LED displays:

Estimating optimal viewing distance and display size

Christie® Velvet™ indoor LED tiles offer brilliant, high-brightness, high-definition visuals. At the optimal viewing distance and display size, images appear seamless and at the highest-possible quality.

How to estimate optimal viewing distance

To estimate the optimal viewing distance, all you need to know is an LED display’s ‘pixel pitch’—the shortest distance from the center of one pixel to the center of the next—and this simple calculation:

\[
\text{Pixel pitch} \times 8 = \text{Optimal viewing distance (in feet)}
\]

Let’s calculate estimated optimal viewing distances for Christie Velvet LED display tiles, available in four different pixel pitches:

<table>
<thead>
<tr>
<th>Christie Velvet LED display pixel pitch</th>
<th>Optimal viewing distance: Pixel pitch x 8</th>
<th>Optimal viewing distance from LED display (approximate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.9mm</td>
<td>1.9 x 8</td>
<td>15 feet</td>
</tr>
<tr>
<td>2.5mm</td>
<td>2.5 x 8</td>
<td>20 feet</td>
</tr>
<tr>
<td>3mm</td>
<td>3 x 8</td>
<td>24 feet</td>
</tr>
<tr>
<td>4mm</td>
<td>4 x 8</td>
<td>32 feet</td>
</tr>
</tbody>
</table>

Note: To calculate optimal viewing distance in meters instead of feet, simply multiply pixel pitch by 2.5
How to estimate optimal display size

Modular, built-to-order Christie Velvet LED display tiles can be configured into virtually any size and shape. Beyond considering the size of your space, how do you estimate the optimal size of your display? As with viewing distances, estimating optimal display size is largely based on pixel pitch. Essentially, larger pixel pitches equal larger recommended display sizes, and vice versa.

This chart estimates display sizes needed to achieve 1920 x 1080 resolution:

4.0mm pitch  
Size: 25.2 x 14.2 feet

3.0mm pitch  
Size: 18.9 x 11 feet

2.5mm pitch  
Size: 15.8 x 9.5 feet

1.9mm pitch  
Size: 12.6 x 7.9 feet

For more information, please check out these resources:

» Watch the video: Christie Velvet indoor LED tiles

» Download our ‘Display wall solutions’ brochure

» Visit our website

Have any questions? Would you like a quote?

Please contact your Christie territory sales manager.