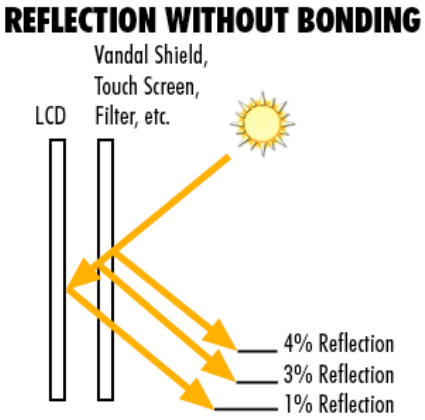
HOW TO CHOOSE THE BEST SUNLIGHT READABLE LCD MONITOR

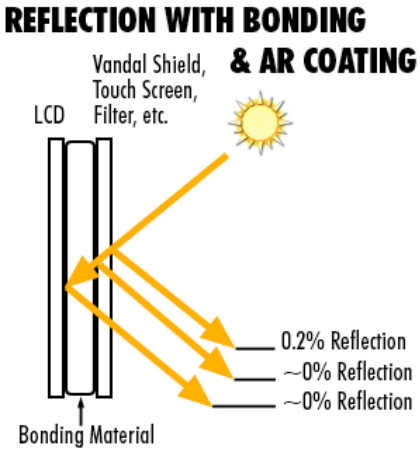
The viewability of most LCD displays (as well as LED's and plasmas) is severely limited in high ambient light conditions. When they are taken outdoors on a sunny day, the screen "washes out" so that only about 10% of it is visible to the human eye. This is due to the amount of ambient surrounding brightness, as well as the reflections off of 3 surfaces: the outer surface of the protective glass, the inner surface of the glass, and the surface of the LCD panel, as you can see below:



The most common solutions which will enable you to clearly see monitor images on a bright, sunny day are Sunlight Readable Monitors and Optically Bonded Monitors.

Sunlight Readable Monitors employ more (or more powerful) backlights to increase the monitor's brightness to 1,000 nits or more. This added brightness is enough to "over-power" the ambient light and produce viewable images. These are ideal when the sun's rays will fall directly onto the face of the monitor's screen. However, the drawbacks of Sunlight Readable monitors are that they have greater power consumption and produce more heat than standard LCD monitors.

Another approach is to use Optically Bonded Monitors. Optical bonding is the process of injecting a clear, optical-grade resin into the gap between the LCD panel and the protective outer glass, bonding them together. This fills the air gap between the two, eliminating two reflective surfaces. An Anti-Reflective coating is then applied to the outside of the protective glass, minimizing surface reflections.



The net result of the optical bonding process is a drastic (up to 98%) reduction in reflections, and a significant increase in contrast ratio. This produces a tremendous improvement in viewability on bright, sunny days.

In addition to the obvious improvement in image quality outdoors, Optical Bonding also provides several other important benefits:

- Improved ruggedness
- Increased scratch resistance
- Improved safety (less chance of broken glass)
- Increased shock/vibration resistance
- Prevents condensation/internal fogging

Sunlight Readable and Optically Bonded LCD monitors are ideal for use in a wide range of industries and applications:

Transportation	Pipeline Inspection
Navigation	Drilling Rigs
Outdoor Kiosk	Control Towers
Airplane Cockpits	Ships/Boats
Digital Signage	Law Enforcement
Military	

For the ultimate solution, ***TRU-Vu*** offers a 21.5" Sunlight Readable monitor, which is also Optically Bonded! Learn more about the SRMOB-21.5C HERE.

In summary, Sunlight Readable LCD monitors are the best choice for applications where the sun's rays will be falling directly onto the face of the monitor. Optically Bonded monitors will work extremely well in bright daylight conditions, or where there is a lot of bright, reflected light.

Click HERE to see a VIDEO comparing standard LCD monitors, Sunlight Readable monitors, and Optically Bonded monitors on a bright sunny day.

For information on specific Sunlight Readable and Optically Bonded monitor models, please click HERE.