



DarkStar® UST eFinity Series

EDGE FREE® Ultra-short throw Fixed Frame Screen USER'S GUIDE

Product Description:

The *DarkStar® UST Series* is an ultra-short throw fixed frame projection screen that uses EPV's EDGE FREE® technology. It is designed for **Ultra-Short Throw Projectors only**, for use in environments where ceiling light cannot be entirely controlled. It includes an LED backlight kit and an ultra-thin bezel to further enhance the frame appearance.

Screen Maintenance

Dust, dirt and scratches on the projection screen surface will affect the quality and performance of the projection image. For optimal results we advise to pay attention to the following instructions.

1) The screen surface has a horizontal lens structure. **DO NOT** wipe the screen up and down or in a circular motion.

Wipe from left to right only.






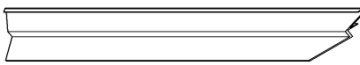
2) Please clean the dust on the screen surface with a soft brush or microfiber cloth (rough towel or cloth may damage the screen's surface).

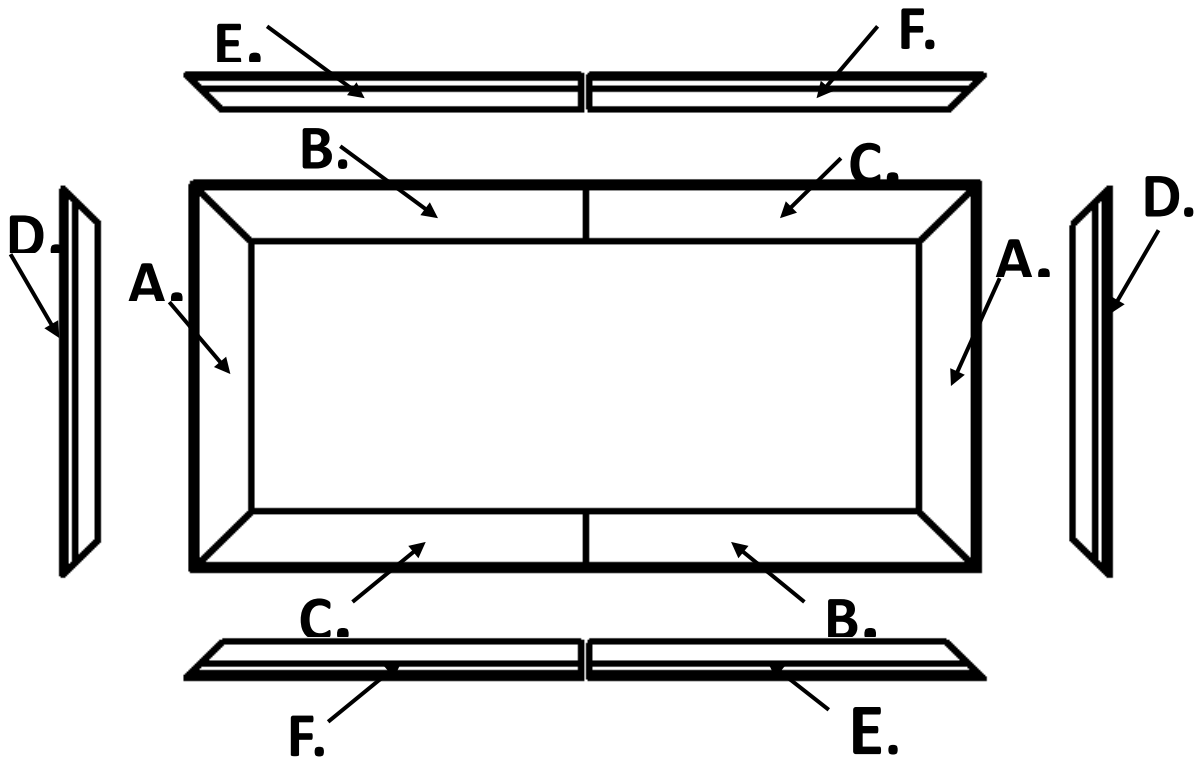
3) Gently wipe the screen with a moistened microfiber cloth with mild soap diluted in water.

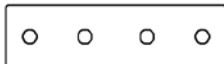
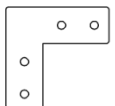



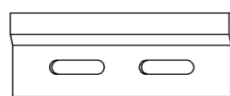





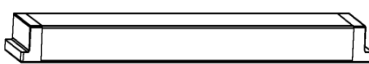

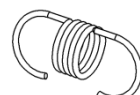
Notes:

The following precautions should be followed at all times to avoid damaging the material, which is not covered under warranty.

- Don't **touch** the screen material to avoid leaving fingerprints. *Use gloves when handling the material.*
- Don't **scratch** the material, as it will leave permanent markings on the screen's surface.
- Don't **point** to the screen material with a fingertip or other sharp objects to prevent damage to the material.
- Don't **use** acetone, benzene, alcohol and any other organic solvents to clean the screen material. Using such chemicals will permanently damage the screen.

1. Frame and Edge Trim Parts List			
Qty item	2 pcs Main Frame Parts	Qty item	2 pcs Edge Trim Parts
Part A.	vertical frame 	Part D.	
Part B.	½ horizontal frame 	Part E.	
Part C.	½ horizontal frame 	Part F.	



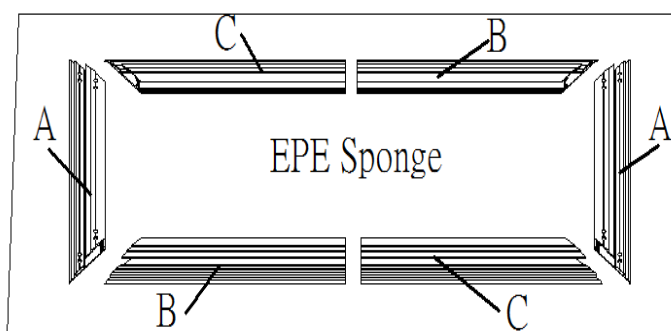
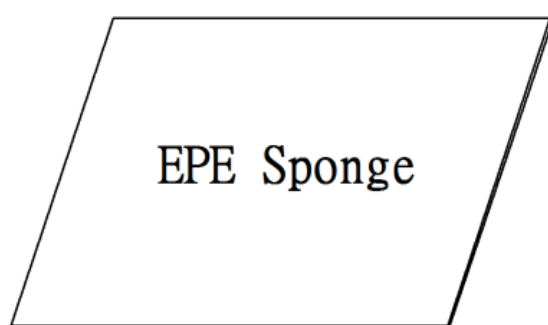
2. Hardware Parts List				
a. 	b. 	c. 	d. 	
e. 	f. 	g. 	h. 	i. 
j. 	k. 	l. 	m. 	n. 

Item	Parts List Qty	EF90H-CLR	EF100H-CLR	EF120H-CLR
a.	Center Joints (1)	4	4	4
b.	Elbow Joints (2)	8	8	8
c.	M4x6 Screws	66	66	66
d.	Spring Hook	2	2	2
e.	Spring	84	92	104
f.	Top wall brackets	2	2	2
g.	Φ5x50 Wall Screws	6	6	6
h.	Hollow Wall anchors	6	6	6
i.	Bottom wall brackets	2	2	2
j.	Angle cover	4	4	4
k.	LED light strip clip	8	8	8
l.	Center Support Bar	1	1	1
m.	white gloves	2	2	2
n.	Extension spring	4	4	4

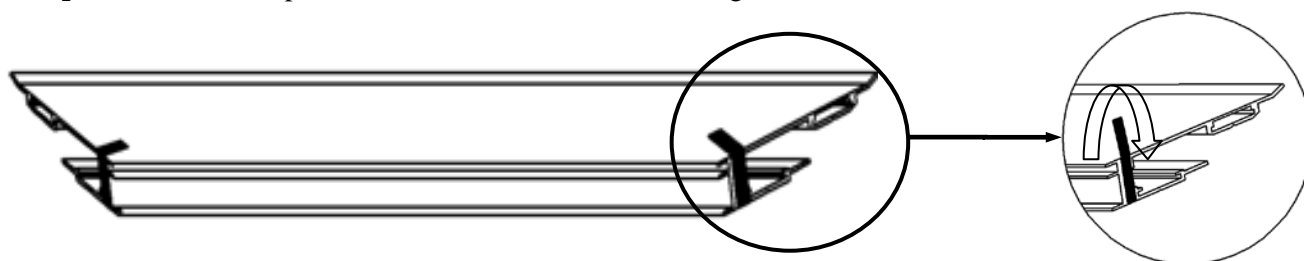
Frame Assembly

Step 1: Place the soft padded EPE sponge on a clean area on the ground where the screen will be assembled.

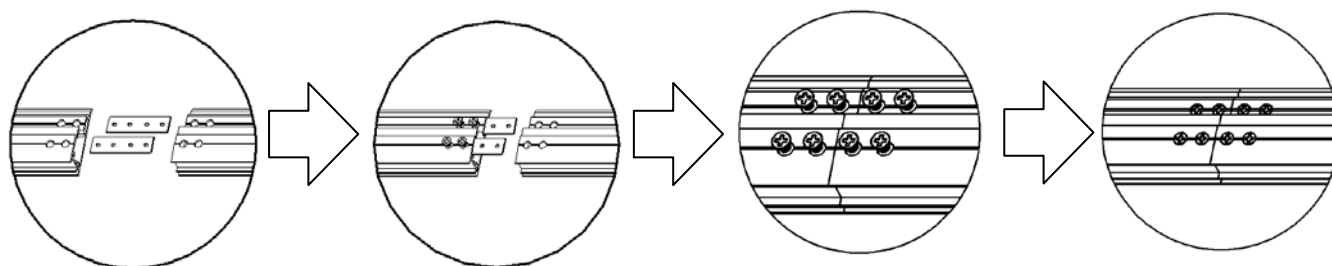
Step 2: Position the pieces of the frame on the EPE sponge in the arrangement shown below



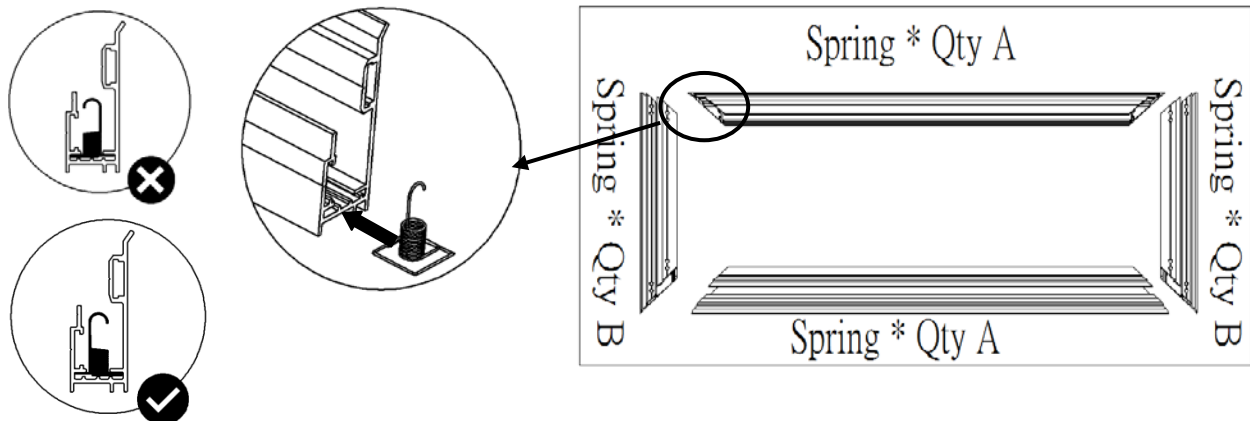
Step 3: Remove the tape on all frame ends before assembling the frame.



Step 3: Insert the *center joint (a)* connectors into *one-half of the horizontal frame (b/c)* and secure with the *M4x6 screws (c)*.



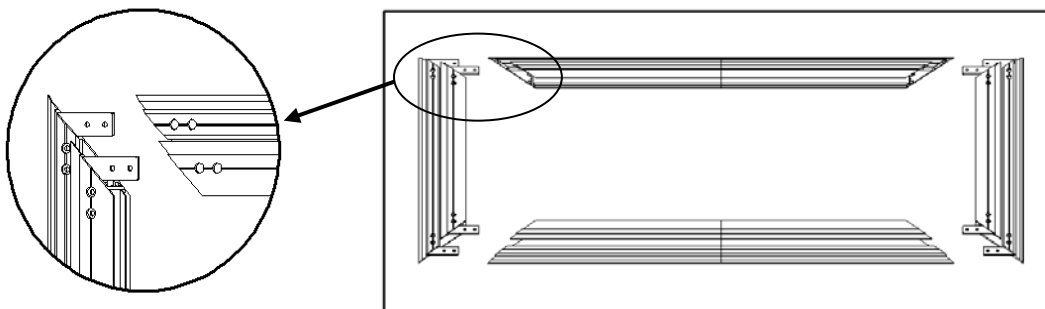
Step 4: Insert the *springs (e)* into the grooves of the frame. The spring's hooks should be facing the front side of the frame. For the correct amount of springs to place into the frame, please refer to the table listed below.



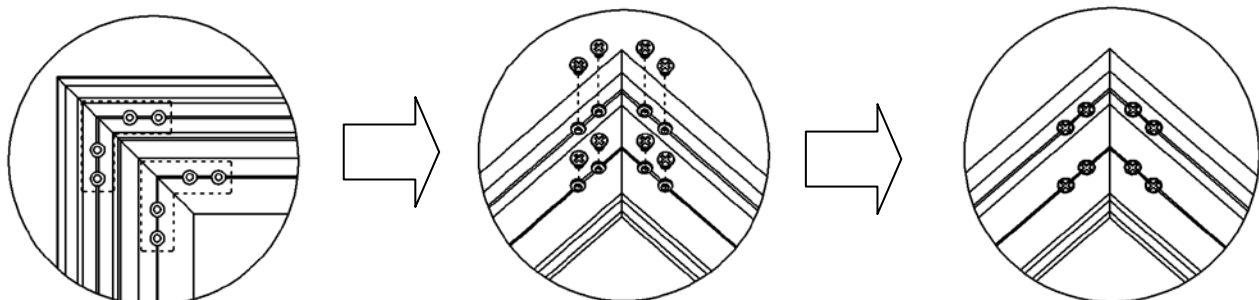
Note: The springs are pre-installed into the grooves of the frame.

Model Number		EF90H	EF100H	EF120H
Qty	A(Spring)	27	29	35
	B(Spring)	15	17	21

Step 5: Connect the *elbow joints (b)* to the top and bottom sections of the vertical frame. Once inserted, connect the vertical sections to the horizontal frame sections. Make sure all holes are in alignment and the frame pieces are flush (no gaps). They should form perfect right angles.



Step 6: Secure the elbow joints by fastening them with *M4x6 screws (c)*, 4 at each corner.



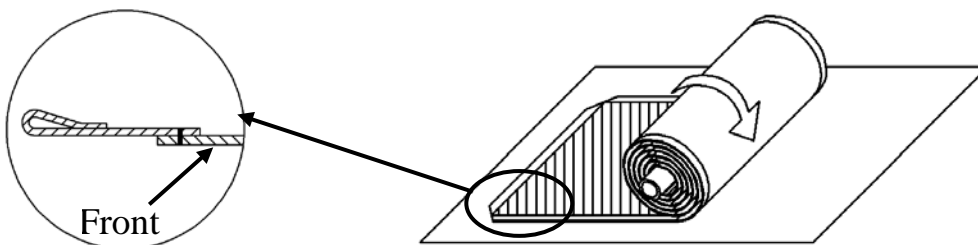
Screen Material Installation

Please read this important note before proceeding with the installation process of the material.

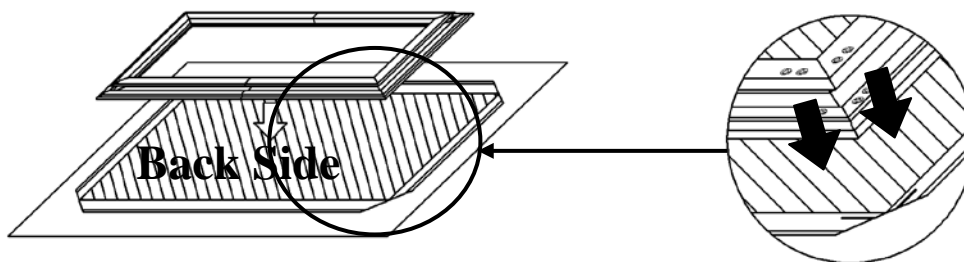
Before handling the DarkStar® UST material, put on the supplied pair of white gloves to avoid leaving fingerprint marks, dust or hand oil on the material's surface. The DarkStar® UST material is very delicate and should be handled with extreme care. Do not allow the material to fold or bend. Failure to follow instructions will result in permanent damage to the screen material, which is not covered by warranty.

Step 7: It is strongly recommended for two people to unroll the material to prevent it from rolling unevenly. Each person holds one end of the roll. Slowly unroll the screen in a clockwise direction.

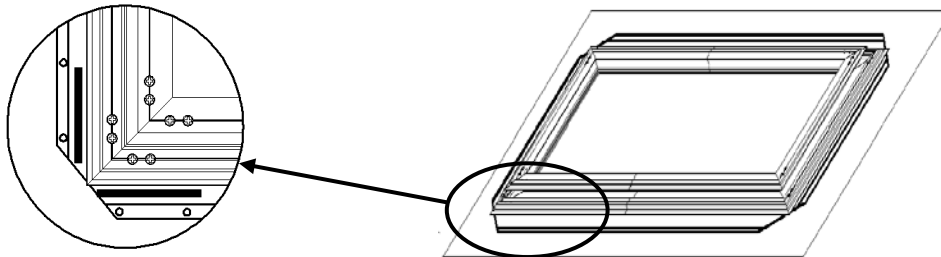
Step 8: Put on the **white gloves** (m) and carefully unroll the screen material on a clean surface from the roller to the other side as shown below. The back side (black) of the screen material should be placed upwards.



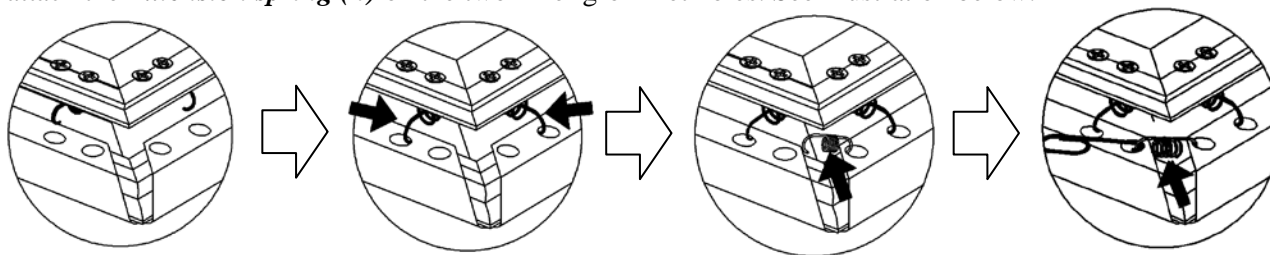
Step 9: Carefully and gently place the assembled frame on top of the screen material. Make sure to not allow the angle edge of the frame to come in direct contact with the screen material to avoid puncturing it.



Note: Make sure all of the corners of the frame are aligned according to the markings on the back of the material as indicated below.

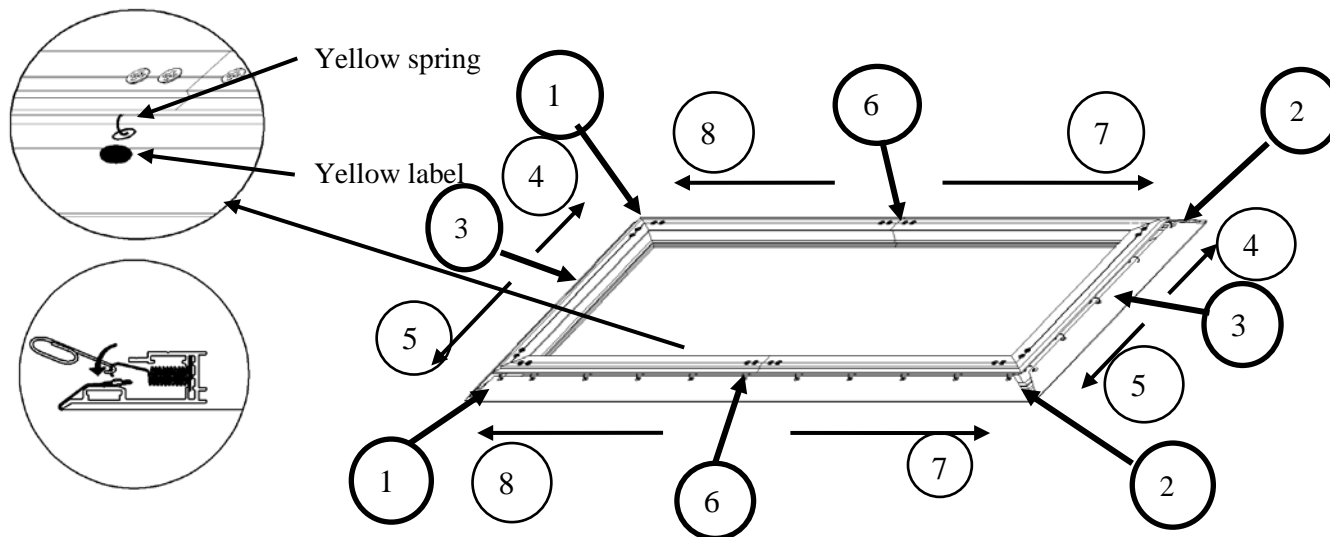


Step 10: Use the **spring hook** (d) to attach the **spring** (e) to the grommet hole located on the screen material's outer edge in the following order. Attach all four corners first (1) and (2) on the outer grommet holes. Then attach the **Extension spring** (n) on the two inner grommet holes. See illustration below.



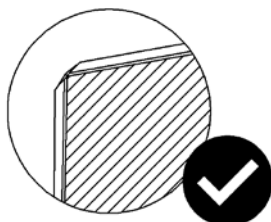
After all four corners have been attached, proceed to attach the vertical sides of the material. Begin in the center and move towards the corners from (3) to (4) to (5). Lastly, attach the horizontal sides of the material by starting with the center of the material and make your way towards the corners from (6) to (7) to (8).

Note: Please make note of the yellow label and spring in the center of the frame. This is an indicator to start the screen material installation process from the middle area of the frame.

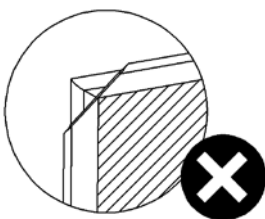


Note (after all springs have been attached):

Correct material installation – Corners of the screen material are properly wrapped around the corner edges of the frame and material is evenly tensioned and flat, creating a nicely taut surface.



Incorrect material installation –The corners of the screen material are not properly wrapped along the edge of the frame leaving the material with unbalanced tension and an uneven finish. To correct, detach springs from material at the corner(s) where material does not lie flat along the edge of the frame, reposition the material so that it lies flat and wraps along the edge of the frame as much as possible, and reattach springs to the material.

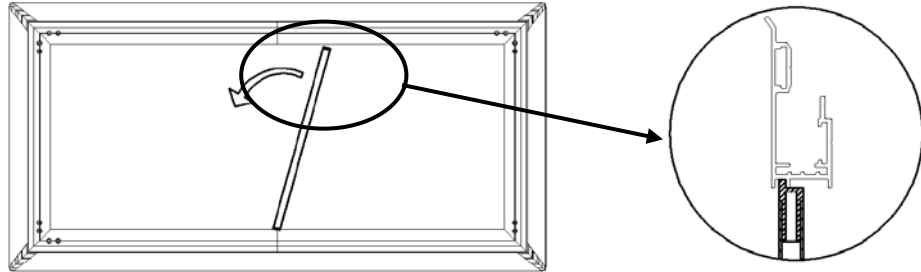


To avoid ripples forming in the material it is imperative that all of the corners are properly wrapped around the edges as illustrated in the check mark diagrams.

Center Support Bar

Step 11: Insert the *Center Support Bar (i)* into the upper top groove on the back of the frame with the bottom end near the approximate center point of the frame and rotate it in at an angle so that both ends of the bar are in alignment with the groove.

Diagonal Models 150" and below use 1 x Center Support Bar



Pre-check prior to Edge Trim Installation

Correctly distinguish the top and bottom of the DarkStar® UST material. Place the assembled screen on the ground. Look down on the screen. If the material looks white/gray as shown below then it is correct.

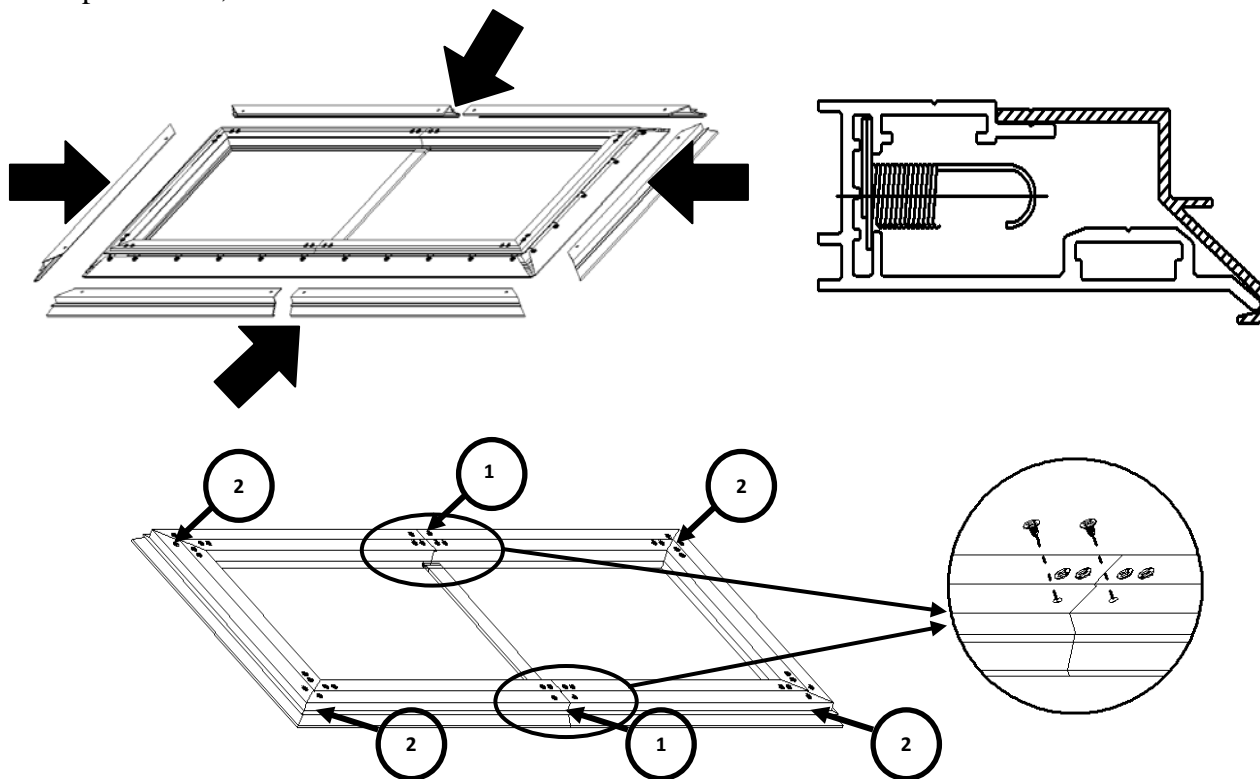


If the material looks black as shown below, then it is upside down.



Edge Trim

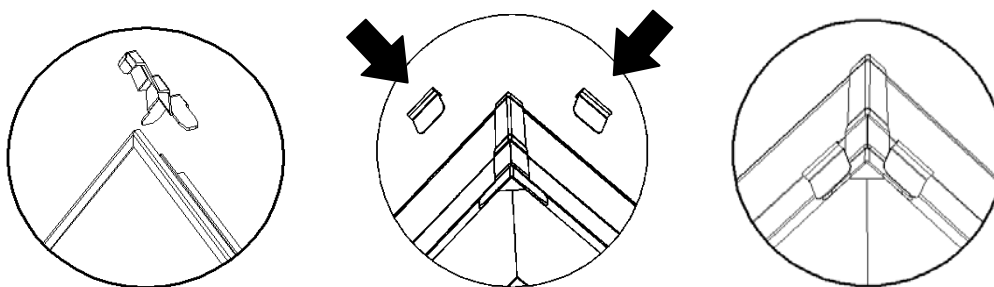
Step 12: Place the *Edge Trim* over each end of the frame and secure with *M4x6 screws (c)*, Start with the center points first, then the rest of the corners as shown.



Step 13: Install the *angle cover (j)* on each corner of the frame and install the LED light strip to hold down the angle cover.

Note: Make sure the edge trim with the EPV logo does not get installed on the bottom.

Then insert the *LED light clip (l)* to hold the LED light strip in place.



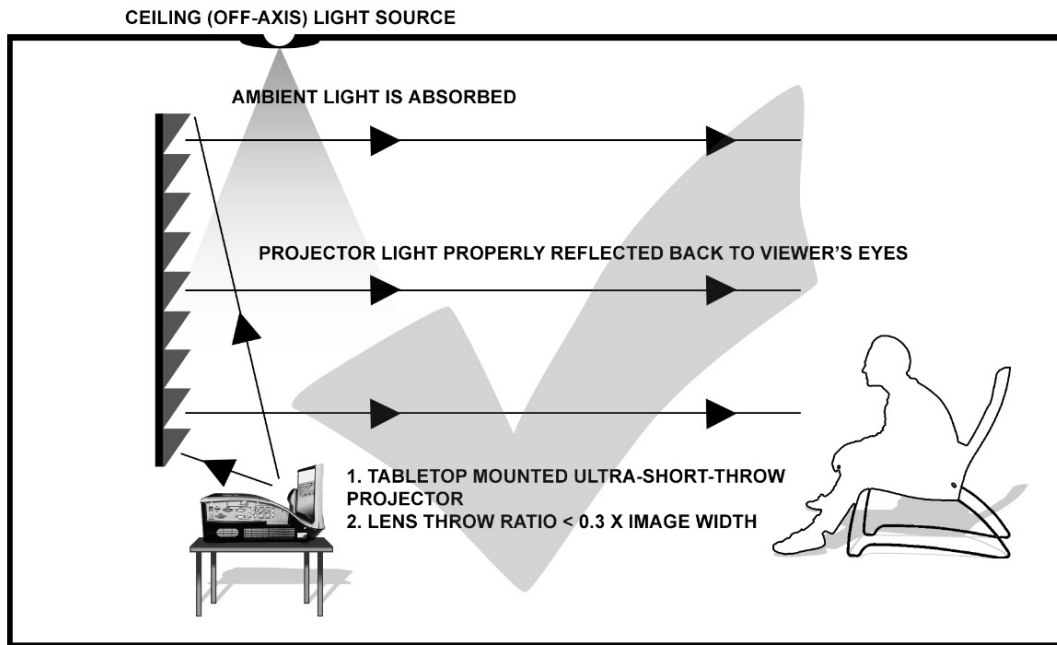
Notice to Installer:

Please use the following installation instructions to obtain superior optical performance from EPV's innovative *DarkStar® UST* screen material.

The *DarkStar® UST* is exclusively for table-mounted ultra-short throw projectors as illustrated in the Example 1 diagram. Overhead placement or a standard projector will make the image very dark, on account of the screen's *absorbent layer* deflecting light that is not aligned with its reflective angle.

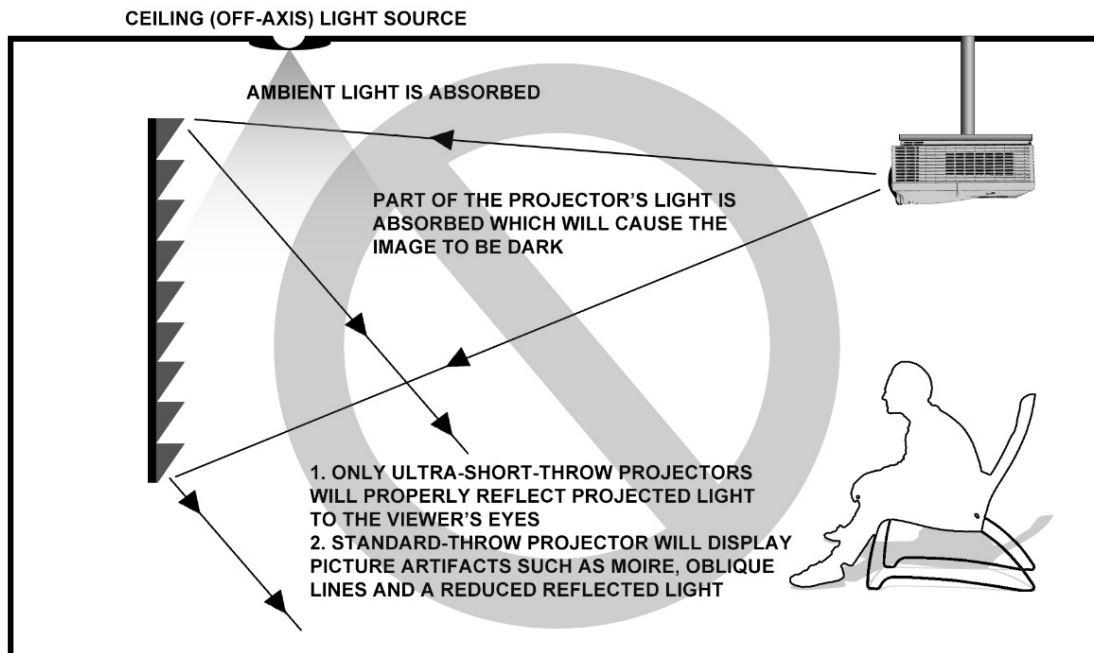
Please use the following installation instructions to obtain superior optical performance from the Retro-Reflective ALR (Ambient Light Rejecting) Screen.

Example 1: Proper Projector Installation



ULTRA SHORT THROW PROJECTOR ILLUSTRATION

Example 2: Improper Projector Type/Installation



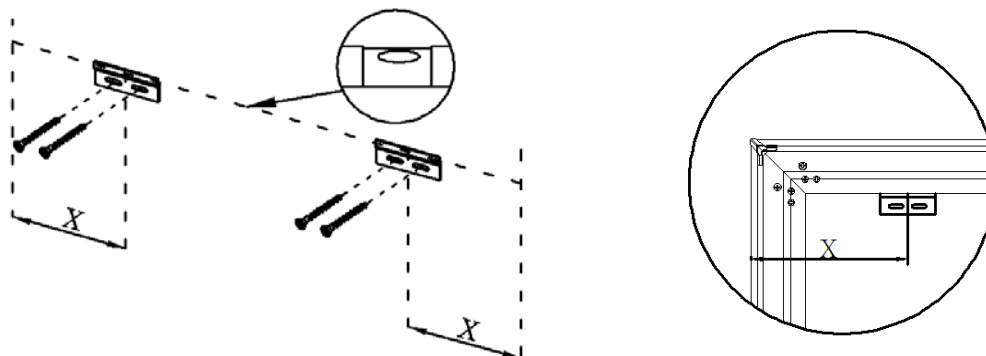
PROJECTOR CEILING INSTALLATION (NOT COMPATIBLE)

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.

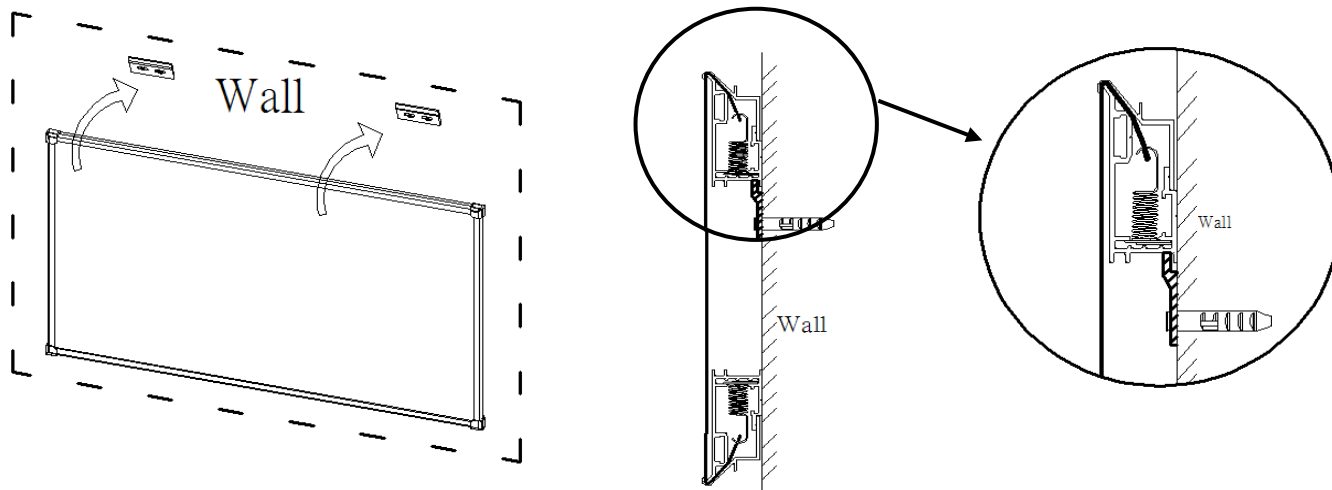
Images are not up to scale and are for illustration purposes only.

Wall Installation

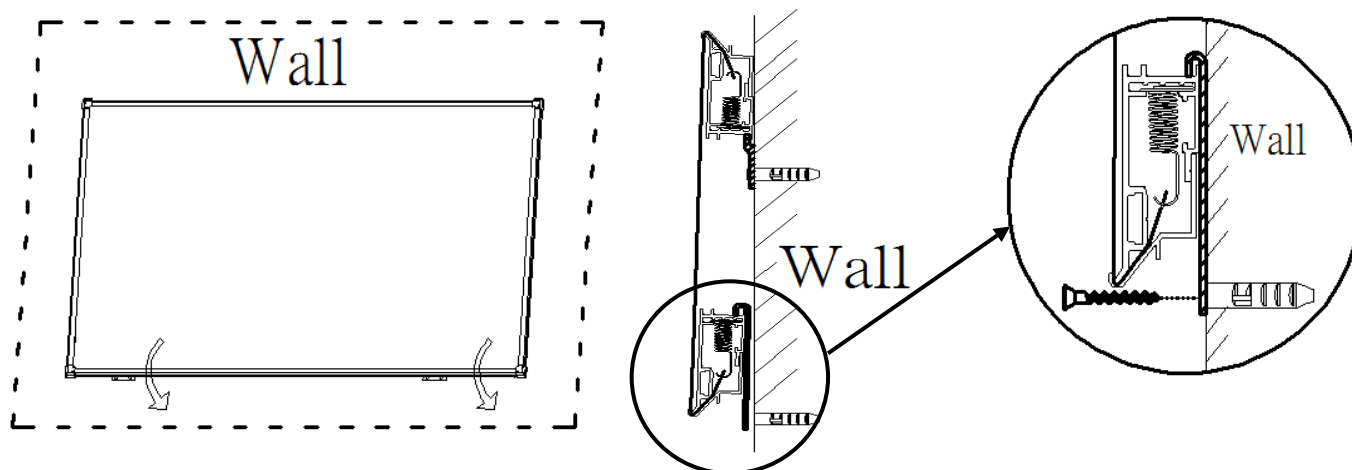
Step 14: Measure the overall length and height of the frame and drill holes for the top brackets. Line up the wall brackets with the drilled holes on the installation location and screw them in using a Phillips screwdriver. If not installing into a structural wood stud, use a hollow wall anchor then screw in the M5x50 wood screws with a screwdriver. Make sure the brackets are leveled.



Step 15: Position the fixed frame screen onto the top wall brackets as shown below and push down at the center of the top of the frame to secure.



Step 16: With the frame slightly tilted outward; connect the bottom brackets onto the bottom groove of the frame. Then secure them by screwing onto the wall.



For Technical Support or an Elite Prime Vision contact in your area, visit

www.epvscreens.com