

# BACKLIGHTING CAMBRIA - THINLIGHT

## TECHNICAL GUIDELINE



This document outlines how to properly use ThinLight LED panels to backlight Cambria quartz surfaces.

1. **Figure 1** below shows designs that can be properly backlit with ThinLight Panels. This includes columns for designs that can be successfully lit in an office setting (200+ LUX) and a dim setting (50+ LUX).

DESIGN	APPROVED THICKNESS(ES)	OFFICE LIGHTING ENVIRONMENT (200+ LUX)	LOW LIGHT ENVIRONMENT (50+ LUX)
Baybridge™	1cm	Yes	Yes

**Figure 1**

2. Color temperature of a light source impacts the surface tone of backlit Cambria. ThinLight panels can be purchased in both cool and warm temperatures. Backlit Cambria tends to warm transmitted light. Because of this, Cambria recommends the cooler of the 2 ThinLight panel options.
  - a. NOTE: To contact ThinLight Technologies, please call 855-622-1972 or visit [thinlightusa.com](http://thinlightusa.com)
3. ThinLight panels consist of an etched acrylic interior that disperses light provided by LED strips along the acrylic edge. These strips are embedded into an extruded aluminum wireframe that both protects the diodes and dissipates heat. This aluminum frame provides a 0.098" (2.5mm) gap along the outer perimeter of the panel. This gap must be filled with a 0.098" (2.5mm) thick piece of clear acrylic offset ½" from the outer dimensions of the panel. **See Figure 2.** This thin piece of acrylic provides structural support to the stone and must be included in each installation.

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**Figure 2**

- a. NOTE: This 0.098" thick piece of acrylic will be included with all Cambria related projects but is not standard for ThinLight panels.
  - b. NOTE: Do not adhere the acrylic to the ThinLight panel. This will cause uneven dispersion of light that can easily be seen through the backlit stone.
4. A similar approach must be taken to properly support the bottom of the thinlight panel. A ½" thick substrate must be used to both fully support the bottom of the panel and eliminate stress placed onto the aluminum frame of the panel. **See Figure 3.**



**Figure 3**

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5. The most readily available substrate material is ½" thick plywood. ½" thick honeycomb panels can also be used, but they must have comparable rigidity. Unlike the thin acrylic supportive layer on the top of the panel, the bottom substrate must be adhered to the back of the panel. Cambria recommends 100% pure, clear silicone.
  - a. NOTE: Avoid using low viscosity adhesives such as super glue. Such an adhesive could leak into the LED strip channel and ruin sensitive electrical components.
  - b. NOTE: Avoid placing adhesive into the void spaces of the aluminum frame. This frame is specifically designed to dissipate heat. Any adhesive allowed to dry on the surface will cause this design to work less efficiently and shorten the working life of the panel.
6. The edge profile of Cambria stone can either be a laminated (1cm+2cm/3cm) or received a 1 ½" minimum mitered drop edge when paired with ThinLight LED panels. ThinLight use causes a ½" wide minimum unlit halo to appear around the edge of the stone piece. See Figure 4. A laminated edge will increase the width of this halo.

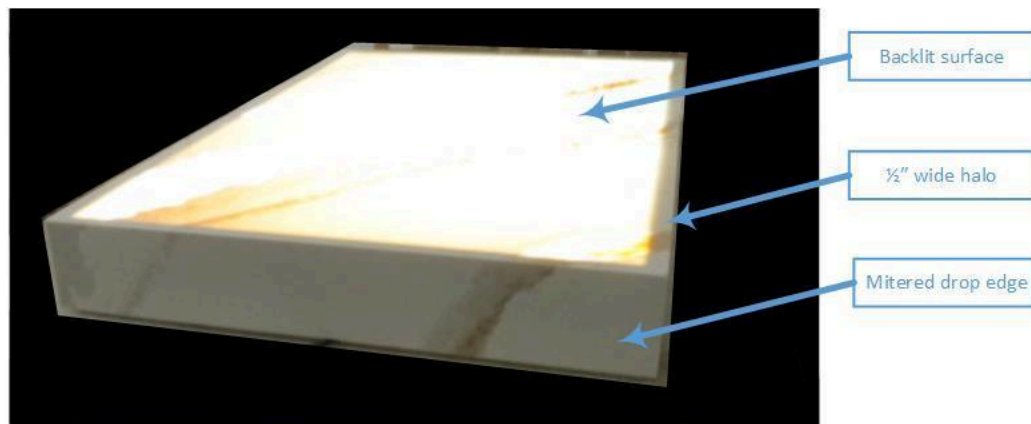


Figure 4

7. Backlit Cambria installations must be designed so that there is a maximum 1/8" gap between the backside of the lamination strip or mitered drop edge and ThinLight aluminum frame.
  - a. Mitered drop edge applications:
    - i. Shims must be installed every 12" to fill the gap between the backside of Cambria mitered drop edge and the ThinLight aluminum frame.
8. Depending on the style of the cabinet, additional buildup must be added to provide a minimum of 1/8" from the bottom of the miter to the top of the cabinet drawer. The illustrations

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CAMBRIA®

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below show the cross section view of the assembly for backlighting Cambria product for two different styles of cabinets.

- a. EXAMPLE ONE: **Figure 5** illustrates that only the ½" substrate is needed to properly space the backlighting assembly.

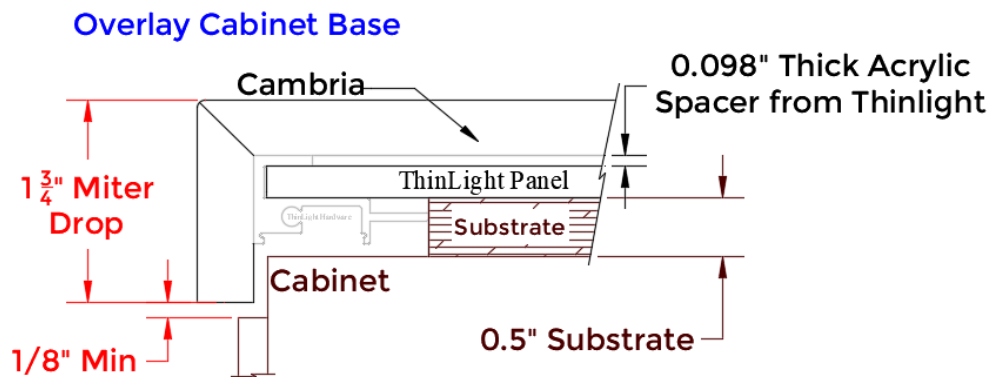


Figure 5

- b. EXAMPLE TWO: **Figure 6** illustrates additional buildup is needed to properly space the backlighting assembly.

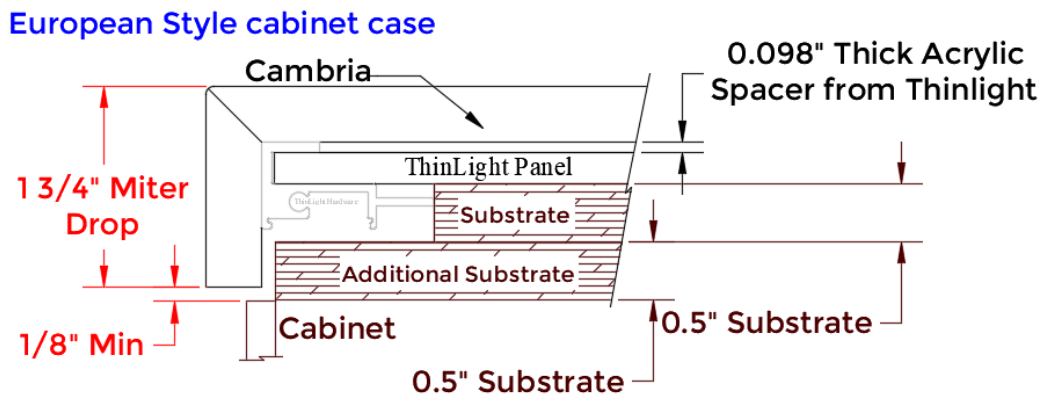


Figure 6

- 9. ThinLight lighting systems must be installed so that the surface is flat and on-plane to properly support the Cambria surfacing. Refer to SOP 9.3.3 Installation Requirements for Cambria for proper installation of Cambria surfacings.

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10. A beauty bead of silicone must be applied once Cambria is installed onto the ThinLight panel. Beauty bead to be placed between the backside of the Cambria and ThinLight aluminum frame.
  - a. **NOTE: Do not sandwich adhesive between Cambria and ThinLight components**

If you have any questions, please contact Cambria at 1-866-CAMBRIA.

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