

Lumicor CSI Specification Guide

Open Format

Section 06650

Solid Polymer Fabrication

I. GENERAL

1.01 DESCRIPTION

A. Work described in this section:

1. Wall Partitions
2. Lighting
3. Table tops
4. Bar tops
5. Lavatory vanity tops with under-mount bowls
6. Lavatory vanity tops with top-mount bowls
7. Bath and shower walls
8. Toilet and shower partitions
9. Wetwalls / Wainscoting
10. Window sills
11. Reception stations
12. Work stations
13. Floor coverings
14. Thermoforming
15. Color inlays

B. Related work specified elsewhere:

1. Finish carpentry / architectural woodworks
2. Tile work
3. Wall coverings
4. Casework
5. Plumbing

1.02 REFERENCES

A. Applicable Standards

1. American National Standards Institute (ANSI)
2. American Society for Testing and Materials (ASTM)
3. National Electric Manufacturers Association (NEMA)
4. Federal Specifications (FS)

1.03 SUBMITTALS

A. Shop Drawings, Indicate:

1. Product
2. Color
3. Dimensions
4. Thickness
5. Component sizes
6. Fabrication details
7. Methods of attachment
8. Coordination requirements with adjacent work

B. Samples

1. Submit minimum 2" x 2" (50mm x 50mm) samples.
2. Indicate full range of color and pattern variation.
3. Approved samples will be retained as standards for work.

C. Product Data

1. Indicate product description.
2. Fabrication information.
3. Compliance with specified performance requirements.

D. Maintenance Data

1. Submit manufacturers care, cleaning, and data.
2. Refinishing instructions.
3. Include project close out documents.

1.04 QUALITY ASSURANCE

A. Allowable tolerances

1. Variation in sheet dimension, +/- 2%.
2. Variation in sheet thickness, +/- 10%
3. Location of openings, +/- 1/8"
4. Variation in overall component size, +/- 1/8"

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver no components to project site until areas are ready for installation.
- B. Handle materials to prevent damage to finished surfaces and edges.
- C. Keep protective masking in place while fabricating.
- D. Provide protective coverings to prevent physical damage or staining after installation, and during completion of project.
- E. Store components on edge, fully supported at 10° off vertical, indoors where atmospheric conditions are controlled to avoid temperature extremes and exposure to ultraviolet light and moisture.
- F. Follow manufactures recommendations for storage and handling.

1.06 WARRANTY

- A. Provide manufacturers 1 year warranty against defects in materials. Warranty shall provide material to repair, or replace, defective materials. Damage caused by physical or chemical abuse, or exposure to high heat will not be warranted.
- B. The warranty applies to [commercial] [residential] Lumicor installations:
 - 1. Within the United States and Canada.
 - 2. Maintained in accordance with the Lumicor Care and Cleaning, Lumicor Care and Handling, and Lumicor 3M Trizact Refinishing instructions.
 - 3. Fabricated in accordance with the Lumicor Fabrication Guide.
 - 4. Copies of all literature are available through your Designtex representative, or directly from Lumicor at (425) 255-4000.

II. PRODUCTS

2.01 SOLID POLYMER FABRICATIONS

- A. Specified Product: Lumicor, manufactured by Schober Inc.
- B. Material: Unfilled acrylic with embedding fabrics, metals, natural foliage, wood veneers, and assorted additional core elements.
 - 1. Material shall have minimum performance properties as described under section “ “ below.
 - 2. Superficial damage to a depth of 0.010” (.25mm) shall be considered repairable by sanding and polishing.
- C. Wall Partitions:
Minimum [1/4” (.236”) (6mm)] thickness Lumicor material cut to size and edge sealed, _____ color, _____ part number. Installation to include all components and hardware required for material to be fully framed, or attached to floor and ceiling sufficient to prevent deflection of material.
- D. Lighting:
- E. Table tops:
Minimum [17/32” (.531”) (13.5mm)] thickness Lumicor material, edge sealed, _____ color, _____ part number. Supported per Lumicor Fabrication Guide requirements and the architect’s drawings. Seamed with methacrylate adhesive and edge detailed per architects drawings.
- F. Bar tops:
Minimum [17/32” (.531”) (13.5mm)] thickness Lumicor material, edge sealed, _____ color, _____ part number.

Supported per Lumicor Fabrication Guide requirements and the architect's drawings. Seamed with methacrylate adhesive and edge detail per architect's drawings.

- G. Lavatory vanity tops with under-mount bowls:
Minimum [17/32" (.531") (13.5mm)] thickness Lumicor material, edge sealed, _____ color, _____ part number.
Supported per Lumicor Fabrication Guide requirements and the architect's drawings. Seamed with methacrylate adhesive, edge detail per architect's drawings. Provide _____" back splash and end splashes _____ color, _____ part number, under-mount sink _____ brand, _____ model, _____ color as per architect drawings. Use under-mount hardware as per manufacturers instructions.
- H. Lavatory vanity tops with top-mount bowls:
Minimum [17/32" (.531") (13.5mm)] thickness Lumicor material, edge sealed, _____ color, _____ part number.
Supported vanity top per Lumicor Fabrication Guide requirements and the architects drawings. Seamed with methacrylate adhesive, edge detail per architect's drawings. Provide _____" back splash and end splashes _____ color, _____ part number, top-mount sink _____ brand, _____ model, _____ color as per architect drawings. Use under-mount hardware as per manufacturers instructions.
- I. Bath and shower walls:
Minimum 1/4" thickness Lumicor material cut to size, edge sealed, _____ color, _____ part number.
Installed per the Lumicor Fabrication Guide.
- J. Toilet and shower partitions:
Minimum 1/8" thickness Lumicor material, edge sealed, _____ color, _____ part number, partition panels bonded to 1/2" thickness hard substrate, or honeycomb sheet, on all sides and edges. Pilaster material bonded to 3/4" thickness hard substrate on all sides and edges. Pilasters to be attached to floor and ceiling. Provide hardware for attachment of partition panels to pilasters as per the architect's drawings.
- K. Wet walls / wainscoting:
Minimum 1/8" thickness Lumicor material, edge sealed, _____ color, _____ part number, [butt seamed] or [separated by _____" wide by _____" thickness insert of _____ material bonded to each Lumicor edge] bonded to wallboard surface per the architects drawings with adhesive per the

Lumicor Fabrication Guide. Top edge detail to be finished per the architect's drawings.

- L. Window sills:
Minimum [1/2" thickness] [5/8" thickness] Lumicor material, edge sealed, _____ color, _____ part number, joined with adhesive and bonded to hard substrates per the Lumicor Fabrication Guide. Installed and edge detail to be finished per the architect's drawings.
- M. Reception stations:
Minimum 1/4" thickness Lumicor material, _____ color, _____ part number, cut to size, edge sealed, inserted into reception application per architect's drawings.
- N. Work stations:
Minimum 1/4" thickness Lumicor material, _____ color, _____ part number, cut to panel size, edge sealed, inserted into panel system per manufacturer's instructions.
- O. Flooring:
Minimum 1" thickness Lumicor material, _____ color, _____ part number cut to required tile size, edge sealed, and inserted in raised flooring system per manufacturer's instructions and architect's drawings.
- P. Material properties
See Appendix

2.02 ACCESSORY PRODUCTS

- A. Seam adhesive:
Two-part methacrylate cement to create non-porous joints with a chemical bond.
- B. Edge Sealant
 1. Two-part methacrylate cement, [clear] or [_____ colored], to fill routed groove in Lumicor edge as a homogeneous fill sealer. Avoid air bubbles and voids. Secondary machining to profile edge detail to architect's drawing's.
 2. Two-part methacrylate cement, clear or colored, to bond an acrylic based secondary material to Lumicor edge as a homogeneous sealant. Avoid air bubbles and voids in joint.
 3. Two-part epoxy base gel adhesive, [clear] or [_____ colored], to fill routed groove in Lumicor edge as a homogeneous fill sealer. Avoid air bubbles and voids.

4. 3M VHB (Very High Bond) two sided tape applied to Lumicor edge per manufacturer's instructions. Apply secondary edge finishing material to the back side of tape per architect's drawings. Avoid air bubbles and void when applying VHB tape to Lumicor edge, and when applying secondary material to back side of VHB tape.
 5. Mildew resistant, [clear] or [_____colored], FDA / UL recognized acid-free silicone sealant.
- C. Panel adhesive:
1. 3M Fastbond [30] [40] contact cement applied to both Lumicor and substrate surfaces per manufacturer's instructions.
- D. Sink bowl hardware:
- Manufacturer's approved bowl clips, brass inserts and fasteners for attachment of [under-mount] [top-mount] sink bowls.

2.03 FABRICATION

- A. [Fabrication to be performed by a certified Lumicor fabricator / installer.]
- B. Fabricate components in shop environment to the greatest extent practical to dimension indicated on architects / shop drawings, and in accordance with the Lumicor Fabrication Guide.
- C. Form joints between Lumicor components using methacrylate adhesives in accordance with the Lumicor Fabrication Guide. Avoid air bubbles and voids within the bonded seam. Attach 2" x 1/2" clear cast acrylic reinforcement strip to the back side of seam using methacrylate adhesive. Avoid air bubbles and voids in the reinforcement seam. Tape off seam edges and reinforcement strips to avoid adhesive coming in contact with Lumicor material.
- D. Provide holes, openings, and cutouts for plumbing and accessories as indicated on the manufacturer's instructions and architect's drawings.
- E. Rout and finish edges with a smooth uniform finish. Rout all cutouts, then sand all edges smooth. Repair or reject defective or inaccurate work.
- F. All surfaces shall have a uniform finish.
1. [Matte – Gloss rating of 5-20] Recommended finish for horizontal applications. Requires the least maintenance.
 2. [Semigloss – Gloss rating of 25-50] Requires fabrication upcharge and increased maintenance.
 3. [Gloss – Gloss rating of 55-80] Recommended for light duty, or vertical applications. Requires additional fabrication and increased maintenance.

G. Thermoforming:

1. Comply with forming instruction per the Lumicor Fabrication Guide.
2. Fabricate matching molds to form component shape per architect's drawings.
3. Form pieces to shape prior to seaming and joining.
4. Cut pieces larger than finished dimension. Sand edges to a smooth surface to remove all nicks and scratches.
5. Heat entire component uniformly between 275 – 310 °F during forming.
6. Prevent overheating, blistering, and cracking of Lumicor material during heating and forming.
7. Allow adequate time for cooling / annealing of material to prevent stress buildup in component.

H. Colored inlay:

1. Fabricate using color fill manufacturer's instructions.
2. Rout 1/16" maximum depth groove for inlay to pattern as indicated on architect's drawings.
3. Fill groove using methods recommended by colored fill manufacturer. Avoid air bubbles and voids in fill material within groove. Overfill groove with color fill material.
4. Allow area to fully cure. Sand color fill material flush with material surface. Do not overheat color fill material while sanding. Finish to a uniform appearance.

III. EXECUTION

3.01 MOCK-UP

- A. Prior to final approval of shop drawings, erect one full size mock-up of each component at project site for architect / customer review.
- B. If mock-up is rejected, re-work or re-make mock-up until approved. Remove / destroy rejected mock-up.
- C. Approved mock-up's shall remain as part of finished work.

3.02 INSTALLATION

- A. Install components plumb and level, or in accordance with architect's drawings.
- B. Form field seams using recommended adhesives, and in accordance with the Lumicor Fabrication Guide. Tape off seam edges to avoid excess adhesive contacting material surface.
- C. Attach [under-mount] [top-mount] sink bowls using manufacturer's instructions and recommended hardware.
- D. Provide back and end splashes as indicated in the architect's / shop approved drawings. Adhere components using [clear] [colored] silicone.

- E. Keep components and hands clean during installation process. Remove excess adhesive, sealant, stains, scratches to a uniform appearance. Components shall be clean on Date of Substantial Completion.
- F. Make plumbing connections in accordance with Division 15. Mechanical.
- G. Protect component surfaces from damage until Date of Substantial Completion. Repair or replace damaged work that cannot be repaired to the architect's satisfaction and invoice for the cost of repairs. Architect to pre-approve cost estimate before repairs are made.
- H. Fabricator / Installer to provide Lumicor Care and Handling, Care and Cleaning, 3M Trizact Refinishing instructions, and review care and maintenance instructions and warranty with the customer upon completion of the project.