Ambient Light Rejecting WHITEBOARDSCREEN™ SERIES

Section 1: Screen Design

1.1 What is it for?
The versatile Ambient Light Rejecting WhiteBoardScreen™ has enhanced reflectivity: It is perfect for rooms with high ambient light, such as presentations rooms, when used with standard throw projectors.

1.2 How does it work?
This whiteboard projection screen uses our unique StarBright™ 4 (4.0 gain) material for in-line seating. Its highly reflective projection surface enhances brightness and contrast while countering the washout effect of ambient light.

Section 2: Product Features

2.1 Characteristics

Screen Material
- StarBright™ 4 with 4.0 gain projection surface is coated with a transparent dry-erase layer for training presentations
- 120° viewing angle
- High reflectivity is ideal for presentations with high levels of ambient light
- 4K Ultra HD, Active 3D, and HDR Ready
- Unique optical coating supports high uniformity and picture quality
- Contrast enhancements improve picture black levels for greater resolution and balanced color temperature
- Available in the following diagonal sizes:
  - 60" and 80" in 4:3 format

Design and Installation
- Cutting-edge design combines projection screen and dry erase board into one space-saving economical product
- Includes dry-erase markers, eraser, and bracket installation kit
- For energy conservation and extended projector lamp life, use projector on economy mode. The StarBright™ 4 material enhance image brightness.
Quality and Reliability

- 2-year Parts & Labor manufacturer’s warranty
- 3-year warranty offered through ENR-G program (Education, Non-Profit, Religious and Government)

2.2 Model Numbers

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WB60V</td>
<td>60&quot;</td>
<td>4:3</td>
<td>35.0</td>
<td>46.9</td>
<td>StarBright 4</td>
<td>4.0</td>
<td>Black</td>
<td>34.39</td>
<td>39.68</td>
<td>52.4&quot;x40.9&quot;x3.2&quot;</td>
</tr>
<tr>
<td>WB80V</td>
<td>80&quot;</td>
<td>4:3</td>
<td>46.9</td>
<td>62.6</td>
<td>StarBright 4</td>
<td>4.0</td>
<td>Black</td>
<td>57.32</td>
<td>72.75</td>
<td>68.1&quot;x52.6&quot;x3.2&quot;</td>
</tr>
</tbody>
</table>

Section 4: Screen Material Specifications

4.1 Characteristics

The **StarBright™ 4** material has a unique optical coating that enhances picture clarity regardless of an ambient light presence. The Angular-Reflective surface is coated with a transparency dry-erase layer for use as a white board while enhancing true color rendition from its highly reflective qualities. StarBright™ 4 materials will enhance image brightness 4x more than the standard matte-white material and is your best dual function for White Board and Front Projection for use in training rooms with ambient light.

Features & Benefits

- Multi-layer PVC (Polyvinyl chloride) with texture and surface coating
- Gain: 1.1
- View Angle: 180° (90° ±LR)
- Full Lambertian Diffuser- no half gain drop
- Produces exceptional picture quality for any presentation
- Mildew Resistant
- Active 3D and 4K Ultra HD ready
- Surface can be cleaned with (water) moist cotton cloth
## Section 5: Execution

### 5.1 Precautionary Notes

Before using the dry-erase function of your whiteboard screen, please make note of the following instructions to properly maintain and clean your dry-erase surface projection screen. (These Whiteboard cleaning tips are just as relevant with any dry-erase writing surface as they are with our Whiteboard-Projection Screens.)

1. Only use a high density foam eraser when removing dry-erase markings from the Whiteboard screen.
2. Do not use abrasive erasers as these may scratch the surface of the screen.
3. Never spray the whiteboard cleaner solution onto the surface while marker writing is present and then attempt to use a high density foam eraser to remove. This will only smear the dry-erase marker ink making...
the surface more difficult to clean and will likely ruin the foam eraser.

4. If there are any dry-erase markings left behind even after attempting to remove them using our high
density erasers, spray our whiteboard cleaning solution directly onto the screen surface and use only a soft
microfiber cloth to wipe-down and clean the area.

For a video demonstration, please visit: http://www.elitescreens.com/whiteboardscreen-cleaning

If replacement cleaning accessories are needed, please visit the Whiteboard cleaning accessories section of
our website at http://www.elitescreens.com/clean-whiteboard

5.2 Hardware and Parts List

Please make sure all parts listed are included before proceeding with installation.

<table>
<thead>
<tr>
<th>Parts List</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Qty 4–Butterfly screw</td>
</tr>
<tr>
<td>b. Qty 12–Wall screw</td>
</tr>
<tr>
<td>c. Qty 12–Hollow wall (or drywall) anchor</td>
</tr>
<tr>
<td>d. Qty 2–Top hanging wall brackets (to the wall)</td>
</tr>
<tr>
<td>e. Qty 2–Top hanging whiteboard brackets (to the whiteboard)</td>
</tr>
<tr>
<td>f. Qty 2–Bottom hanging bracket</td>
</tr>
<tr>
<td>g. For whiteboard diagonal size 60 (4:3) inches</td>
</tr>
<tr>
<td>h. For whiteboard diagonal 80(4:3), 96 (16:9) inches.</td>
</tr>
<tr>
<td>i. Qty 2–whiteboard eraser</td>
</tr>
<tr>
<td>j. Qty 2–Dry-erase pens</td>
</tr>
<tr>
<td>k. Qty 1–WhiteBoardScreen™ cleaner</td>
</tr>
</tbody>
</table>

G and H are not actual individual parts included but configurations only by combining parts (d) and (e) with the butterfly screw.
5.3 Installation

1. Mark the location the WhiteBoardScreen™ will be installed and drill your holes for all Top Hanging Wall Brackets (fig.1) and Bottom Frame Hanging Brackets (fig.2).

2. Attach the Top Hanging WhiteBoard Brackets (fig.3) to the Top Hanging Wall Brackets (fig.1) with the Butterfly Screws according to the size of the WhiteBoardScreen™ as specified in fig.4 and 5 below.

3. Next, affix the Top Hanging Wall Brackets (fig.1) and the Bottom Frame Hanging Brackets (fig.2) to the drilled locations and install the wall screws (fig.6).

4. Lastly, hang the WhiteBoardScreen™ on the brackets (fig.7).

Note: The WhiteBoardScreen™ Series eraser should only be used for the WhiteBoardScreen™.

Note:  

- Fig.4 Bracket configuration for whiteboard 60 inch diagonal (4:3) screens
- Fig.5 Recommended Bracket configuration for whiteboard 80 inch (4:3) and 96 inch (16:9)
Desktop Projector Mode

Overhead Projector Mode

the overall height of the white board

50mm (Distance between the bottom of the top hanging bracket and the top of the white board)

the overall height of the white board

50mm (The distance between the top of the bottom hanging bracket and the bottom of white board)

Note: If you will use the flat installation, you just need to install the “Bottom hanging bracket” on the top of the WhiteBoardScreen.
Notice to Installer:

Please use the following installation instructions to obtain superior optical performance from the StarBright 4 Angular Reflective ALR (Ambient Light Rejecting) Screen.

Make sure to follow these instructions in order for the StarBright 4 to perform correctly.

- Angular-Reflective material is not compatible with ultra/short-throw projectors
- Minimum lens throw ratio 1.5x image width
- Ambient light must not come from the same direction as the projector

Since angular-reflective means that the projected image will reflect at the mirror-opposite angle, it is important to position the projector so that the viewer will get the best possible image.

Step 1: Establish the general “eye level” of the viewers

Step 2: Set the appropriate projection level

Step 3: Adjust the screen height level and projection angle

Input Angle (A) = Output Angle (B) aligns with the viewer’s angle

**Correct Installation Examples**

<table>
<thead>
<tr>
<th>Projector Ceiling Installation:</th>
<th>Projector Table Top:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make sure the projector (light in) is angled (A) to reflect (B) at the mirror-opposite angle (light out) to align with the viewer’s eye level.</td>
<td>Make sure the projector (light in) is angled (A) to reflect (B) at the mirror-opposite angle (light out) to align with the viewer’s eye level.</td>
</tr>
</tbody>
</table>

**Incorrect Installation Examples**

<table>
<thead>
<tr>
<th>Ceiling Mounted Short-throw Projector</th>
<th>Tabletop Ultra-Short throw Projector</th>
</tr>
</thead>
</table>

**Note:** Improper installation will result in light loss and produce a dark image. This is due to the projector’s light reflecting in the wrong direction. Images are not to scale and are for illustration purposes only.
**Recommended Installation Locations for desktop and overhead projector installations**

The StarBright4 material used in this WhiteBoardScreen™ has a special high gain that is angular reflective. In order to take full advantage of this special material, it is important that the WhiteBoardScreen™ is installed properly so that the projected image is viewed within the recommended viewing angle.

It is normal for some viewing areas to be less bright than the center due to the nature of the screen material. It is not a defect and minor “hot spotting” will occur as a result.

The below charts will assist in determining several factors to consider to help you with your installation. Please note that these are only recommendations.

### Desktop Projector Installation

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Overall Width (W)</th>
<th>Overall Height (H)</th>
<th>Installation Height (A)</th>
<th>Suggested Projection Distance (B)</th>
<th>Sitting View Distance (C1)</th>
<th>Standing View Distance (C2)</th>
<th>Suggested Projection Height (D)</th>
<th>Viewer Distance (E)</th>
<th>Sitting View Height (F1)</th>
<th>Standing View Height (F2)</th>
<th>Sitting View Angle (01)</th>
<th>Standing View Angle (02)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB60V</td>
<td>1190.0</td>
<td>930.0</td>
<td>1000-1200</td>
<td>1950-2950</td>
<td>160</td>
<td>114</td>
<td>800-1000</td>
<td>1200</td>
<td>1200</td>
<td>1700</td>
<td>9°</td>
<td>6°</td>
</tr>
<tr>
<td>Unit: Inches</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Diagram](image.png)

Elite Screens Inc. | Elite Screens Europe GmbH | Elite Screens France SAS | Elite Screens India
Elite Screens China Ltd. | Elite Screens Taiwan Corp. | Elite Screens Japan | Elite Screens Australia
<table>
<thead>
<tr>
<th>Model Number</th>
<th>Overall Width (W)</th>
<th>Overall Height (H)</th>
<th>Installation Height (A)</th>
<th>Suggested Projection Distance (B)</th>
<th>Sitting View Distance (C1)</th>
<th>Standing View Distance (C2)</th>
<th>Suggested Projection Height (D)</th>
<th>Viewer Distance (E)</th>
<th>Sitting View Height (F1)</th>
<th>Standing View Height (F2)</th>
<th>Sitting View Angle (01)</th>
<th>Standing View Angle (02)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB80V</td>
<td>1630.0</td>
<td>1230.0</td>
<td>1000-1200</td>
<td>2750-3750</td>
<td>228</td>
<td>145</td>
<td>800-1000</td>
<td>1200</td>
<td>1200</td>
<td>1700</td>
<td>10°</td>
<td>6°</td>
</tr>
</tbody>
</table>

| WB80V        | 64.2             | 48.4               | 39.4-47.2               | 108.3-147.6                      | 9.0                       | 5.7                         | 31.5-39.4                      | 47.2             | 47.2                      | 66.9                     | 10°                  | 6°                    |

**Desktop Installation explanation:**

A = Installation Height (Floor to bracket drilling hole)

B = Suggested Projection Distance (Projector to screen)

C1 = Sit View Distance (The brightest view when people are sitting down in relation to the angle setting in F1)

C2 = Stand View Distance (The brightest view when people are standing in relation to the angle setting in F2)
### Overhead Projector Installation

<table>
<thead>
<tr>
<th>Models</th>
<th>Overall Width (W)</th>
<th>Overall Height (H)</th>
<th>Installation Height (A)</th>
<th>Suggested Projection Distance (B)</th>
<th>Ceiling Height (C)</th>
<th>Suggested Offset (D)</th>
<th>Viewer Distance (E)</th>
<th>Sitting View Height (F1)</th>
<th>Standing View Height (F2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB60V</td>
<td>1190.0</td>
<td>930.0</td>
<td>2340</td>
<td>1950-2950</td>
<td>2500</td>
<td>130</td>
<td>1200</td>
<td>1200</td>
<td>1700</td>
</tr>
</tbody>
</table>

**Unit: mm**

<table>
<thead>
<tr>
<th>Models</th>
<th>Overall Width (W)</th>
<th>Overall Height (H)</th>
<th>Installation Height (A)</th>
<th>Suggested Projection Distance (B)</th>
<th>Ceiling Height (C)</th>
<th>Suggested Offset (D)</th>
<th>Viewer Distance (E)</th>
<th>Sitting View Height (F1)</th>
<th>Standing View Height (F2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB60V</td>
<td>46.9</td>
<td>36.6</td>
<td>92.1</td>
<td>76.8-116.1</td>
<td>98.4</td>
<td>5.1</td>
<td>47.2</td>
<td>47.2</td>
<td>66.9</td>
</tr>
</tbody>
</table>

**Unit: inches**

---

**Notes:**
- **D** = Suggested Projection Height (Floor to project center)
- **E** = Viewer Distance (User to projector)
- **F1** = Sit View Height
- **F2** = Stand View Height
- **θ1** = Sit View Angle (Screen slope angle between screen and wall to achieve brightest view)
- **θ2** = Stand View Angle (Screen slope angle between screen and wall to achieve brightest view)

(****Relation between C1, F1 and θ1; Relation between C2, F2 and θ2****)
## Models

<table>
<thead>
<tr>
<th></th>
<th>WB80V</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall Width (W)</strong></td>
<td>1630.0</td>
<td><strong>Overall Height (H)</strong></td>
<td>1230.0</td>
</tr>
<tr>
<td><strong>Installation Height (A)</strong></td>
<td>2340.0</td>
<td><strong>Suggested Projection Distance (B)</strong></td>
<td>2750-3750</td>
</tr>
<tr>
<td><strong>Ceiling Height (C)</strong></td>
<td>2500.0</td>
<td><strong>Suggested Offset (D)</strong></td>
<td>17.0</td>
</tr>
<tr>
<td><strong>Viewer Distance (E)</strong></td>
<td>1200.0</td>
<td><strong>Sitting View Height (F1)</strong></td>
<td>1200.0</td>
</tr>
<tr>
<td><strong>Standing View Height (F2)</strong></td>
<td>1700.0</td>
<td><strong>Unit: mm</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Unit: inches**

<table>
<thead>
<tr>
<th></th>
<th>WB80V</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall Width (W)</strong></td>
<td>64.2</td>
<td><strong>Overall Height (H)</strong></td>
<td>48.4</td>
</tr>
<tr>
<td><strong>Installation Height (A)</strong></td>
<td>92.1</td>
<td><strong>Suggested Projection Distance (B)</strong></td>
<td>108.3-147.6</td>
</tr>
<tr>
<td><strong>Ceiling Height (C)</strong></td>
<td>98.4</td>
<td><strong>Suggested Offset (D)</strong></td>
<td>6.0</td>
</tr>
<tr>
<td><strong>Viewer Distance (E)</strong></td>
<td>47.2</td>
<td><strong>Sitting View Height (F1)</strong></td>
<td>47.2</td>
</tr>
<tr>
<td><strong>Standing View Height (F2)</strong></td>
<td>66.9</td>
<td><strong>Unit: inches</strong></td>
<td></td>
</tr>
</tbody>
</table>

---

**Over head installation explanation:**

A = Installation Height (Suggested from floor to top of screen)

B = Suggested Projection Distance (Projector to screen)

C = Ceiling Height

D = Suggested Off set (Distance between projection center and top of screen)

E = Viewer Distance (User to projector)

F1 = Sit View Height

F2 = Stand View Height

****The basis of height is from an average height****

W = Overall Width

H = Overall Height

---

Note: The data is for reference only. The installer should base the installation according to the customer and the space provided.
## Section 6: Product Specifications

### 6.1 Dimensions

<table>
<thead>
<tr>
<th>Model</th>
<th>Diag. Size</th>
<th>Aspect Ratio</th>
<th>Overall Width (A)</th>
<th>View Width (A1)</th>
<th>Overall Height (B)</th>
<th>View Height (B1)</th>
<th>Tray Length (A2)</th>
<th>B2</th>
<th>C1</th>
<th>C2</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB60V</td>
<td>60”</td>
<td>4:3</td>
<td>48.6</td>
<td>46.9</td>
<td>36.8</td>
<td>35.0</td>
<td>32.9</td>
<td>4.5</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>WB80V</td>
<td>80”</td>
<td>4:3</td>
<td>64.4</td>
<td>62.6</td>
<td>48.6</td>
<td>46.9</td>
<td>55.1</td>
<td>5.7</td>
<td>9.0</td>
<td></td>
</tr>
</tbody>
</table>

**Unit: Inches**

<table>
<thead>
<tr>
<th>Model</th>
<th>Diag. Size</th>
<th>Aspect Ratio</th>
<th>Overall Width (A)</th>
<th>View Width (A1)</th>
<th>Overall Height (B)</th>
<th>View Height (B1)</th>
<th>Tray Length (A2)</th>
<th>B2</th>
<th>C1</th>
<th>C2</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB60V</td>
<td>60”</td>
<td>4:3</td>
<td>1234.4</td>
<td>1191.3</td>
<td>934.7</td>
<td>889.0</td>
<td>1000.8</td>
<td>835.7</td>
<td>114.3</td>
<td>160.0</td>
</tr>
<tr>
<td>WB80V</td>
<td>80”</td>
<td>4:3</td>
<td>1635.8</td>
<td>1590.0</td>
<td>1234.4</td>
<td>1191.3</td>
<td>1399.5</td>
<td>1135.4</td>
<td>144.8</td>
<td>228.6</td>
</tr>
</tbody>
</table>

**Unit: mm**

### 6.2 Drawings

[Diagram of product dimensions]
6.3 Pictures

*ALR WhiteBoardScreen™ Series* Front View

Example of Ambient Light Rejecting Qualities
Life Style
Section 7: About Elite Screens

7.1 Company Description

*Elite Screens Inc.* is a California based company that specializes in making quality commercial and home-theater projection screens for the retail and custom install sales channels. Our company began as an innovative venture into the projection market by manufacturing veterans from the AV/IT industry. Elite Screens quickly established itself as an entry level commercial and home theater screen manufacturer. This was accomplished by making a quality product cost effective with a focus on mass-producing screen material, sizes and aspect ratios that were most commonly preferred by AV customers in general. We focused on uniformity with what would match the mainstream demographic while including extra features that are not usually included by other manufacturers. In time, we progressed from just retail sales into the realm of custom installer/integrator manufacture as our numerous reviews and awards will attest. We stand behind our product and are so certain of customer satisfaction with the quality of our product that we offer a 2-year manufacturer's warranty which is twice the industry standard. In our continued devotion to excellence in products and service, we are committed to implementing green practices with our production. We have adopted manufacturing methods that promote conservative regulation of our energy needs. Our simple product designs combined with the expertise of our permanent staff ensures that our entire line of products are made by experienced hands devoted to the high standards of today’s audio-video consumer.

###