Table of Contents

Selecting the Right Screen

Da-Lite offers a wide array of screens each with a choice of projection surfaces. Selecting the right combination to meet your needs is important for optimum results.

The following pages offer guidelines for selecting a screen that suits your application. Although these recommendations will work in most situations, each must be looked at not as a strict rule, but rather as a guideline for determining your actual needs based on your own situation.

For additional help in selecting screens, contact Da-Lite for the free publications "Selecting Front Projection screens for Today's Presentation Media Applications" or "Selecting Rear Projection Screens for Today's Presentation Applications". Of course, your Da-Lite Sales Partner is also happy to assist you.

Four Steps to Selecting the Right Screen

❶ Pick the ***type screen*** that best suits your particular needs. For example, choose from front projection (page 5) or rear projection (page 21) screens in either portable, wall or ceiling mounted models in either manual or electric versions. Generally, if your projection application is permanent, then wall and ceiling screens are your best choice. If, however, you find your needs require moving the screen to different locations then a portable screen is a better alternative.

❷ Determine the optimum ***screen size*** based on room dimensions, planned audience seating size and arrangement. The rule of thumb is to fit the screen to the audience — not to the projector. Da-Lite recommends the following formula for determining screen size:

- Screen height should be approximately equal to 1/6 the distance from the screen to the last row of seats, allowing text to be read and detail to be seen in the projected image.
- Ideally, the first row of seats should be approximately 2 screen heights away.
- The bottom of the screen should be a minimum of 4 feet above the audience floor, allowing those seated toward the rear of the audience to see the screen. This may require additional screen "drop" for ceiling hung screens (see next page for information).

❸ Select the appropriate ***format*** for your projection application. Common formats are as follows:

Common Applications	Aspect ratio Width/Height
NTSC Video	1.33
PAL Video	1.33
Letter Box Video	1.85
HDTV Video	1.78
35 MM Filmstrip	1.32
2x2 Standard 35MM Double-Frame Slides	1.50

❹ Choose the ***screen surface*** that best suits your projection and viewing requirements. For your convenience, the next two pages provide descriptions and performance characteristics for each front and rear screen surface. If the screen will be used for multiple projection methods, choose the screen surface that meets the requirements of the lesser performing projection method. For example, if using a slide projector and a video projector, choose the screen surface for the video projector since its light output is generally less than a slide projector.

Front Projection Screen Surfaces

Screen surface can be cleaned. Flame retardant. Mildew resistant.

Number shows the degrees from the center axis of the screen that the projected image is brightest to the audience.

Indicates Goniophotometer reflectance readings. The higher the number, the greater light transmitted to the audience.

Matte White
The most versatile screen surface and the premier choice when ambient light is controllable. It evenly distributes light over a wide viewing area while colors remain bright and life-like, with no shifts in hue.

50° 1.1

Glass Beaded
This surface has the ability to achieve a higher gain by reflecting more of the projected image back along the projection axis. Glass beads impregnated into the screen's surface provide additional reflectance. This attribute creates an unparalleled screen surface that reproduces vibrant life-like color at moderate viewing angles.

30° 2.5

Video Spectra 1.5
Especially designed for demanding video and overhead LCD panel projection applications where a balance of higher gain and greater viewing angle is required. The special pearlescent surface may be cleaned with mild soap and water.

35° 1.5

High Power
A technological breakthrough, combines the reflectivity of a glass beaded surface with the ability to clean the surface when required. Its smooth surface offers the highest gain of all types of screen surfaces with moderate viewing angle.

25° 2.8

Super Wonder-Lite
Employs a scientifically designed ridged lenticular pattern, embossed into an aluminum vinyl and textile laminate. It's free from objectionable glare and hot spots, even in partially darkened rooms. Not available on all screen types since the material needs to be tensioned.

40° 2.5

Da-Mat
A smooth, white, vinyl finish surface for precise image reproduction. Provides an exceptionally wide angle of view with little loss of resolution. It is a highly flexible unsupported vinyl fabric and may be folded or rolled.

50° 1.1

Pearlescent
This surface utilizes an unsupported vinyl creating a very smooth Pearlescent coating that provides high reflectivity and brilliance without loss of image quality or resolution.

35° 2.0

Cinema Vision
A unique unsupported vinyl surface that offers a bright, uniform image with no color shift no matter at what angle you view the image.

45° 1.3

Dual Vision
A unity gain flexible fabric capable of both front and rear projection. The surface is ideal for video projection where light is controllable. With its exceptionally wide viewing angle, each seat in the audience will observe a uniform, bright, sharp image with no color shift.

50° 1.0

Screen Borders and Drop
Black masking borders are standard on all Da-Lite front projection screens at no extra charge. Borders enhance the perceived brightness of an image on a screen. The human eye perceives the image to have more contrast and a sharper picture with brighter colors. Borders also allow the projected image to "bleed-off" the screen for professional appearing presentations.

Drop is also available on most Da-Lite wall/ceiling and electric screens. Drop is extra fabric added to the top or bottom of the screen to adjust the screen surface to within normal viewing heights. Drop can be specified in either black or white.

Rear Projection Screen Surfaces

Da-Lite offers three types of Rear Projection Screens: Diffusion, Profiled and flexible fabric screens.

Da-Lite's Polacoat Diffusion Screens offer two types of substrates, transparent glass (Da-Glas) or acrylic (Da-Plex) and choice of six extremely fine, precise optical coatings.

Da-Lite profiled type screens feature a lens on their back surface which is formed by a series of concentric circular grooves each cut at a different angle. These grooves reduce the incident angles of light rays from the projector making more light available for transmission directly to the audience.

Flexible fabric screens are generally used for situations where portability is a prime concern. It offers high light transmission for optimal viewing.

Polacoat Diffusion Screens

Substrates

Da-Glas™

A glass substrate for long service life with high optical quality and maximum sound isolation. Standard sizes up to 10' x 20' and larger by request.

Da-Plex™

A rigid acrylic substrate for increased breakage resistance. It offers lightweight, good optical quality and good sound isolation. Standard sizes up to 9' x 18' and larger by request.

Screen surface can be cleaned.

Flame retardant.

Mildew resistant.

Indicates Goniophotometer reflectance readings. The higher the number, the greater light transmitted to the audience.

Number shows the degrees from the center axis of the screen that the projected image is brightest to the audience.

Polacoat Optical Coatings

DA-WA

A neutral white screen exclusively designed for specialty applications requiring wide off-axis viewing under controlled or low ambient light conditions.

60° 1.5

DA-WA N

A neutral gray screen that provides contrast, uniformity and color rendition ideally suited for high resolution applications.

65° 1.0

DA-1N

A neutral gray screen well suited for multi-image displays where bend angles from some images may be severe. It makes a good choice for audiences with a wide seating arrangement.

50° 1.8

DA-3N

An excellent choice where a balance between gain and viewing angle is needed. Ideal for situations with a high level of ambient light.

40° 2.3

DA-5N

Offers an extremely bright diffused image for very narrow viewing applications, especially those which use extremely low powered projection sources.

30° 5.0

Video Vision

A special coating process generates a screen ideal for video projection under controlled light conditions. Offers an exceptionally wide field of view so each audience member will observe a uniform, bright, sharp image with no color shift.

55° 1.0

Profiled Type Display Screens

Video Vision Ultra

A special combination of an optical diffusion coating and Fresnel lens making it ideal for single image displays. Available in sizes up to 72" x 96".

42° 1.0

Da-View

Offers a bright image at a relatively wide field of view perfect for single image display.

Da-View 4

50° 4.0

Da-View 5

25° 5.0

Mark 30®

Optically symmetrical screen consists of a lenticulated layer that is laminated to a diffusion layer. Includes special high-contrast optical coating to improve projected images. Contains 1,000 lensing elements for every 39" of width to support images from the highest resolution projectors.

50° 4.0

Flexible Fabric Screens

Da-Tex™

A neutral gray vinyl surface that yields excellent color rendition, image contrast, and a wide viewing angle.

35° 2.3

Dual Vision

A unity gain flexible fabric capable of both front and rear projection. The surface is ideal for video projection where light is controllable. With its exceptionally wide viewing angle, each seat in the audience will observe a uniform, bright, sharp image with no color shift.

50° 1.0