
Light Tape[®] Backlighting Solutions

Surface Transparency Test

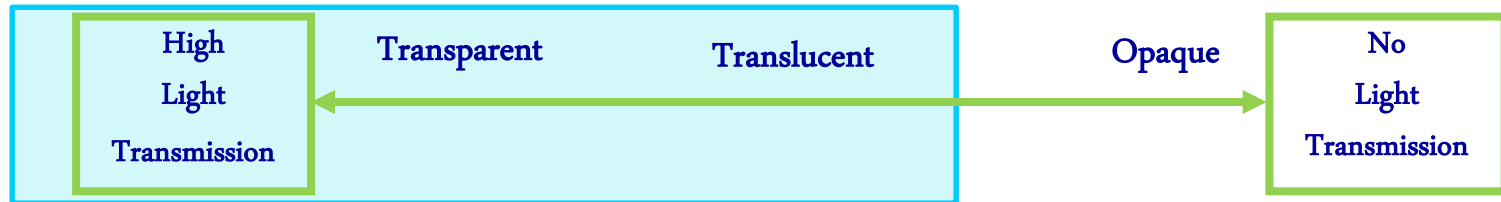


Determining the translucency of a surface

It is important to understand how light will react through a surface when backlit. Not every surface reacts the same. Surfaces that are highly translucent or transparent require a different lighting solution than surfaces on the opposite end of the spectrum who are closer to opaque.

4 Levels of Surface Transparency

All surfaces are not created the same and must be illuminated differently.



Transparent Surfaces – There is no diffusion, you can easily see the light source. Only an even backlight will illuminate without hot or cold spots. Light Tape[®] is the only choice!

Highly Translucent Surfaces - Very little diffusion in the surface, difficult to illuminate without hot and cold spots. Light Tape[®] is the ideal solution.

Blended Surface - These surfaces have a combination of opaque and also translucent sections. The overall effect is limited depending on ratio of opaque to translucent.

Poorly Translucent Surfaces – These surface are not really meant to be backlit. Light Tape[®] can be a solution but LEDs are probably the required light source. One would need to simulate the effect of 100s bulbs a short distance from the rear of the surface which can be difficult. Edge lit solutions may also work.

Surface Transparency Test

Light Tape[®] is the ideal backlight for translucent and transparent surfaces. While most “translucent” surfaces will illuminate, all are not truly translucent.

1. Using the flash light on a standard mobile phone as the light source.
2. Place the flash light directly on the back of the surface you wish to backlight. Shining the light through the surface. Is the light somewhat restricted and defined or is there a ‘halo’ around the center illuminated point?
3. Then slowly move the light away and observe the illuminated area. Does the glowing area become larger or does it become less defined?

Which surface is more translucent?



While both surfaces allow light to pass, they present different challenges to illuminate evenly over a large surface area.

The greater the translucency, the lower the need for diffusion. There is no diffusion required with Light Tape[®] lamps, the surface is placed directly on top of the lamp.

Highly Translucent Surface

When you place your phone light on the back, do you see a dot about the twice the size of the light bulb with 1 or 2" halo around like Saturn? The surface should somewhat glow around the bright center.



Light directly pressed on back of the surface.

Strong definition and wash.

When you back the phone away, does more of the surface area illuminate? The surface should start to glow and the illumination should even. This is a perfect medium for Light Tape.



Illumination is strong as light is backed away.

Poorly Translucent Surface

When you place your phone light on the back, do you see a somewhat fainter dot about the size of the light without a strong halo around the center point? The light is limited to a defined area.



Light directly pressed on back of the surface.
Limited wash, poorly defined.

When you back the phone away, does the center illumination disperse? With this surface, the brightness begins to fade very quickly as you move the away from the highly diffused surface.



Illumination is somewhat insipid as light is backed away.