

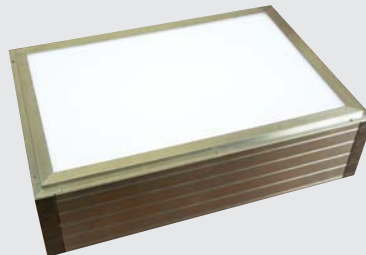
HOW TO BUILD A MAE WEST LIGHTBOX

YOU WILL NEED THE FOLLOWING:

- 150 Aluminium Return Profile (Mae West)
- 150 Aluminium Return Corner for Mae West
- H-Profile
- Backing board (Chromadek or any solid substrate)
- PLEXIGLAS® WH72 / WH52 Opal Face
- POP Rivets & Self Tapping Screws
- LED Modules and Power Supply
- Cabling (Twinflex/2-core cabtyre) & a Plug.
- Graphics for the face - Digitally printed SAV, Film or Translucent, cut decals on SAV.

TOOLS REQUIRED:

- Rivet gun
- Drill
- Screw driver
- Tape Measure
- Soldering Iron
- Rubber Mallet



CALCULATIONS AND CUTTING



Determine the outside size of your lightbox first.
Only once you have this size can cut your materials accordingly.



CALCULATIONS - 150mm Mae West Profile

- Length of Aluminium = Total outside size - 66mm (33mm per side for your corner)
- H-Profile Aluminium = Total outside size - 4mm on both length and width profile needs to be mitre cut at a 45° angle
- PLEXIGLAS® Face = Total outside size - H Profile (x2) - 4mm (lip) - (expansion & contraction) (NB: You need to allow for expansion and contraction on your PLEXIGLAS® face (5mm per 1000mm))
- Baby H 16mm (E.g. $16 \times 2 + 4\text{mm} = 36\text{mm}$)
- Big Baby H 16mm (E.g. $16 \times 2 + 4\text{mm} = 36\text{mm}$)
- Big H 26mm (E.g. $26 \times 2 + 4\text{mm} = 56\text{mm}$)
- Backing size = Total outside size - 4mm (Length and width)

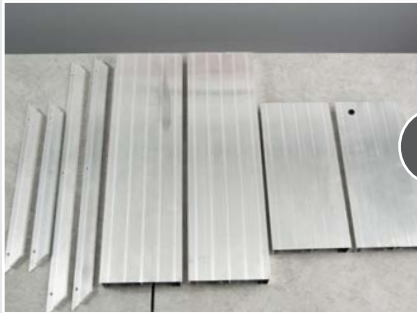
CALCULATIONS – 160mm Profile (Note the round corner.)

- Length of Aluminium = Total outside size - 56mm (28mm per side for your corner)
- PLEXIGLAS® Face = Total outside size - 26mm (13mm per side from your profile) plus you need to allow for expansion and contraction on your acrylic face (5mm per 1000mm)
- Backing size = Total outside size - 26mm (13mm per side from your profile)
- Visible size of the face = Length of Aluminium

CALCULATIONS - 90mm Profile (Note the round corner.)

- Length of Aluminium = Total outside size – 50mm (25mm per side for your corner)
- PLEXIGLAS® Face = Total outside size – 20mm (10mm per side from your profile rounded curve) plus you need to allow for expansion and contraction on your acrylic face (5mm per 1000mm)
- Backing size = Total outside size – 4mm (Profile wall thickness)
- Visible size of the face = Length of Aluminium

ASSEMBLY OF A MAE WEST LIGHTBOX



1



Once all the required profiles have been cut, take all four sides of the Mae West profile and position in the four corners. Gently secure the corners with a rubber mallet to ensure a proper fit with no gaps.



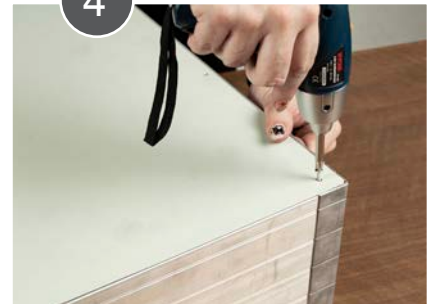
2

Drill holes into the profile and corner pieces and secure them with self-tapping screw or pop rivets.



3

Measure outside of the box to confirm your size is correct. Now deduct 4mm all round and cut your chromadek/backing board accordingly.



4

Pop rivet or screw in the backing board to secure.



HANDY TIP: If the lightbox is larger than one m² we recommend 12mm x 12mm or 25mm x 25mm square support bars to be placed along the length for larger boxes. Position them approximately ± 500 mm apart. The support bars provides extra stability and reduces “flex” on the lightbox.



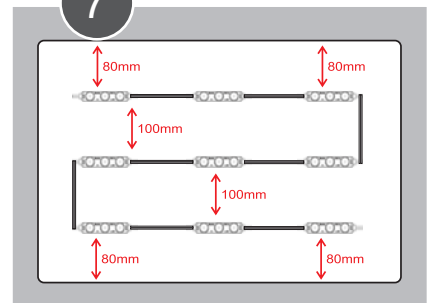
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Pre drill holes into the H profile and Mae West. Remember the H profile used has to correspond to the thickness of the substrate used for the face of the lightbox.



6

Screw in one side and pop rivet three sides. Make sure everything aligns properly. The screw in side will be your removable service side. Now remove the H-profile on the service side.



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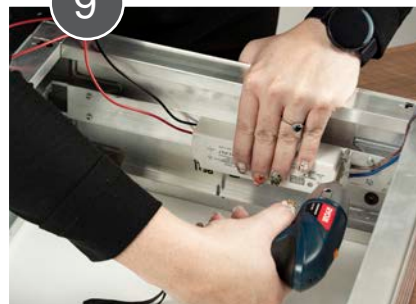
Calculate / plan your LED's and mounting layout to the backing board. Our demonstration is based on a 600mm x 400mm outside size.

8



Determine the layout of the LED's, remove the double sided mounting tape and firmly secure the LED's in place on the backing.

9



Secure the Power Supply in position with self tapping screws.



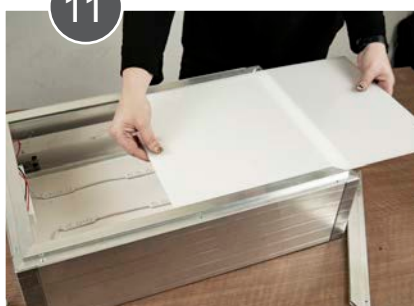
HANDY TIP: Remember to drill a hole for the power cable on the side or back of the lightbox and fit a rubber or plastics grommet to reduce chafing.

10



Connect the Power Supply and wiring to the LED's. Secure the wiring in place.

11



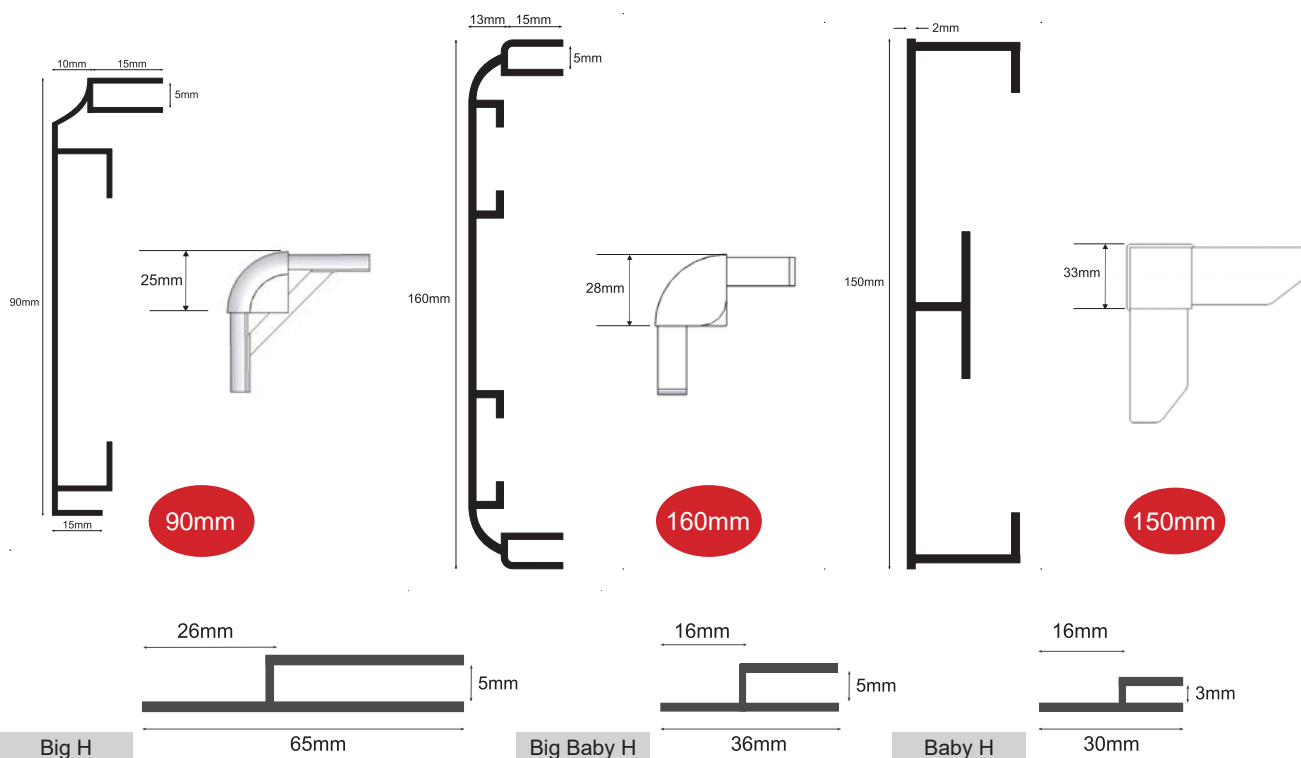
Fit the pre-cut PLEXIGLAS® WH72 / WH52 Opal Face. (Slide it into place from the open service side.)

12



Close off lightbox with the H profile on the service side. The lightbox is complete and will just need a plug fitted.

PROFILE DIMENSIONS



LED CALCULATIONS

LUMILED HIGH POWER Z18 (EDGE LIT MODULE)

- Double sided lightbox 60mm – 100mm up to 1200mm width MAX. (Illuminated from both top and bottom.)
- Modules installed top and bottom 80mm - 100mm apart.
- For a brighter effect, install LED's on all 4 sides of the lightbox.



ECO ST2W (BACKLIT MODULE)

- 60mm – 180mm Return
- Modules should be placed on the backing board and spaced as follows:
 - Standard 6 modules per meter (use full wire length 115mm (180mm center to center of module) for the length of the lightbox.
 - For the width you can play with a spacing of 40mm – 100mm depending on the size, aluminium return and brightness.



M8B (BACKLIT MODULE)

- Single sided lightbox 35mm – 150mm Mae West Profile
- M8 spacing center to center of modules, on various modules & returns as per the chart below:



M8-B MODULE	
Depth (H)	Spacing mm (X x Y)
35mm	140 x 140
40mm	180 x 180
50mm	220 x 220
60mm	220 x 220
80mm	330 x 330
100mm	330 x 352
120mm	352 x 352
150mm	352 x 352

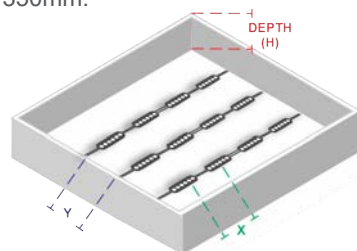
M8-B has a spacing between the wires of 352.5mm. The wires need to be lengthened.

M8-C MODULE	
Depth (H)	Spacing mm (X x Y)
100mm	140 x 140
120mm	180 x 180
150mm	220 x 220
180mm	330 x 330

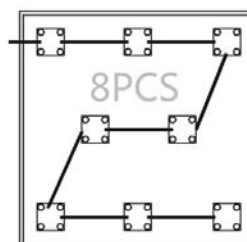
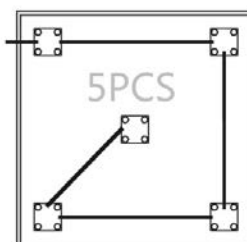
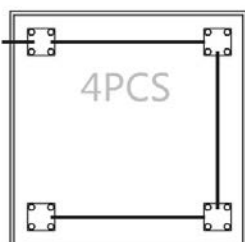
M8-C has a spacing between the wires of 350mm.

ST2W MODULE	
Depth (H)	Spacing mm (X x Y)
60mm	100 x 40
80mm	120 x 40
100mm	140 x 40
120mm	100 x 60
150mm	120 x 60
180mm	140 x 60

PT10 MODULE	
Depth (H)	Spacing mm (X x Y)
60mm	100 x 100
80mm	120 x 100
100mm	120 x 120
120mm	140 x 140
150mm	140 x 140
180mm	140 x 140



Common Arrangements for M8 LED Modules



LED Mounting Tips

1. Clean the mounting surface and make sure it's free of dust and debris.
2. Peel away the self adhesive tape on the back of the LED and mount it, pressing down firmly
3. Make sure the LED is flat and evenly arranged in the lightbox.
4. Fix the product with screws, check and ensure correct wiring, then power on for a self-test.