



BIPV Exterior Glass Glazing

Canadian Standards

MITREX Spec Note: This master specification is written to include SPEC NOTES noted as “MITREX Spec Note” in order to assist designers in their decision-making process. SPEC NOTES precede the text to which they apply. This section should serve as a guideline only and should be edited by a knowledgeable person to meet the requirements of each specific project.

Text indicated in bold and by square brackets is optional. Make appropriate decisions and delete the optional text as well as the brackets in the final copy of the specification. Delete or hide the SPEC NOTES in the final version of the document.

This specification section is written to follow the recommendations of the Construction Specifications Institute/Construction Specifications Canada (CSI/CSC) such as MasterFormat™, SectionFormat™, and PageFormat™. It is also written with metric and imperial units of measurement.

MITREX manufactures and sells building envelope materials. MITREX does not practice architecture or engineering. Therefore, the design responsibility remains with the architect, engineer, or consultant. We hope the information given here will of some assistance. It is based upon data considered to be true and accurate and is offered solely for the user's consideration, investigation and verification. Nothing contained herein is representative of a warranty or guarantee for which MITREX Industries can be held legally responsible. MITREX does not assume any responsibility for any misinterpretation or assumptions the reader may formulate.

This Specification specifies the following MITREX systems:

PV Exterior Glass Glazing

PART 1 - GENERAL

1.1 SUMMARY

1. Provide labour, materials, products, equipment, and services to complete the Building-Integrated PV exterior glass glazing specified herein. This includes, but is not necessarily limited, to:
 1. PV insulated glass for **[curtain wall assemblies] [windows] [storefronts] [skylights]**.
 2. Glazing sealants and accessories.
 3. Auxiliary materials required for a complete installation.

1.2 RELATED REQUIREMENTS

1. Specifications throughout all Divisions of the Project shall be read as a whole, and may be directly applicable to this Section.

2. Related requirements provided below are for convenience purposes only.

MITREX Spec Note: Limit section listings to only those sections containing specific information that would directly affect the work of this section. Do not include Division 01 sections in this listing

1. Section 07 92 00, Joint Sealants: for field-applied sealants not otherwise specified in this Section.
2. Section 08 44 00, Curtain Wall and Glazed Assemblies: for curtain wall framing.
3. Division 26 – Electrical: For the facility's electrical infrastructure.

1.3 REFERENCES

1. The latest published edition of a reference shall be applicable to this Project unless identified by a specific edition date.
2. All reference amendments adopted prior to the Bid Closing date of this Project shall be applicable to this Project.
3. All materials, installation and workmanship shall comply with all applicable requirements and standards.
4. ASTM International
 1. ASTM C1048: Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass
 2. ASTM C1376: Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass
 3. ASTM E1300: Standard Practice for Determining Load Resistance of Glass in Buildings
 4. ASTM E772: Standard Terminology of Solar Energy Conversion
 5. ASTM E2190: Standard Specification for Insulating Glass Unit Performance and Evaluation
5. Canadian General Standards Board (CGSB)
 1. CAN/CGSB 12.1: Safety Glazing
 2. CAN/CGSB 12.20: Structural Design of Glass for Buildings
 3. CAN/CGSB-12.8: Insulating glass units
6. CSA International
 1. CSA C22.1: Canadian Electrical Code, Part I, Safety Standard for Electrical Installations
7. Institute of Electrical and Electronics Engineers (IEEE)
 1. IEEE 100 CD: Standards Dictionary: Glossary of Terms And Definitions

8. Underwriters Laboratories (UL)
 1. UL 1703: Standard for Flat-Plate Photovoltaic Modules and Panels

1.4 DEFINITIONS

1. Electrical and Electronics Terminology: Unless otherwise specified or indicated, electrical and electronics terminology used shall herein be as defined by IEEE 100 CD.
2. Solar Energy Conversion and Solar Photovoltaic Energy System Terminology: Unless otherwise specified or indicated, solar energy conversion and solar photovoltaic energy system terminology used herein shall be as defined by ASTM E772.
3. Abbreviations and Acronyms
 1. EVA: Ethylene-Vinyl Acetate
 2. MSVD: Magnetic Sputter Vacuum Deposition
 3. PV: Photovoltaic

1.5 ADMINISTRATIVE REQUIREMENTS

Retain "Preinstallation Meeting" Paragraph below if Work of this Section is extensive or complex enough to justify a Meeting.

1. Preinstallation Meeting: Conduct Meeting at Project site.

Retain subparagraphs below if additional requirements are necessary; revise to include more specific information about Meeting.

1. Meet with Owner, Consultant, Subcontractor, manufacturer's representative, structural-support Subcontractor, and Subcontractors whose work interfaces with or affects PV exterior glass glazing, including installers of curtain walls, windows, and storefronts.
1. Review temporary protection requirements for glazing during and after installation.
2. Review governing regulations and requirements for insurance, certificates, and tests and inspections if applicable.
3. Review temporary protection requirements for PV exterior glass glazing during and after installation.
4. Document proceedings, including corrective measures and actions required, and Supply copy of record to each participant.
2. Agenda: review progress of other construction activities and preparations for the particular activity under consideration.
3. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
4. Scheduling: Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

5. Sequencing: Sequence work to permit installation of materials in conjunction with related materials and seals.

1.6 PRECONSTRUCTION TESTING

1. Preconstruction Adhesion and Compatibility Testing: Test PV exterior glass products, sealants, gaskets, accessories, and glass-framing members for adhesion to, and compatibility with elastomeric glazing sealants.
2. Schedule enough time for testing and analyzing results to prevent delaying the Work.

1.7 ACTION SUBMITTALS

1. Product Data: Submit in accordance with Division 01 for the following:
 1. Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
 2. Include components such as wiring, PV-modules, and other electrical components. Coordinate with Division 26.
 3. Submit WHMIS SDS Safety Data Sheets in accordance with requirements of Division 01.
2. **[Sustainable Design Submittals:**
 1. **Comply with project requirements intended to achieve sustainable design, measured and documented according to the LEED Green Building Rating System of the Canadian Green Building Council. Provide submittals as required by Consultant.]**
3. Shop Drawings: Submit in accordance with Division 01 for PV exterior glazing work.
 2. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.
 3. Include diagrams for power, and wiring.
4. Professional Engineer's Stamped Shop Drawings and Submittals: Submit engineered and stamped shop drawings for PV exterior glass, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation in accordance with Division 01.
5. Samples: Submit in accordance with Division 01, for each type of exposed finish required, prepared on Samples of size indicated below.
 1. Submit 300 mm (12 inches) square sample of each type of PV exterior glass glazing product illustrating typical exterior glass glazing assembly, including typical junction box and associated wiring.
6. Warranties: Submit sample of extended warranties specified in this Section for Consultant's review.
7. Quality Assurance Submittals: submit the following in accordance with Division 01.
 1. Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, and cleaning procedures.

1.8 CLOSEOUT SUBMITTALS

1. Maintenance Data: Submit operation and maintenance data for each type of PV exterior glazing to include in maintenance manuals.

1.9 QUALITY ASSURANCE

MITREX Spec Note: MITREX installation must be performed by a trained and authorized MITREX installer. Contact info@mitrex.com for the authorized MITREX installer near you.

1. Subcontractor Qualifications: Installation must be performed by an installer who has been trained or otherwise authorized by manufacturer.
2. Fabricator Qualifications for Insulating-Glass Units: Provide Products by a qualified insulating-glass fabricator who is approved and certified by glass manufacturer.
3. Safety Glazing Labeling: Permanently mark glass with certification label of certification agency acceptable to authorities having jurisdiction or manufacturer. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.
4. Mock-ups: Build mock-ups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
 1. Reviewed mock-ups may become part of the completed Work if undisturbed at time of Substantial Performance of the Work.
5. Source Limitations: Obtain primary components of PV exterior glass glazing assemblies, from single manufacturer. Obtain secondary components and accessories from sources acceptable to manufacturer of primary materials.

1.10 DELIVERY, STORAGE AND HANDLING

1. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations. Inspect components for damage upon delivery.
2. Storage: Store products in a secure enclosed area protected from the elements, in manufacturer's packaging until ready for installation.
3. Handling: Handle materials with care and avoid dents, scratches or damage to products. Remove labels, stickers or protection after installation.

1.11 PROJECT CONDITIONS

1. Field Measurements: Verify actual panel locations by field measurements performed by the installer prior to commencement of fabrication. Ensure recorded measurements provided by the installer are indicated on Shop Drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.
2. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of PV exterior glass glazing to be performed according to manufacturers' written instructions and warranty requirements.

1.12 COORDINATION

1. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

1.13 WARRANTY

1. Extended Warranty: Provide manufacturer's standard warranty which covers Products specified in this Section that fail in materials or workmanship within specified warranty period.

MITREX Spec Note: Edit paragraph below to reflect warranty required for the project.

1. Warranty Period – PV Exterior Glass Glazing:
 1. Solar photovoltaic cells: 25 years from date of Substantial Performance of the Work.
 2. Power output: 25-year manufacturer's power output warranty, at 80% minimum rated power output of the initial nominal power by year 25.
 3. Delamination: lifetime of Products.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

1. Materials specified in this Section are based on Products as supplied by Mitrex Inc.; 41 Racine Road, Toronto, ON M9W 2Z4; T: 416-497-7120; E: info@mitrex.com; web: www.mitrex.com

MITREX Spec Note: Retain one of the two options below to either permit or preclude other manufacturers from bidding on the Work of this Section.

2. [Substitution Limitations: No further substitutions are acceptable.]
3. [Substitution Limitations: Conforming to requirements of Section 01 25 00, Substitution Procedures and as follows:
 1. Consultant will consider requests for substitution if received [10] days before Bid Closing Deadline. Requests received after that time will be rejected. Consultant will consider requests for substitution when following conditions are satisfied:
 1. Requests for substitution include a list of at least five similar projects of equivalent size where products have been installed for a minimum of five years.
 2. Requested substitution does not require extensive revisions to the Contract Documents.
 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 4. Requested substitution will not adversely affect construction schedule.
 5. Requested substitution provides specified warranty.]

2.2 REGULATORY REQUIREMENTS

MITREX Spec Note: Specify the regulation(s) that is (are) applicable to the Project.

1. Comply with applicable provisions in the **[Ontario Building Code,]** and requirements of authorities having jurisdiction.

2.3 DESIGN AND PERFORMANCE REQUIREMENTS

1. Professional Engineer's Design and Certification: Employ the services of a Professional Engineer licensed to practice in the Province of **[Ontario]** carrying professional liability insurance, and who is experienced in providing engineering services of similar kind, scope and complexity; to design and certify PV exterior glass glazing.
2. Design PV exterior glass glazing systems to withstand live loads and dead loads without loss or glass breakage due to defective manufacturing, fabrication, or installation.
3. Safety Glazing: Where safety glazing is required, provide glazing that complies with CGSB 12.1.

MITREX Spec Note: If the loads acting on the glass are known, include them below. Often times, they are noted on the Structural Drawings of the Project.

4. Size glass to withstand wind loads, dead loads and positive and negative live loads acting normal to plane of glass to design pressures indicated **[on Structural Drawings] [xxx kPa]** to ASTM E1300 and CAN/CGSB-12.20.
5. Insulating-Glass Certifications: Provide glazing marked either on spacers or on at least one component lite of units with appropriate certification label from IGMA.
6. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
7. System operating temperature shall be from -40 deg C to +85 deg C.
8. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
9. Minimum Performance Parameters of PV system: to UL 1703.
10. Electrical Characteristics:
 1. Provide materials to fabricate functioning photovoltaic systems in accordance with CSA, ASTM, IEEE, NEMA, and cUL requirements, as specified in this section, and as shown on Drawings.
 2. System operating temperature shall be from -40 deg C to +85 deg C.
 3. Minimum Performance Parameters of PV system: to UL 1703.

2.4 MATERIALS

1. Fully Tempered Float Glass: ASTM C1048, Kind FT (fully tempered), Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.
2. Low-E Coated Vision Glass: ASTM C1376, coated by vacuum deposition (sputter-coating) process, and complying with other requirements specified.

MITREX Spec Note: Choose below from thin-film or monocrystalline silicon technology. The choice is dependent on the required power output as well as the aesthetics of the project. Speak to a MITREX representative for more information. Remove paragraphs that do not apply.

2.5 MONOCRYSTALLINE SILICON PV INSULATING GLASS

1. PV Insulating-Glass Unit: 25 mm (1 inch) thick factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified in accordance with ASTM E2190 or CAN/CGSB-12.8.
2. Outer Lite Glass: Laminated PV glass fabricated as follows:
 1. 3 mm (1/8 inch) thick low-iron tempered glass conforming to ASTM C1048, Kind FT (fully tempered) or CAN/CGSB-12.1
 2. Encapsulation: 0.76 mm (0.03 inch) thick encapsulation consisting of EVA interlayer, photovoltaic cells and EVA interlayer as follows:
 1. Photovoltaic Cells: Monocrystalline silicon solar cells, listed to UL 1703 with performance characteristics ($\pm 10\%$) of typical PV Module at Standard Test Conditions (STC = 25°C cell temperature, 1000 W/m² irradiance at Air Mass of 1.5 spectrum) as follows:

MITREX Spec Note: Update the information below based on the project requirements and power requirements for the project. Mitrex manufactures sizes to suit project requirements.

1. [2032 mm x 1016 mm (80 inches x 40 inches), 12.1% transparency – Monocrystalline Silicon
 1. Nominal Maximum Power (P_{max}): 380W
 2. Maximum Power Voltage (V_{mp}) = 41.9V
 3. Maximum Power Current (I_{mp}) = 9.12A
 4. Open Circuit Voltage (V_{oc}) = 47.2V
 5. Short Circuit Current (I_{sc}) = 9.57A
 6. Module efficiency = 18.4%
 7. Power tolerance = +/- 5%
 8. Maximum series fuse rating = 20A]
 2. [3048 mm x 1016 mm (120 inches x 40 inches) , 12.1% transparency – Monocrystalline Silicon
 1. Nominal Maximum Power (P_{max}): 570W
 2. Maximum Power Voltage (V_{mp}) = 62.8V
 3. Maximum Power Current (I_{mp}) = 9.12A
 4. Open Circuit Voltage (V_{oc}) = 70.8V
 5. Short Circuit Current (I_{sc}) = 9.57A
 6. Module efficiency = 18.4%
 7. Power tolerance = +/- 5%
 8. Maximum series fuse rating = 20]

3. 3 mm (1/8 inch) thick low-iron tempered glass conforming to ASTM C1048, Kind FT (fully tempered) or CAN/CGSB-12.1
3. Inter-cavity space thickness: 13 mm (1/2 inch) with low conductivity spacers and 95% argon, 5% air gas fill.
4. Inner Lite Glass thickness: 6 mm (1/4 inch) thick low-iron tempered glass conforming to ASTM C1048, Kind FT (fully tempered) or CAN/CGSB-12.1

MITREX Spec Note: Use the following paragraph to specify the location of the low 'E' coating as well as the selected product if one has been selected.

5. Glass coating: low 'E' MSVD coating '[Solarban 60 by Vitro Glazing]' on surface no. [4 (facing cavity, exterior lite)] [5 (facing cavity, interior lite)]

MITREX Spec Note: Use the following paragraphs to indicate the thermal properties of the glass based the final selections.

6. Thermal Properties of Glazing:
 1. Winter Nighttime U-Factor: [0.24_{IP} (1.36_{metric})] maximum, according to NFRC 100 and based on LBL's WINDOW 5.2 computer program.
 2. Visible Light Transmittance: [10] percent minimum.
 3. External reflectance: [16] percent.
 4. Solar Heat Gain Coefficient: [0.2] maximum, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
 5. Sealing System: Dual seal, with manufacturer's standard primary and secondary sealants.
 6. Perimeter Spacer: Manufacturer's standard low-conductivity spacer material and construction.
 7. Desiccant: Molecular sieve or silica gel, or a blend of both.

MITREX Spec Note: Choose below from thin-film or monocrystalline silicon technology. The choice is dependent on the required power output as well as the aesthetics of the project. Speak to a MITREX representative for more information. Remove paragraphs that do not apply.

2.6 THIN FILM PV INSULATING GLASS

1. PV Insulating-Glass Units: 38 mm (1-1/2 inch) thick factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified in accordance with ASTM E2190 or CAN/CGSB-12.8.
2. Outer Lite Glass: Laminated PV glass fabricated as follows:
 1. 6 mm (1/4 inch) thick low-iron tempered glass conforming to ASTM C1048, Kind FT (fully tempered) or CAN/CGSB-12.1
 2. Encapsulation: 0.76 mm (0.03 inch) thick encapsulation consisting of EVA interlayer, photovoltaic cells and EVA interlayer.

1. Photovoltaic Cells: Thin-film solar cells, listed to UL 1703 with performance characteristics ($\pm 10\%$) of typical PV Module at Standard Test Conditions (STC = 25°C cell temperature, 1000 W/m² irradiance at Air Mass of 1.5 spectrum) as follows:

MITREX Spec Note: Update the information below based on the project requirements and power requirements for the project. Mitrex manufactures sizes to suit project requirements.

1. [1200mm x 1100mm (47.2 inches x 43.3 inches), 20% transparency – Thin Film
 1. Nominal Maximum Power (P_{max}): 118W
 2. Maximum Power Voltage (V_{mp}) = 87.6V
 3. Maximum Power Current (I_{mp}) = 1.35A
 4. Open Circuit Voltage (V_{oc}) = 119.2V
 5. Short Circuit Current (I_{sc}) = 1.57A
 6. Module efficiency = 8.9%
 7. Power tolerance = +/- 5%
 8. Maximum series fuse rating = 2A]
2. [2400mm x 1200mm (94.5 inches x 47.2 inches), 20% transparency – Thin Film
 1. Nominal Maximum Power (P_{max}): 258W
 2. Maximum Power Voltage (V_{mp}) = 88.7V
 3. Maximum Power Current (I_{mp}) = 2.91A
 4. Open Circuit Voltage (V_{oc}) = 119.4V
 5. Short Circuit Current (I_{sc}) = 3.38A
 6. Module efficiency = 8.9%
 7. Power tolerance = +/- 5%
 8. Maximum series fuse rating = 5A]
3. [3600mm x 1200mm (141.7 inches x 47.2 inches), 20% transparency – Thin Film
 1. Nominal Maximum Power (P_{max}): 387W
 2. Maximum Power Voltage (V_{mp}) = 87.6V
 3. Maximum Power Current (I_{mp}) = 4.36A
 4. Open Circuit Voltage (V_{oc}) = 119.2V
 5. Short Circuit Current (I_{sc}) = 5.07A
 6. Module efficiency = 8.9%
 7. Power tolerance = +/- 5%
 8. Maximum series fuse rating = 8A]
3. 6 mm (1/4 inch) thick low-iron tempered glass conforming to ASTM C1048, Kind FT (fully tempered) or CAN/CGSB-12.1
4. Interlayer: 0.76 mm (0.03 inch) thick EVA interlayer.
5. 6 mm (1/4 inch) thick low-iron tempered glass conforming to ASTM C1048, Kind FT (fully tempered) or CAN/CGSB-12.1
3. Inter-cavity space thickness: 13 mm (1/2 inch) with low conductivity spacers and 95% argon, 5% air gas fill.
4. Inner Lite Glass thickness: 6 mm (1/4 inch) thick low-iron tempered glass conforming to ASTM C1048, Kind FT (fully tempered) or CAN/CGSB-12.1

MITREX Spec Note: Use the following paragraph to specify the location of the low 'E' coating as well as the selected product if one has been selected.

5. Glass coating: low 'E' MSVD coating '[Solarban 60 by Vitro Glazing]' on surface no. [6 (facing cavity, exterior lite)] [7 (facing cavity, interior lite)]

MITREX Spec Note: MITREX Spec Note: Use the following paragraphs to indicate the thermal properties of the glass based the final selections.

6. Thermal Properties of Glazing:
 1. Winter Nighttime U-Factor: **[0.23_{IP} (1.33_{metric})]** maximum, according to NFRC 100 and based on LBL's WINDOW 5.2 computer program.
 2. Visible Light Transmittance: **[50]** percent minimum.
 3. External reflectance: **[12]** percent.
 4. Solar Heat Gain Coefficient: **[0.38]** maximum, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
 5. Sealing System: Dual seal, with manufacturer's standard primary and secondary sealants.
 6. Perimeter Spacer: Manufacturer's standard low-conductivity spacer material and construction.
 7. Desiccant: Molecular sieve or silica gel, or a blend of both.

2.7 ACCESSORIES

1. Provide products of material, size, and shape complying with referenced glazing standards, with requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
2. Compatibility and Suitability: Ensure sealants are compatible with one another and with other materials they contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application.
3. Setting blocks: silicone, 80-90 Shore A durometer hardness to ASTM D 2240, to suit glazing method, glass light weight and area.
4. Spacers: blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.
5. Electrical Components
 1. Junction Box: IP67, 3 by-pass diodes.
 2. Connector: TE or MC4; suitable for solar panels.
 3. Coordinate with Division 26 for provision of connections and coordination for electrical characteristics.

2.8 FABRICATION

1. Fabricate glazing units in sizes required to fit openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying required, to comply with system performance requirements.

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

1. Compliance: comply with manufacturer's latest written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 EXAMINATION

1. Examine substrates, areas, and conditions, with Subcontractor present, for compliance with requirements for installation tolerances, supports, and other conditions affecting performance of the Work.
 1. Verify that openings for glazing are correctly sized and within tolerance.
 2. Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive glazing.
2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 PV EXTERIOR GLASS GLAZING INSTALLATION

1. Perform work in accordance with GANA Glazing Manual and GANA Laminated Glazing Reference Manual for glazing installation methods.
2. Install PV exterior glass glazing according to manufacturer's written instructions in orientation, sizes, and locations indicated on Drawings.
3. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site. Damaged glass includes glass with edge damage or other imperfections that, when installed, could weaken glass, impair performance, or impair appearance.
4. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.
5. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
6. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
7. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.
8. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
9. Set glass lites with proper orientation so that coatings face exterior or interior as specified.
10. Wiring Installation: to CSA C22.1/CE Code.

1. Utilize on-site measurements in conjunction with engineering designs to accurately cut wires and layout before making permanent connections.
2. Locate wires out of way of windows, doors, openings, and other hazards.
3. Ensure wires are free of snags and sharp edges that have the potential to compromise the wire insulation.

3.4 FIELD QUALITY CONTROL

1. Manufacturer's Field Services: Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
2. Tests: Perform tests in accordance with the manufacturer's written recommendations.

3.5 ADJUSTING, CLEANING, AND PROTECTION

1. Remove nonpermanent labels and clean surfaces immediately after installation.
2. Protect glass from contact with undesirable substances resulting from construction operations.
3. If, despite such protection, contaminating substances come into contact with glass, remove substances immediately. Remove and replace glass that cannot be cleaned without damage to coatings.
4. Remove and replace glass that is damaged during construction period.
5. Wash glass on both exposed surfaces prior to Substantial Performance of the Work. Wash glass as recommended in writing by glass manufacturer.
6. Upon completion of acceptance checks, settings, and tests, demonstrate that in-service PV electrical power generation system is in good operating condition and properly performing the intended function. Coordinate with Division 26.

END OF SECTION

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- Learn More

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