Solarity® Solar Shades

- Bring balance to your space by controlling light and temperature without sacrificing your view
- A range of fabrics and colors are available to satisfy almost any need; choose from solar screen, high performance, translucent, and blackout fabric options
- All fabric options may contribute to LEED credits in EAc1 and EQc7 due to their high energy performance and daylighting attributes
- Digitally printed shades are available; a great option for signage or to add visual interest or architectural impact
Solarity® Solar Shades

Suggested Specification

SECTION 122413 - ROLLER WINDOW SHADES

PART 1 - GENERAL

1. RELATED DOCUMENTS
   A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY
   A. Section Includes:
      1. Manually operated roller shades with single or double rollers
      2. Motor-operated roller shades with single or double rollers
      3. Fixed roller shades for skylights.
   B. Related Requirements:
      A. Installer Qualifications: Fabricator of products.
      B. Furnish extra materials that match products
         1.6 MAINTENANCE MATERIAL SUBMITTALS
         1.5 CLOSEOUT SUBMITTALS
      B. Product Certificates: For each type of fabric panel
         1. Fabric Panel Material: Not less than 10 inches
            material, for tests performed by manufacturer and
            material, signed by product manufacturer.
         1.3 ACTION SUBMITTALS
         1.2 SUMMARY
         1.1 RELATED DOCUMENTS
         1. SHADOW PROJECTION: Do not install roller
            shades for service.
         1.9 FIELD CONDITIONS
         1.8 DELIVERY, STORAGE, AND HANDLING
         1.7 QUALITY ASSURANCE
         1.6 MAINTENANCE MATERIAL SUBMITTALS
         1.5 CLOSEOUT SUBMITTALS
         1.4 INFORMATIONAL SUBMITTALS
         1.3 ACTION SUBMITTALS
         1.2 SUMMARY
         1.1 RELATED DOCUMENTS
         A. Product Data: For each type of product.
            1. Include styles, material descriptions, construction
details, dimensions of individual components and profiles, features, finishes, and operating instructions for roller shades.
         B. Shop Drawings: Show fabrication and installation details for roller shades, including fabric panel materials, their orientation to rollers, and their seam and batten locations.
   B. Motor-Operated Shades: Include details of installation and diagrams for power, signal, and control wiring.
   C. Samples: For each exposed product and for each color and texture specified, 10 inches (250 mm) long.
   D. Samples for Initial Selection: For each type and color of fabric panel material.
      1. Include Samples of accessories involving color selection
   E. Samples for Verification: For each type of roller shade.
   F. Roller-Shade Schedule: Use same designations indicated on Drawings.
   G. Installation Accessories: From bottom fascia, unless indicated otherwise on the drawings.
   H. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to test quality standards for materials and execution.
   I. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
   J. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
   K. DELIVERY, STORAGE, AND HANDLING
      A. Deliver roller shades in factory packages, marked with manufacturer, product name, and location of installation using same designations indicated on Drawings.
      1.9 FIELD CONDITIONS
         A. Environmental Limitations: Do not install roller shades until construction and finish work in spaces, including painting, is complete and dry and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
   B. Field Measurements: Where roller shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operating hardware of operable glazed units through entire operating range. Notify Architect of installation conditions that vary from Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 Section 016000 "Product Requirements." MANUFACTURERS
   A. Manufacturers: Subject to compliance with requirements, provide products by the following:
      a. Solarity by Inpro Corporation
      b. Source Limitations: Obtain roller shades from single source from single manufacturer.
   2.2 MANUALLY OPERATED SHADES WITH SINGLE ROLLERS
   A. Chain-and-Clutch Operating Mechanisms: With continuous-loop bead chain and clutch comprised of multi-banded steel springs that stops shade movement when bead chain is released; permanently adjusted and lubricated.
   B. Bead Chains: Manufacturer's standard height required
   1) Color: [Bronze] [Black] [White] [Clear anodized] [Nickel] [Antique brass].
   C. Clutch Color: [Vanilla] [Black].
   D. Clutch Holding Capacity: [8 pounds (3.6 kg)] [16 pounds (7.3 kg)] [24 pounds (10.9 kg)] [30 pounds (13.6 kg)]
   E. Loop Length: Full length of roller shade
   F. Limit Stops: Provide upper and lower ball stops.
   G. Chain-Retainer Type: [Child-safety metal chain guide] [Child-safety locking chain guide]
   H. Springs: Manufacturer's standard for balancing roller-shade weight and lifting heavy roller shades.
   I. Provide for fabric panels that weigh more than 24 lb (10.9 kg) or for shades as recommended by manufacturer, whichever criteria are more stringent.
   J. Spring Operating Mechanisms: Roller contains spring sized to accommodate shade size indicated.
   K. Provide with positive locking mechanism that can stop shade movement at each half-turn of roller and with manufacturer's standard pull.
   L. Rollers: Corrosion-resistant steel or extruded-aluminum tubes of diameters and wall thicknesses required to accommodate operating mechanisms and weights and widths of fabric panels indicated without deflection. Provide with permanently lubricated drive-end assemblies and idle-end assemblies designed to facilitate removal of fabric panels for service.
   M. Roller Drive-End Location: Right side of inside face of shade, unless indicated otherwise on the drawings.
   N. Direction of Fabric Panel Roll: Regular, from back of roller.
   O. Fabric-Panel-to-Roller Attachment: Manufacturer's standard method.
      a. Provide fabric panels not less than 12 inches (300 mm) longer than desired shade height to assure solid attachment to roller tube and ability to adjust panels in field without removing mounting brackets.
   P. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.
   Q. Roller-Coupling Assemblies: Coordinated with operating mechanism and designed to join up to three inline rollers into a multiband shade that is operated by one roller drive-end assembly.
   R. Fabric Panels:
      a. Bottom (Sill) Channel: With light seals and designed to eliminate light gaps at bottoms of shades when shades are closed.
      b. Color and Finish: As selected by Architect from manufacturer's full range.
   S. Installation Accessories:
      1. Front Fascia: Aluminum extrusion that conceals front and underside of roller and operating mechanism and attaches to roller endcaps without exposed fasteners.
         a. Shape: [L-shaped] [Curved] [Cassette]
         b. Height: Manufacturer's standard height required to conceal roller and fabric panel when shade is fully open, but not less than 3 inches (76 mm).
         c. Color options below apply only to L-shaped fascia.
            1) Color: [Bronze] [Black] [White] [Clear anodized] [Vanilla].
            d. Color options below apply only to curved and cassette fascia.
            1) Color: [Fabric-wrapped] [Black] [White].
      2. Exposed Headbox: Rectangular, extruded-aluminum enclosure including front fascia, top and back covers and endcaps.
         a. Height: Manufacturer's standard height required to enclose roller and fabric panel when shade is fully open, but not less than height indicated on Drawings.
         b. Endcap Covers: To cover exposed endcaps.
Solarity™ Solar Shades
Suggested Specification

4. Recessed Shade Pocket: Rectangular, extruded-aluminum enclosure designed for recessed ceiling installation; with front, top, and back formed as one piece, end plates, and removable bottom closure panel.
   a. Height: Manufacturer’s standard height required to enclose roller and fabric panel when shade is fully open, but not less than height indicated on Drawings.
   b. Provide pocket with lip at lower edge to support acoustical ceiling panel.
5. Access Flap and Hanger: Removable aluminum panel designed for installation at bottom of site-constructed ceiling recess or pocket.
   a. Closure-Panel Width: As indicated on Drawings.
6. Side Channels: Designed to eliminate light gaps at sides of shades as shades are drawn down.
7. Bottom (Sill) Channel: With light seals and designed to eliminate light gaps at bottoms of shades when shades are closed.
8. Installation Accessories Color and Finish: As selected from manufacturer’s full range.
2.3 FABRIC PANEL MATERIALS
   A. Fabric Panel Material Flame-Resistance Rating: Comply with NFPA 701. Testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
   B. Fabric: As indicated on Drawings.
      1. Basis-of-Design Product: Solarity™ by Inpro Corporation
      2. Opacity: As indicated on Drawings.
      3. Composition: As indicated on Drawings.
2.4 ROLLER-SHADE FABRICATION
   A. Product Safety Standard: Fabricate roller shades to comply with WCMA A 100.1, including requirements for flexible, chain-loop devices; lead content of components; and warning labels.
   B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F (23 deg C):
      1. Between (Inside) Jamb Installation: Width equal to jamb-to-jamb dimension of opening in which shade is installed less 1/4 inch (6 mm) per side or 1/2-inch (13 mm) total, plus or minus 1/8 inch (3.1 mm).
         Length equal to head-to-sill or -floor dimension of opening in which shade is installed less 1/4 inch (6 mm), plus or minus 1/8 inch (3.1 mm).
      2. Outside of Jamb Installation: Width and length as indicated, with terminations between shades of end-to-end installations at centerlines of mullion or other defined vertical separations between openings.
   C. Fabric Panel Fabrication: Fabricate fabric panels without battens or seams to extent possible except as follows:
      1. Vertical Shades: Where width-to-length ratio of fabric panel is equal to or greater than 1:4, provide battens and seams at uniform spacings along fabric panel length to ensure fabric panel tracking and alignment through its full range of movement without distortion of the material.
      2. Railroaded Materials: Railroad material where material roll width is less than the required width of fabric panel and where indicated. Provide seams as required by railroaded material to produce fabric panels with full roll-width panel(s) plus, if required, one partial roll-width panel located at top of fabric panel.

PART 3 - EXECUTION
3.1 EXAMINATION
   A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, and other conditions affecting performance of the Work.
   B. Proceed with installation only after unsatisfactory conditions have been corrected.
3.2 ROLLER-SHADE INSTALLATION
   A. Install roller shades level, plumb, and aligned with adjacent units according to manufacturer’s written instructions.
3.3 ADJUSTING
   A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.
3.4 CLEANING AND PROTECTION
   A. Clean roller-shade surfaces after installation, according to manufacturer’s written instructions.
   B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that roller shades are without damage or deterioration at time of Substantial Completion.
   C. Replace damaged roller shades that cannot be repaired, in a manner approved by Architect, before time of Substantial Completion.