

COLD-FORMING BEND RADIUS

RESIN CHOICE

Lumiform is typically recommended for cold-forming applications because it can be formed to a tighter radius (see chart below) and is less likely to craze or crack. Cold-forming a sheet to radius smaller than the minimum indicated will cause the product to fail, either immediately or over time. If smaller bend radii are required for a specific application, line bending or thermoforming is recommended.

RESIN	RULE OF THUMB <i>Does not pertain to all products</i>
Lumiclear	min. radius = 350 x panel thickness
Lumishield EX & Lumiform	min. radius = 100 x panel thickness

MINIMUM COLD-FORM BEND RADIUS <i>Does not pertain to all products</i>									
SHEET THICKNESS	in	1/8" (0.118")	5/32" (0.16")	3/16" (0.196")	1/4" (0.236")	3/8" (0.354")	1/2" (0.472")	3/4" (0.708")	1" (0.944")
	mm	3.0	4.1	5.0	6.0	9.0	12.0	18.0	24.0
LUMICLEAR RADIUS	in	41.3	56	68.6	82.6	123.9	165.2	247.8	330.4
	mm	1049	1422	1742	2098	3147	4196	6294	8392
LUMISHIELD EX & LUMIFORM RADIUS	in	11.8	16	19.6	23.6	35.4	47.2	70.8	94.4
	mm	300	406	498	599	899	1199	1798	2398

DECORS & FINISHES

Lumicor advises against cold-forming Recycled Glass, Java, and all metal products. Some thicker décor materials such as reeds in thinner gauges may crack if formed to a tight radius even within the rule of thumb listed above. The deeper the finish, the more likely a product will crack or craze, so the bend radius should be larger than minimum for Impressions or products with finishes other than gloss or matte.

HARDWARE & SUPPORT

Do **not** cold form with standoffs or other point support, regardless of the gauge, resins, or radius. The panel will pucker on the straight edge between standoffs, and stress concentrations will likely cause crazing over time. Straight edges should always be captured in a full length track or frame. Curved edges do not necessarily need to be captured in a frame, although it is preferred.

OTHER RISKS

Cold-formed panels are more susceptible to cracking or crazing from chemical exposure or stress concentrations from hardware or other applications of force.

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