general contractor or project manager. Cleaning instructions shall be located on manufacturers label. Thermoplastic cleaning instructions from Sheffield Plastics must be followed exactly and are available upon request.

**End of Section**