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SWITCHABLE PRIVACY GLASS (PDLC)
MASTER GUIDE SPECIFICATION

SECTION 08 88 00

Architect of Record remains responsible for adapting this Master Guide Specification to the requirements of each individual project.

This document is intended to assist architects and design professionals in preparing project-specific specifications.

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Prepared for Architects, Specification Writers, and Design Professionals

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Document Purpose

This Master Guide Specification has been prepared to assist architects, specification writers, glazing consultants, contractors, and design professionals in specifying VitroLens switchable privacy glass systems. The document follows the Construction Specifications Institute (CSI) three-part specification format and is intended to be edited by the design professional to suit the specific requirements of each project.

Revision History

Revision	Date	Description
1.0	July 2026	Initial Release

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Table of Contents

PART 1 – GENERAL....4
1.1 Summary....4
Section Includes: • Electrically switchable laminated privacy glass utilizing PDLC technology • Power controllers and accessories • Project-Specific Shop Drawings • Installation documentation • Operation and Maintenance Manual....4
1.2 References....4
1.3 Submittals....4
1.4 Quality Assurance....4
1.5 Delivery, Storage & Handling....4
1.6 Warranty....4
PART 2 – PRODUCTS....5
2.1 Manufacturer....5
2.2 Product Description....5
2.3 Standard Construction....5
2.4 Optional Configurations....5
2.5 Controllers & Control Options....5
PART 3 – EXECUTION....6
3.1 Examination....6
3.2 Installation....6
3.3 Field Quality Control....6
3.4 Cleaning & Protection....6
3.5 Closeout....6

PART 1 – GENERAL

1.1 Summary

VitroLens provides engineered electrically switchable privacy glass systems utilizing Polymer Dispersed Liquid Crystal (PDLC) technology for architectural applications. Systems are designed to simplify specification, fabrication, installation, commissioning, and long-term support.

Section Includes:

- **Electrically switchable laminated privacy glass utilizing PDLC technology**
- **Power controllers and accessories**
- **Project-Specific Shop Drawings**
- **Installation documentation**
- **Operation and Maintenance Manual**

1.2 References

VitroLens switchable privacy glass shall comply with all applicable ASTM standards, safety glazing requirements, and governing building code requirements.

1.3 Submittals

Submit Product Data, Project-Specific Shop Drawings, Samples (if requested), Operation & Maintenance Manual, and Warranty Documentation.

Fabrication shall not begin until the Project-Specific Shop Drawings have been reviewed and approved.

Approved Project-Specific Shop Drawings supersede conceptual drawings and shall govern fabrication.

Changes requested after approval of the Project-Specific Shop Drawings may affect project cost and delivery schedule.

1.4 Quality Assurance

Manufacturer shall have experience in the design, engineering, fabrication support, and technical support of electrically switchable privacy glass systems.

Fabrication shall be performed by an experienced manufacturer of laminated architectural switchable privacy glass.

Installation shall be performed by qualified glazing contractors in accordance with the manufacturer’s written instructions.

1.5 Delivery, Storage & Handling

Deliver glass in custom-engineered wood shipping crates designed to protect the glass during transportation and handling.

Store glass in accordance with the manufacturer's recommendations.

Protect electrical leads from damage during handling and installation.

1.6 Warranty

Provide the manufacturer’s standard two (2) year limited warranty for switchable privacy glass. Extended warranty options may be available.

PART 2 – PRODUCTS

2.1 Manufacturer

VitroLens Technologies, Inc.

VitroLens provides Project-Specific Shop Drawings for customer review and approval prior to fabrication.

VitroLens switchable privacy glass shall be manufactured in the United States whenever project requirements and manufacturing capacity permit.

2.2 Product Description

Provide electrically switchable laminated safety glass utilizing Polymer Dispersed Liquid Crystal (PDLC) technology permanently encapsulated between two lites of low-iron tempered safety glass. The completed assembly shall provide instant transition between transparent and private states when energized.

2.3 Standard Construction

- Low-Iron Tempered Safety Glass
- Laminated PDLC Safety Glass Construction
- White PDLC Privacy Film (Standard)
- Polished Vertical Edges
- Standard 10 ft (3 m) Wire Leads
- Busbar Configuration as indicated on the Approved Project-Specific Shop Drawings
- Factory Tested Prior to Shipment

2.4 Optional Configurations

- Gray PDLC Privacy Film
- Insulating Glass Units (IGUs)
- Curved Glass
- Custom Shapes
- Radius Corners
- Holes
- Notches
- Hardware Cutouts
- Polished Four Edges
- Seamed Edges
- Mitered Edges
- Extended Wire Leads
- Custom Busbar Configurations

Optional configurations shall be identified on the approved Project-Specific Shop Drawings. Availability may vary based on glass size, construction, and project requirements.

2.5 Controllers & Control Options

Controllers shall be purpose-designed for switchable privacy glass applications and shall not consist of generic inverters, modified power supplies, or other off-the-shelf electrical devices.

- Soft-start output voltage to reduce electrical stress and extend the service life of the switchable privacy glass.
- Automatically regulate output voltage throughout operation.
- Incorporate overvoltage protection.
- Provide a 70 VAC true square-wave output to reduce power consumption and optimize optical transparency.
- Provide a dry contact input for integration with building automation systems and wet-location switching applications.
- Provide an optional 0–10 V control interface for dimming and automation integration.
- Be specifically designed for continuous-duty operation.

- Be sized in accordance with the total connected glass area and the approved Project-Specific Shop Drawings.
- Technical support shall be available during installation and system commissioning.

PART 3 – EXECUTION

3.1 Examination

Verify openings, framing, electrical rough-in, and supporting construction are complete.

Do not begin installation until unsatisfactory conditions have been corrected.

3.2 Installation

Install in accordance with approved Project-Specific Shop Drawings, manufacturer instructions, and accepted glazing practices.

Coordinate installation with glazing and electrical contractors.

Protect electrical leads from damage.

Do not field modify the switchable privacy glass. Field cutting, drilling, notching, polishing, or other alterations are prohibited.

3.3 Field Quality Control

Verify proper operation of the switchable privacy glass system before and after installation.

Any deficiencies shall be corrected prior to project acceptance.

3.4 Cleaning & Protection

Clean in accordance with manufacturer recommendations.

Protect installed glass from damage during the remainder of construction.

3.5 Closeout

Provide the Operation & Maintenance Manual, Warranty Documentation, Field Diagnostics Guide, and Approved Project-Specific Shop Drawings upon project completion.