



Panel Installation Guide

Z-Clip Mounting System — All Panel and Slab Types & Configurations

Document Type Installation Guide	Applies To All Z-Clip Configurations	Version 1.7	Covers Resin Panels, Glass Panels and Terrazzo Slabs
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Overview & Scope

These instructions cover the installation of Sensitile Resin panels, Glass Panels and Terrazzo Slabs using the Z-clip mounting system. They apply to the following configurations:

- Single flat panels
- Multiple flat panels in a linear run
- Folded or 3D slabs and panels that turn a corner
- 3D assemblies spanning multiple walls (corner conditions)
- Assemblies incorporating edge lighting or back lighting

Always use the approved, signed shop drawings as the primary reference for panel/slab placement, clip locations, dimensions, and lighting details. These instructions provide general procedural guidance; the shop drawings govern all project-specific dimensions.

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Pre-Installation: Review & Coordination

1. Review approved shop drawings in full before beginning any work. Identify all panel/slab types, z-clip locations, lighting configurations, and any special conditions such as corners, folds, or cutouts.
2. Verify that all panels and hardware provided by Sensitile have been received and match the shop drawing schedule. Inspect for any shipping damage and report discrepancies to Sensitile within 5 days of receipt. Please refer to receiving and handling documentation sent with order.
3. Confirm that any low-voltage rough-in, conduit, or wire routing required for edge-lit or back-lit assemblies has been completed and inspected by the appropriate trades before panel/slab installation begins.
4. Confirm that the area is ready: painting, floor finishing, and other wet or dusty trades are complete. Protect installed panels and slabs from subsequent trades.

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Surface Preparation: Flatness, Blocking & Layout

CRITICAL — The most important step in any Z-clip installation is ensuring the receiving surface is flat, plumb, and adequately blocked to accept the mating Z-clips and carry the full weight of the panels or slabs. Do not skip or rush this step.

5. Check the wall for flatness using a long straight edge (minimum 6 ft) or a laser level. Resin Panels are semi-rigid and will follow the wall; any bow or deviation will telegraph through to the panel face and affect seam alignment. Slabs and Glass panels are rigid and will be damaged if the substrate/z-clips are not flat.
6. In cases where the installed panel and or slabs have to align flush with another adjoining surface, material or trim, maintain a particular depth (or height in the case of a ceiling) – ensure that there is enough room for the panels/slabs + z-clips and any shimming if necessary. In these situations we recommend that the niche be slightly deeper and z-clips be furred out as needed.
7. If the wall is not flat or plumb, determine whether shimming the mating Z-clips is the appropriate remedy, or whether the substrate itself needs to be built out or furred-out to achieve the required plane.
8. Ensure adequate blocking is in place within the wall framing at every Z-clip location. Z-clips must be fastened into solid material — wood blocking, plywood, steel framing, or masonry — capable of supporting the panel weight. **Do not rely on drywall alone.**
9. Using the approved shop drawings as reference, transfer all clip locations to the wall. Snap chalk lines or use a laser to establish horizontal reference lines at each clip elevation. Verify level and squareness before marking fastener hole locations.
10. For corner assemblies and 3D configurations, check that the corner is square (90°) using a framing square or a 3-4-5 check. If the corner is off-square, plan your shimming strategy for the clips on one or both walls before proceeding.

Z-Clip Engagement & Clearance Requirements

The mating Z-clips are provided by Sensitile and, depending on the type of material and illumination, are either pre-adhered or pre-fastened to the back of each panel. The wall-side mating clip must be fastened to the wall. The clearance above the top of the panel (between the top panel edge and any ceiling, soffit, or obstruction) must be sufficient to allow the panel to be lifted up and over the engaged clip for removal. Refer to the table below:

Z-Clip Engagement	Recommended Clearance Above Panel	Notes
5/8"	3/4"	Standard engagement — most common configuration
3/8"	1/2"	Medium lift-off
1/4"	3/8"	Minimum engagement

NOTE: These clearances are minimums. Where access for future removal is important, increasing clearance is always advisable. Verify the specific engagement depth for your panels on the shop drawings.

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Fastener & Anchor Selection

11. Select the appropriate fastener type based on the substrate:
 - Wood stud or blocking: Wood screws with appropriate length to achieve minimum 1" embedment into solid framing.
 - Metal stud framing: Self-tapping metal screws or toggle anchors, depending on framing gauge and load.
 - Concrete or CMU: Concrete anchors (e.g., Tapcon or equivalent wedge anchors) sized for the clip and panel weight.
 - Gypsum board alone: Not acceptable as a primary anchor point — always fasten into blocking or framing behind.

12. Confirm fastener spacing and quantity based on wall type and rhythm of structure within it. For heavy panels or tall assemblies, err toward closer fastener spacing on the mating Z-clips.

4 Installing the Wall-Side Mating Z-Clips

13. Starting from the established reference lines, position the first mating Z-clip at the specified elevation per the shop drawings.
14. Hold the clip in place and verify it is level. For multi-panel installations, string a line or use a laser across the full run to ensure all clips on the same row are co-planar.
15. For walls that are off-plumb or off-flat, shim behind the mating Z-clips as needed to bring each clip to the correct plane. Use metal/wood shim stock or appropriate non-compressible material.
16. Once the z-clip is confirmed to be level and properly positioned, fasten it to the wall using the selected anchors. Check that it has not shifted during fastening.
17. Repeat for all remaining mating Z-clips across the installation, working from bottom to top (for assemblies with multiple rows) and from one reference edge outward.

TIP — For large multi-panel runs, install all mating clips dry first (without tightening fasteners fully), confirm level and co-planarity across the full run, then go back and fully tighten. This allows easy adjustment before committing.

5 Lighting Preparation (Edge-Lit & Back-Lit Assemblies)

If the installation includes edge lighting (lightbar channels with LED strips provided by Sensitile) or back lighting, address wire routing before hanging panels.

18. Confirm the locations of lightbar channels (top, bottom, or sides) per the shop drawings. These are typically satin anodized aluminum capture channels or L-angles fastened to the wall.
19. Install all lightbar channels and L-angle support brackets in their specified positions before hanging any panels.
20. Route all low-voltage wiring and pigtails behind the panel or slab plane. Given the diameter of the LED wires, the mating Z-clips and any support hardware may need to be furred out slightly to create sufficient clearance for wires to pass behind the panels without being pinched or kinked.
 - A small furring shim (typically 1/8" to 1/4" depending on wire bundle diameter) applied uniformly behind all mating Z-clips in the affected area will create a consistent air gap for wire passage.
 - Ensure wires are organized and secured before panel installation to prevent interference with clip engagement.
21. Coil any excess pigtail length neatly behind the panel zone. Confirm that connections to power supplies and terminal blocks or other connectors (provided by Sensitile) are positioned in an accessible location per the lighting wiring diagram in the shop drawings.
22. Do not energize lighting circuits until panels are fully installed and all connections are verified.

6 Corner Conditions & 3D Assemblies

Folded and 3D panels that turn a corner require additional attention to ensure the corner reads cleanly, and the panel geometry sits correctly.

23. Verify the corner is square before hanging any panels or slabs. A 3D panel/slab is manufactured to a specific angle — typically 90° — and will not sit correctly if the wall corner deviates significantly.
24. If the corner is out of square, adjust the mating Z-clip positions on the adjacent walls by shimming until the panel can be offered up and the fold aligns naturally with the corner. **Do not force a panel into position.**
25. Panels and slabs may have special conditions like stiffening ribs, corner braces, or other hardware on the back (per the shop drawings) – ensure that these special conditions are accounted for appropriately.
26. It is good practice to start by installing the corner panel or slab first, ensuring both legs of the fold or both faces of the slab are properly engaged with their respective mating Z-clips before proceeding to adjacent flat panels.
27. For assemblies with L-angle base support brackets which may include lighting, install and level prior to panel installation. The bottom edge of the panel rests on this bracket; its height directly sets the final installed panel elevation.

7 Panel Installation — Sequence of Operation

IMPORTANT — Sequence matters. Always perform a complete dry fit of all panels before final installation. This allows identification of any fit, level, or seam issues before any permanent connections are made.

Step 7A — Dry Fit

28. Position each panel or slab in sequence, engaging the panel-side Z-clips over the mating wall clips. Do not finalize any positions or install any base L-angles permanently at this stage.
29. Check each panel for plumb, level, and flatness. Check that seams between adjacent panels are tight and consistent.
30. For multi-panel/slab runs, confirm that all panels/slabs sit in the same plane. If any panel bows/tilts away from or toward the wall, identify whether additional shimming behind the mating Z-clips or shimming behind the panel edges is required.
31. Mark the position of any clips or hardware that require adjustment. Remove panels, make adjustments as necessary, and repeat the dry fit until the installation is satisfactory.

Step 7B — Final Installation

32. Begin final installation from the bottom of the assembly, working upward. For multi-wall configurations, start at the primary reference corner and work outward.
33. Engage each panel/slab over the mating Z-clips, ensuring full and even clip engagement across the width of the panel.
34. Where panels meet at seams, check gap consistency. Since Sensitile panels have some inherent flexibility, shimming behind panels at their edges (using thin non-compressible shim material) can be used to push panel edges into alignment and achieve a tight, even seam. Apply shims discreetly, working from behind through available gaps.
35. For assemblies with base L-angle support brackets, confirm the bottom edge of the panel is fully seated in or resting on the bracket before finalizing the panel position.
36. Stand back and view the installation from a distance. Check for any panels that appear to bow, tilt, or sit proud of the plane. Address before proceeding to adjacent panels.
37. Repeat for all remaining panels, working in sequence across the installation.

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Post-Installation: Lighting Connections & Final Checks

- 38. Once all panels are installed, verify that all pigtails and wiring are properly positioned and accessible.
- 39. Make final low-voltage connections to the power supplies and terminal blocks or other connectors per the wiring diagram in the shop drawings. Refer to the wiring diagram for the details regarding the power supplies/drivers and controllers.
- 40. Energize the lighting and verify all lightbars illuminate evenly. Check for any dead zones, which may indicate a loose connection or a pinched wire or a misalignment light bar. Also check for any light leakage that may seem unsightly.
- 41. If applicable, confirm that the dimming or lighting control connection to the building control system is operational.
- 42. Remove all protective masking from panel faces. Use a clean, dry microfiber cloth and appropriate cleaner. Please refer to the Care and Maintenance Guidelines.
- 43. Perform a final inspection of all seams, edges, and surfaces. Confirm that no panels have shifted and that all clips are fully engaged.

Quick Reference: Installation Checklist

☒	All panels/slabs, hardware and lighting received per approved shop drawings
☐	Wall surface verified flat and plumb; blocking confirmed at all clip locations
☐	Corner(s) checked for square; shimming plan established if needed
☐	Low-voltage rough-in complete before panel installation begins
☐	Lightbar channels and L-angle base brackets installed and leveled
☐	Mating Z-clips installed at correct elevations; level across full run
☐	Wiring clearance gap behind clips confirmed (furring added if required for wire diameter)
☐	Full dry fit completed; all adjustments made before final installation
☐	Panels installed in sequence, bottom to top; seams shimmed as needed for tight fit
☐	All panels confirmed in same plane; no bowing or tilting
☐	Low-voltage connections made; lighting tested and functional
☐	Protective masking removed; final inspection complete

Questions or Technical Support: Contact Sensitile Systems at info@sensitile.com or +1.313.872.6314. Reference your job name (found on the shop drawings) when calling.