



SECTION 08871

TRANSITIONAL SOLAR CONTROL WINDOW FILM

(Clear when Wanted Tinted when Needed, Triggered by the Sun)

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. **PHOTOCHROMIC FILMS – (PCF), Models SFB70+, SFB60, SFB70 and SFB45.**

1.2 RELATED SECTIONS

- A. Section 08500 – Windows: Windows to receive Photochromic Transition Film
- B. Section 08600 – Skylights: Glass skylights to receive Photochromic Transition Film
- C. Section 08800 – Glazing: General Glazing Applications to receive Photochromic Transition Film
- D. Section 08900 – Glazed Curtain Walls: Curtain Walls to receive Photochromic Transition Film

1.3 REFERENCES

- A. ASHRAE - American Society for Heating, Refrigeration, and Air Conditioning Engineers; Handbook of Fundamentals.
- B. ASTM International (ASTM):
 - 1. ASTM D 1044 – Standard Method of Test for Resistance of Transparent Plastics to Surface Abrasion.
 - 2. ASTM E 84 – Standard Method of Test for Surface Burning Characteristics of Building Materials
 - 3. ASTM E 903 - Standard Methods of Test for Solar Absorbance, Reflectance and Transmittance of Materials Using Integrating Spheres.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.



- C. Selection Samples: For each finish product specified, two complete sets of color samples representing manufacturer's full range of available colors.
- D. Verification Samples: For each finish product specified, two samples representing actual product and color.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of FIVE (5) years' experience.

B. Installer Qualifications: All products listed in this section are to be installed by a single installer with a minimum of Three (3) years demonstrated experience in installing products of the same type and scope as specified.

1. Provide documentation that the installer is authorized by the Manufacturer to perform Work specified in this section.

2. Provide a commercial building reference list of 2 (#) properties where the installer has applied photochromic / transitional window film or similar with same installation process. This list will include the following information:

- a. Name and location of building or residence.
- b. The name and telephone number of a management contact or owner.
- c. Type of glass.
- d. Type of Transition film, which VLT and from which mfg?
- e. Amount of PCF film installed, pcs and total sqft.
- f. Dates of completion.

3. Provide a Glass Stress Analysis of the existing glass and proposed glass/film combination as recommended by the film manufacturer or verify no issues exist.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

- 1. Finish areas designated by Architect.
- 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
- 3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.



B. Store and dispose of hazardous materials, and materials contaminated by hazardous materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits, Must Be Clean, Dirt and Dust Free.

1.8 WARRANTY

A. At project closeout, provide to Owner or Owners Representative an executed current copy of the manufacturer's standard limited lifetime warranty against manufacturing defect, outlining its terms, conditions, and exclusions from coverage.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Architectural and Design Solutions, LLC

Db: Smart-Film- Blinds, which is located at: 5410 – Bldg. B Klee Mill Road, Sykesville, MD 21784 (844) 430-0281 or (443) 430-2984 info@smartfilmb blinds.com or smartfilmb blinds.com

B. Substitutions: Not permitted.

2.2 SFB-PCF (Applied Photochromic Transition Films)

A. SFB70+ (Dual Magnetron Sputtering)

1. VLT – 75% Max and 25% Min
2. UVR – 99%
3. SHGC – 0.47
4. TSER – 58%
5. IRR – 87%

B. SFB60 (Nano Ceramic)

1. VLT – 62% Max and 16% Min
2. UVR – 99%
3. SHGC – 0.43
4. TSER – 57%
5. IRR – 94%



C. SFB70 (Single Magnetron Sputtering)

1. VLT – 73% Max and 43% Min
2. UVR – 99%
3. SHGC – 0.44
4. TSER – 61%
5. IRR – 89%

D. SFB45 (Single Magnetron Sputtering)

1. VLT – 45% Max and 18% Min
2. UVR – 99%
3. SHGC – 0.43
4. TSER – 62%
5. IRR – 90%

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation. Site must be 100% free from dirt and dust!
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions. Use mild liquid detergent soap and water. Installation of SFB-PCF is the same as std. Window Films / Tints.

3.4 CLEANING AND PROTECTION

- A. Remove left over material and debris from Work area. Use necessary means to protect film before, during, and after installation, wipe clean with a lint free cloth.

END OF SECTION