3form LightBox is a pre-configured backlighting solution for signature 3form material. The innovative LED illumination source eliminates hot spots while requiring minimal space between the light source and the 3form material. Offered in a standard square module, 3form LightBox easily configures to any custom pattern for your installation, while the simple front access panel mounting system lets you replace your 3form material designs as often as desired without costly or difficult maintenance.

## Table of Contents
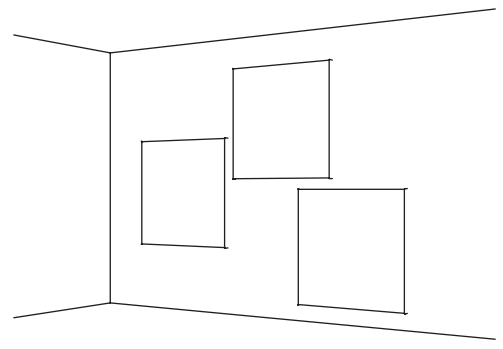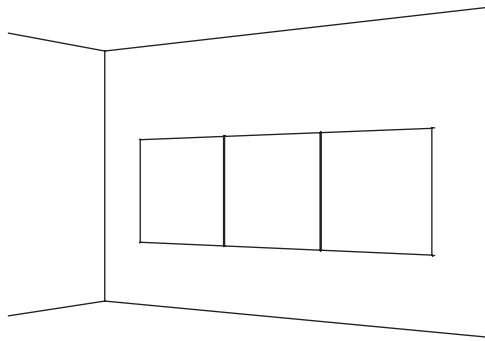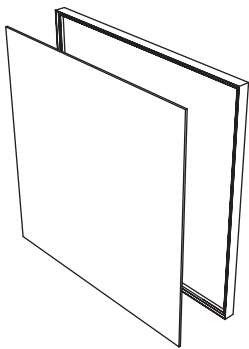
# Specifications and Features

## Dimensions

**48" W × 48" L × 1.875" D**

The slim profile creates a sleek appearance and minimizes the depth of the box. The SImpleSpec 300.32 "Ready To Go" 4' × 4' size creates a simple modular system for creating custom patterns.

LightBoxes can be ordered to any size withing the following limits:
Min Width: 6"      Max Width: 48"
Min Length: 6"     Max Length: 96"

## Lighting Technology

The 3form LightBox utilizes an energy efficient LED to edge-light a proprietary light-carrying panel to achieve a highly even backlighting solution in a very small space.
Expected lifespan of the LEDs is approximately 40,000 hours.

## Material Compatibility

The LightBox is currently configured to work with ⅜" Varia Ecoresin with a supermatte back finish or C3 Vapor back layer for optimum backlighting results. Other 3form material types and gauges may be available and suitable for use with the LightBox. Please consult your local sales rep for more information.

## Dimming

For applications where dimming is desired, an optional wall slide dimmer switch is available. Each wall slide dimmer switch can control up to (6) 48" × 48" LightBoxes.
(See Dimming Wiring Diagrams on page 5 - page 6).

## Weight

The assembled LightBox frame weighs approximately 40 pounds without the front panel installed and approximately 75 pounds with the front panel installed (assuming ⅜" thick Varia Ecoresin). Blocking is recommended for installation.

# Specifications

## Sizing, Power and Electrical

The 3form LightBox can be rotated 90-degrees to fit a horizontal or vertical rotation. The standard size is 4' × 4', but custom sizes are available. The minimum size in either direction is 6 inches; the maximum size of the side without LEDs is 48 inches and the maximum size of the side with the LEDs is 96 inches.

The LightBox includes a Class 2, low voltage, UL recognized power supply. A standard 4' × 4' LightBox uses a 100W, 24V power supply. The actual power consumed is about 70W, but the input circuit should be sized for the full capacity of the power supply of 100W. LightBoxes greater than 24" W and 64.5" L will require (2) power supplies. Each LightBox ships with an external wiring cable (or 2 for larger sizes) to be connected to the DC output of the power supply. The Installer/Electrical Contractor is to provide the wiring and any required enclosures to the input of the power supply. The input to the power supply will require hard wiring to a 90-305VAC power source. An illustration of the electrical connection is found on page 5.

## Drivers

| Part Number | Description | Dimensions | Input Voltage | Input Current | Output Power | Output Voltage | Output Current |
|---|---|---|---|---|---|---|---|
| 3-60-497 | 0-10V Slide Control Wall Dimmer | - | - | - | - | - | - |
| 3-60-765 | 96W Dimmable Power Supply | 11.7"×2.36"×1.4" | 120-277VAC | .8/.35 | 96 | 24 | 4 |

3-60-497 Slide Control

3-60-765 Dimmable Power Supply

## Dimensions - 3-60-765 - Dimmable Power Supply

12.1" (307.9mm)
7.4" (188.2mm)
1.4" (35mm)
6.8" (172mm)

11.7" (298mm)
1.45" (37mm)
1.4" (35mm)
MAGNITUDE LIGHTING
tc.
2.36" (60mm)
7.12" (181mm)
11.4" (290.5mm)
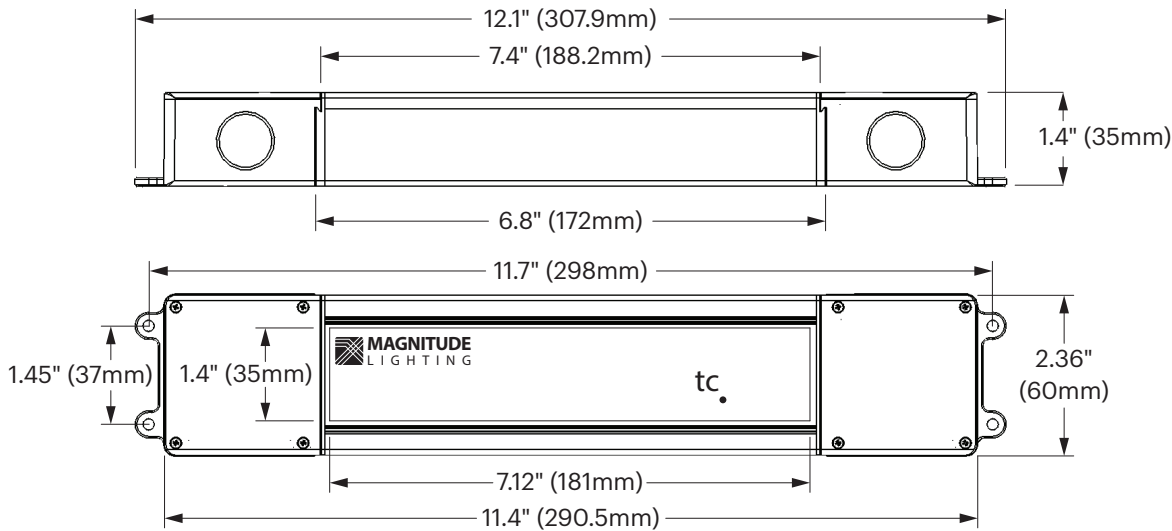
# Installation

## Remove Face Panel

Unpackage LightBox and remove the face panel. The face panel is affixed to the LightBox with 3M Dual Lock tape. The LightBox is shipped with shims behind the face panel to prevent the Dual Lock from engaging.  Once the Dual Lock is engaged, it will require prying the face out with a thin flat screwdriver. Being careful not to scratch the frame or face, pry the face out starting in one corner and then pull the face out.

## Hardwire

Determine where the LightBox will be mounted and remote location for the power supply. Hardwire the power supply to line voltage and connect to the provided 16' cable. If the power supply must be mounted more than 16' from the LightBox, the wires can be extended up to 50' using minimum 18 AWG wire. (See the Wiring Diagram on page 5 and Dimming Wiring Diagrams on page 5 - page 6)

## Fasten To Wall

Fasten LightBox to the wall. A standard 48" × 48" LightBox weighs about 75 lbs., so blocking or attachment to studs is recommended. The LightBox comes from the factory with (8) ¼" pre-drilled mounting holes through the frame at 9" from each corner.

Additional mounting holes can be drilled through the frame along the drill guide lines. Use appropriate wood screws or anchors depending on the mounting substrate. #10 or ³⁄₁₆" diameter fasteners are recommended.

1¼"

Wall

**Section View**

16' Cable

3-60-765 Power Supply

**Overall View**
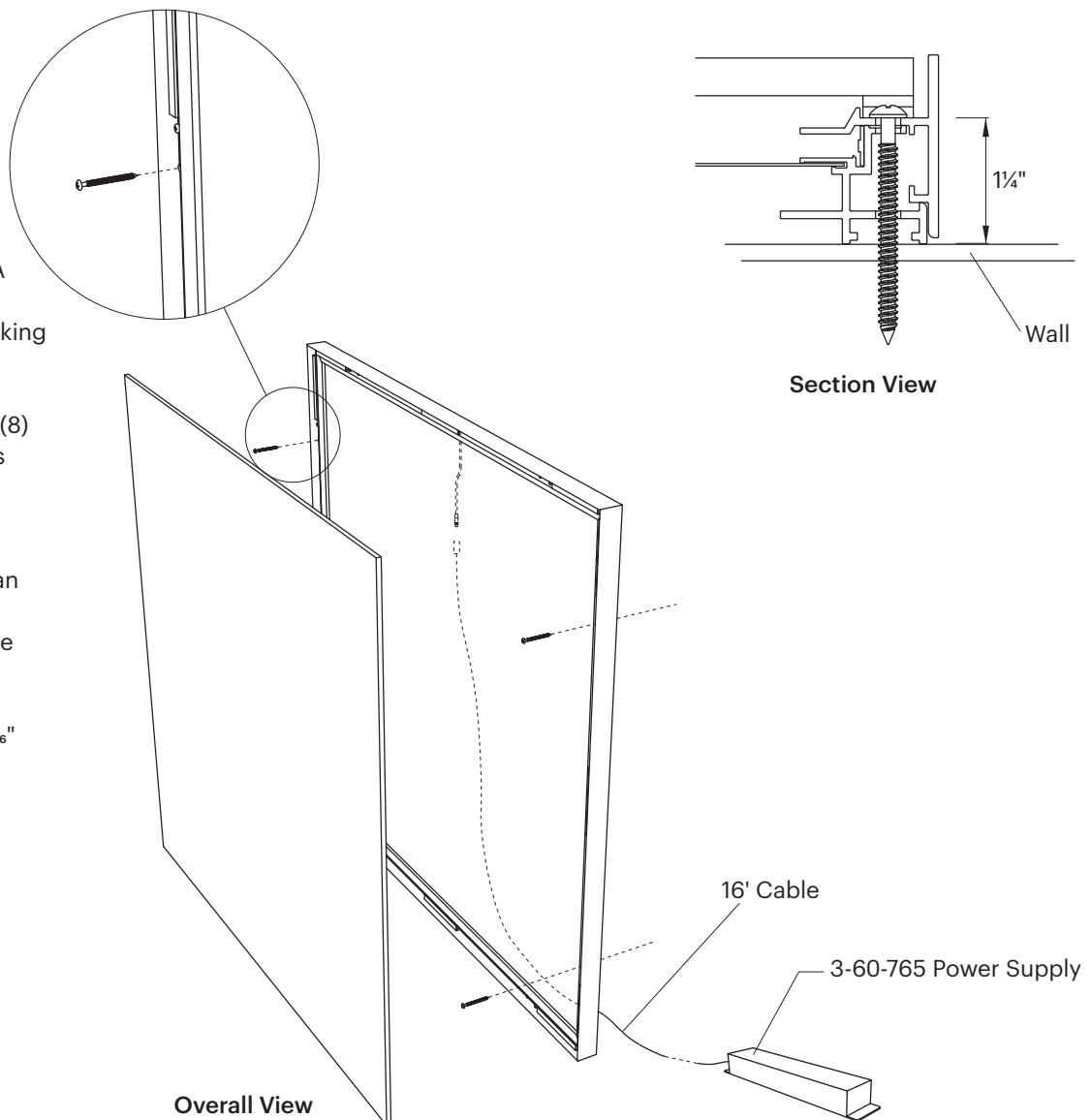
# Installation

## Affix Front Panel

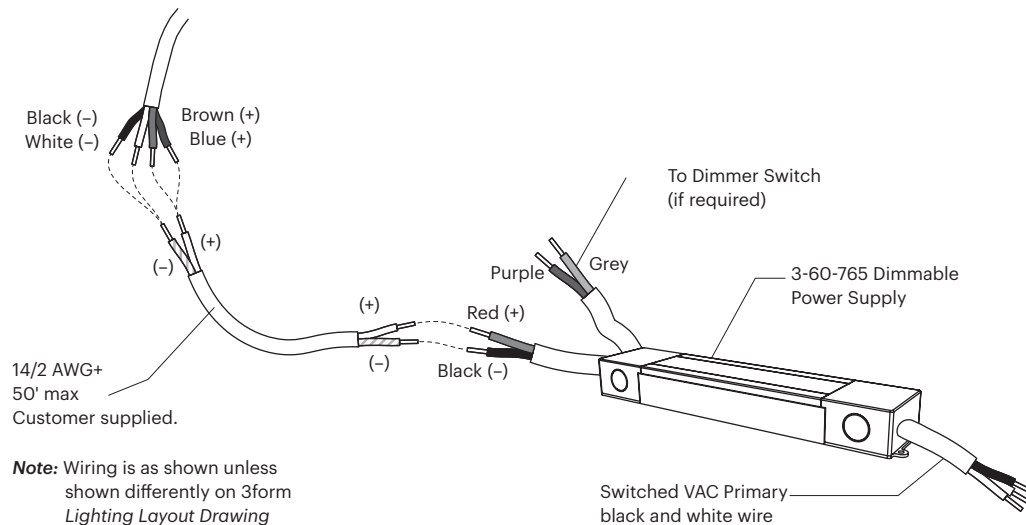Install the face panel. Center the panel in the LightBox and press around the edges to engage the Dual Lock tape.
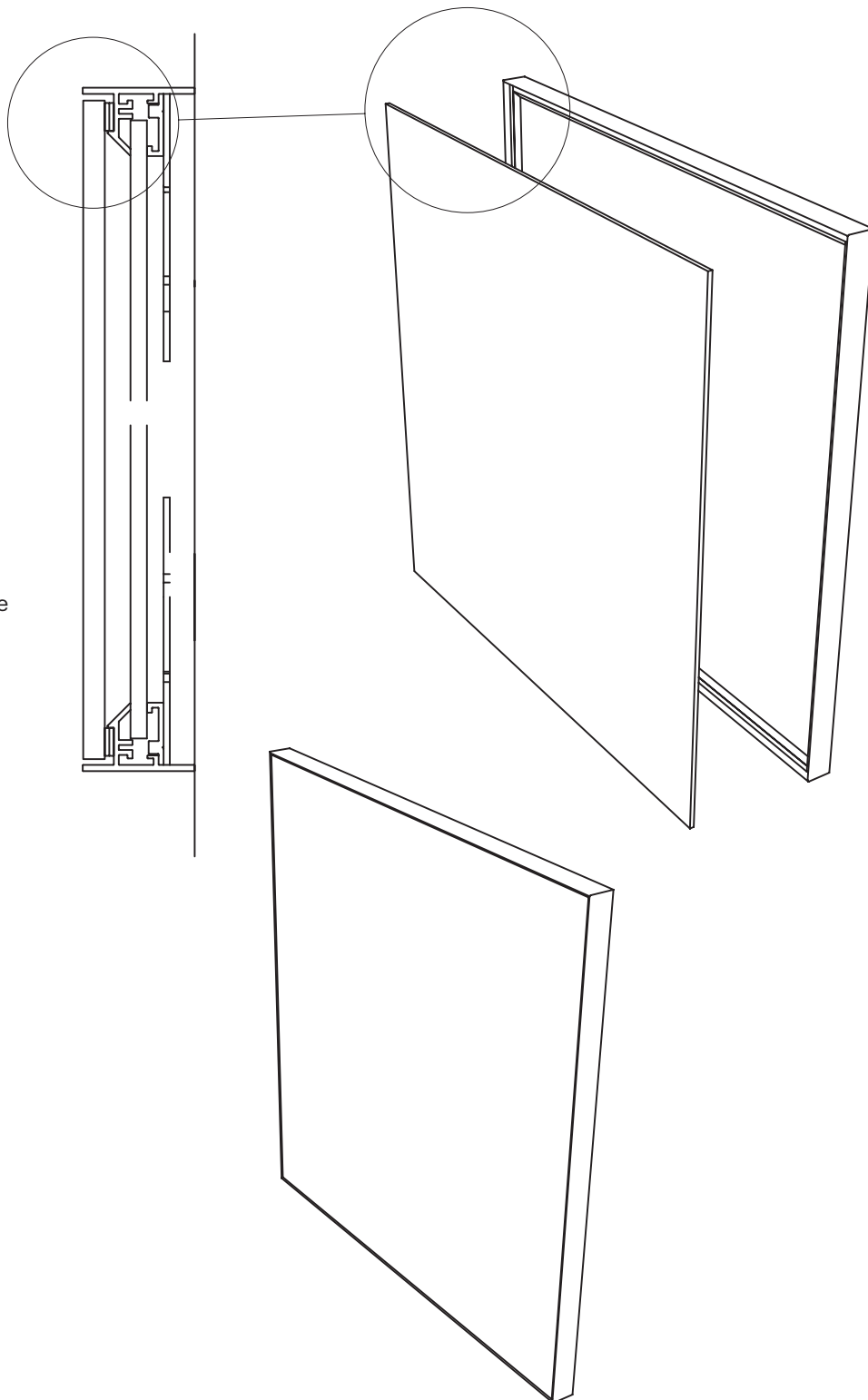
## Cleaning

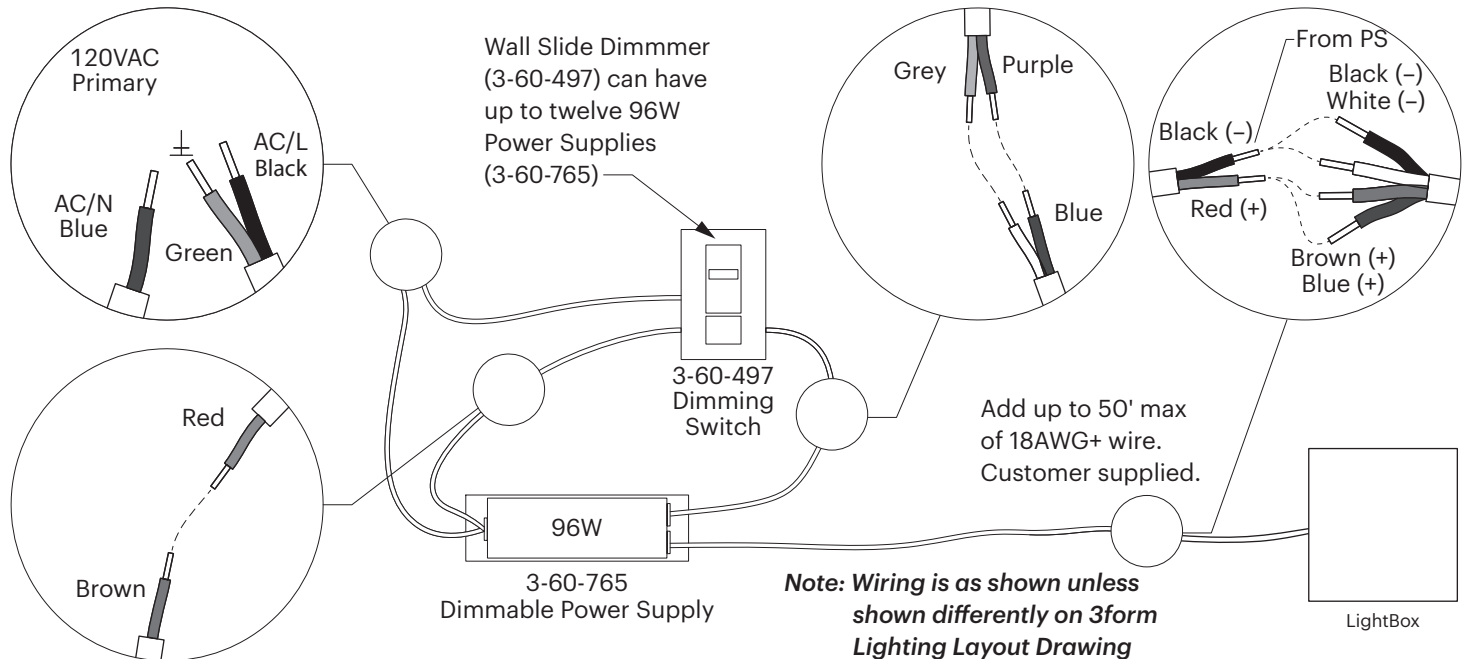The acrylic panel inside the LightBox and the resin face panel may attract construction dust or debris. Use only water and soft cotton cloth to clean the surfaces. Do not use window cleaner or any type of abrasive cleaners. The aluminum frame can be cleaned with a soft cloth and water or Isopropyl Alcohol. For additional cleaning instructions and recommendations, please turn to page 7 of this document.
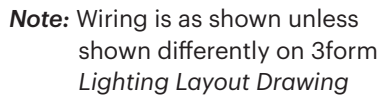
# Installation

## Wiring Diagram

Black (–)
White (–)

Brown (+)
Blue (+)

(+)
(–)

To Dimmer Switch
(if required)

Purple       Grey

3-60-765 Dimmable
Power Supply

(+)
(–)

Red (+)

Black (–)

14/2 AWG+
50' max
Customer supplied.

***Note:*** *Wiring is as shown unless
shown differently on 3form*
*Lighting Layout Drawing*

Switched VAC Primary
black and white wire

## Wiring Diagram - *0-10V Dimming ≤100W*

120VAC
Primary

AC/N
Blue

⏚

AC/L
Black

Green

Wall Slide Dimmmer
(3-60-497) can have
up to twelve 96W
Power Supplies
(3-60-765)

Grey       Purple

Blue

From PS

Black (–)
White (–)

Black (–)

Red (+)

Brown (+)
Blue (+)

3-60-497
Dimming
Switch

Red

Brown

96W

3-60-765
Dimmable Power Supply

Add up to 50' max
of 18AWG+ wire.
Customer supplied.

*Note: Wiring is as shown unless
shown differently on 3form
Lighting Layout Drawing*

LightBox

• *Recommend all power supplies be mounted in a junction box*
• *2"+ of air space recommended on sides and above each power supply*

## Installation

### Wiring Diagram - *0-10V Dimming 100W-1200W*

**120VAC Primary**
AC/N White
AC/L Black
Green

Wall Slide Dimmmer (3-60-497) can have up to 12  96 W PS (3-60-765)

Grey  Purple
Grey  Purple

From PS
Black (–)
White (–)
Black (–)
Red (+)
Brown (+)
Blue (+)

3-60-497 Dimming Switch

96W
3-60-765
Dimmable Power Supply

96W
3-60-765
Dimmable Power Supply

96W
3-60-765
Dimmable Power Supply

30' Cable to LightBox (can be extended an additional 20' with $1\frac{4}{2}$ AWG+)

LightBox

LightBox

LightBox

Red
Black

*Note:* Wiring is as shown unless shown differently on 3form *Lighting Layout Drawing*

• *Recommend all power supplies be mounted in a junction box*
• *2"+ of air space recommended on sides and above each power supply*

# Cleaning and Maintenance

Dust and debris can accumulate on the front and back of the face panel and on the acrylic light guide panel behind the face panel. This may cause a cloudy, spotty, or blotchy appearance on the face.

The face panel must be removed to access the acrylic panel behind. The best method for panel removal is to use industrial glass suction cups to adhere to at least one corner of the panel and pull the panel loose from the Dual-Lock reclosable fastener.
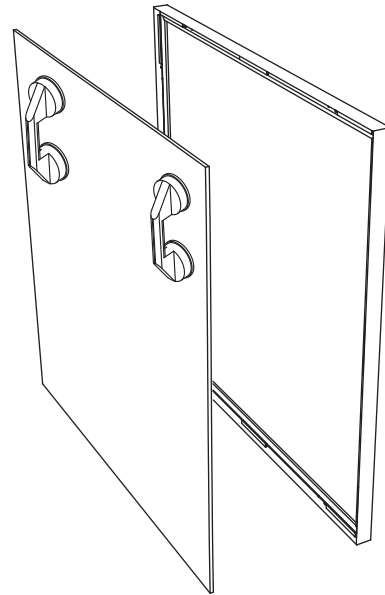
In the absence of glass suction cups you can insert a small flat blade screwdriver between edge of the face panel and the aluminum frame. Use a rag or cardboard to protect the frame and face panel from scratches. Start about 6" from the corner.
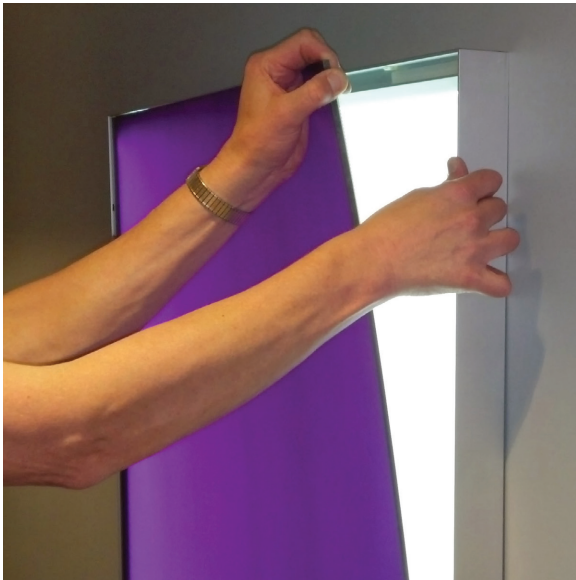
Pry outward to dis-engage the Dual-Lock reclosable fastener at the corner. You may need to pry the face on both sides near the corner to get the corner loose and open enough to grasp with your hand.
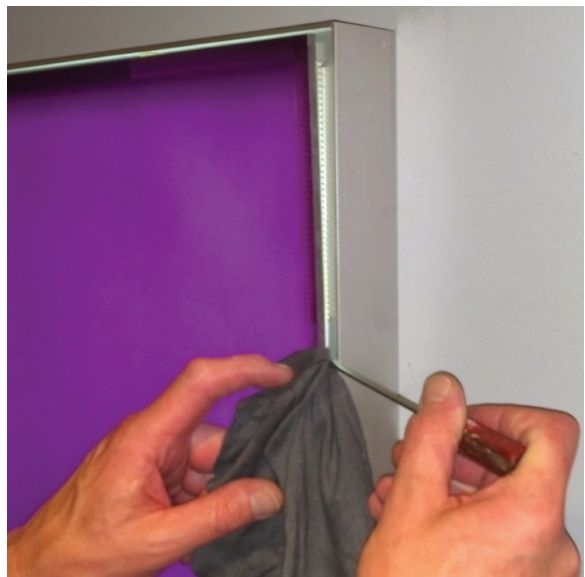
# Cleaning and Maintenance

Once the corner is loose, you can pull the face panel out of the frame, dis-engaging the Dual-Lock around the perimeter.

Place the face panel aside.



To clean the Light Guide panel, use Novus 1 Plastic Clean & Shine. Use of this product is the optimal method to prevent streaking or hazing of any kind. Use water to clean the Varia, Chroma, or Struttura face panels.



Use 3M Perfect-It Detailing Cloths.



Clean the acrylic light guide (or lens) with the rags and cleaner specified. It is important not to use any chemicals or harsh cleaners on the acrylic lens as any abrasions or scratches will cause bright spots.  Novus cleaner may come in a spray or pour container. If you have a pour container, use a spray bottle adjusted to a fine mist spray.

# Cleaning and Maintenance

Spray the surface with cleaner and wipe with clean, dry cloth.



Clean both sides of the Varia or Chroma face panel. Water and cotton rags work well to clean dust and smudges. If the face panel is extremely dirty, common cleaning products can be used such as Windex, Formula 409, or Fantastic.



Re-install the face panel into the LightBox. Make sure it is centered with an even gap all around the edge and press into place. Press firmly on the corners and at the center of each edge. You will hear or feel a slight click as the Dual-Lock engages.

## Repairing Light Guide Scratches

Scratches in the acrylic light guide panel or lens can also cause hot spots in the face panel. These scratches can be entirely removed with no residual damage by following the process outlined here.
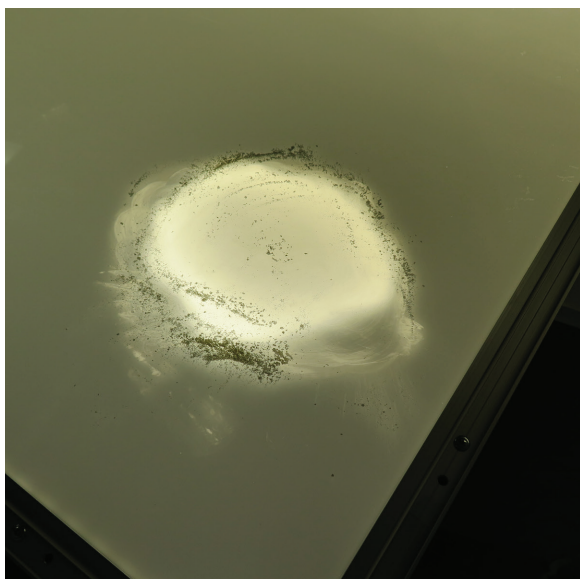
Use 400 grit sandpaper to sand the scratched area of the light guide down to the depth of the scratch.





The scratch should not be discernible within the sanded spot when this phase is complete.

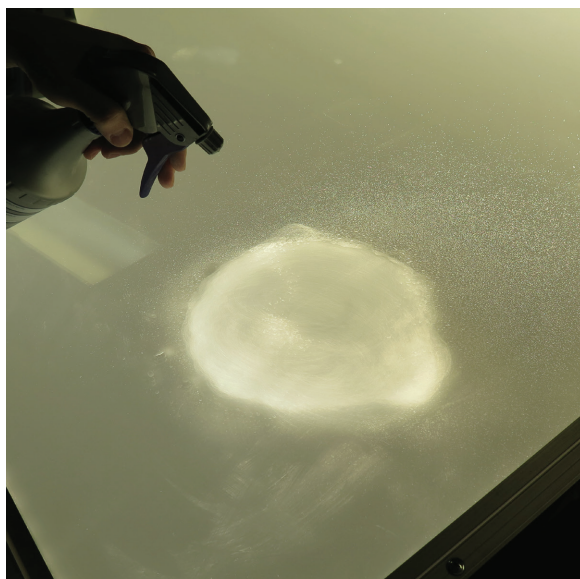Begin to polish the sanded area by next using 800 grit sandpaper.

# Repairing Light Guide Scratches

For the next phases of polishing use the following sanding discs for 1500-grit and 3000-grit levels.



Sanding with the 1500-grit and 3000-grit sanding discs requires a wet sanding technique. Spray the area with water prior to sanding.
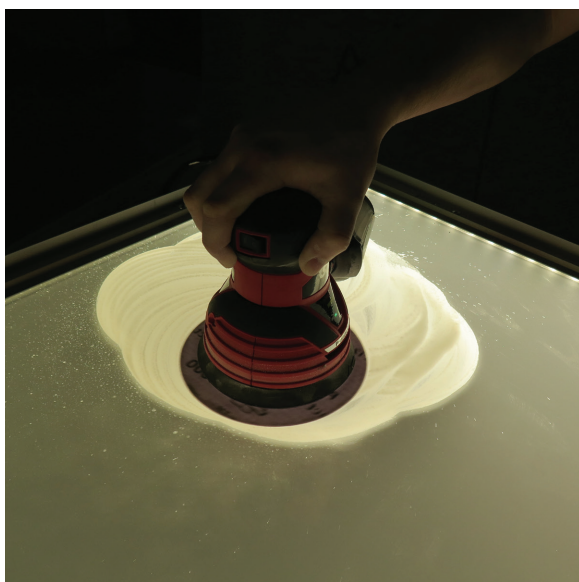
For the 1500-grit and 3000-grit sanding process it is ideal to use a hand orbital sander.

## Repairing Light Guide Scratches

Finish sanding with the 3000-grit sanding disc with the wet sanding technique.



Using the standard 3M cleaning cloth wipe all residue away from light guide panel. Ensure there is no debris in the rag to prevent further scratching.
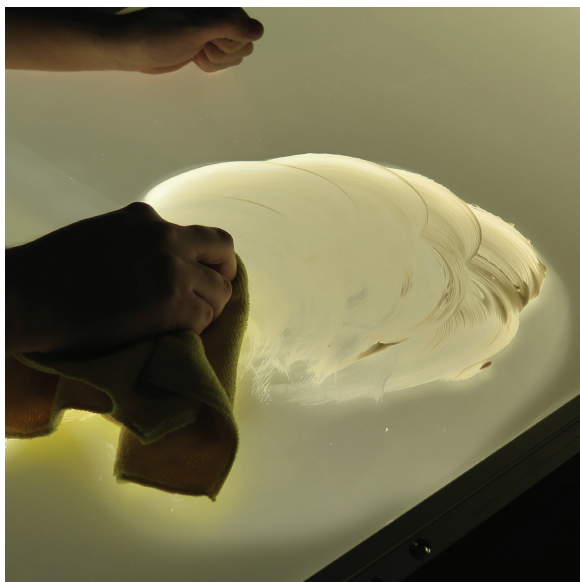


To polish the light guide panel use 3M Perfect-It rubbing compound with the same 3M Perfect-It Detailing Cloths specified in the cleaning section of this document.



Apply 3M Perfect-It rubbing compound to the area to polish.
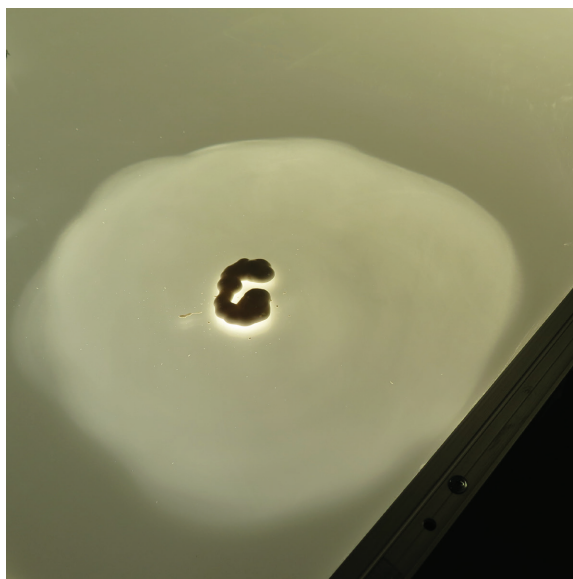
# Repairing Light Guide Scratches

Use polishing compound and rags to thoroughly polish the sanded area of the light guide.



Continue polishing until you begin to see the sanded area exhibit the same light transmission as the rest of the light guide panel.



The polished area will eventually blend completely with the remainder of the light guide panel.



When polishing is complete clean the entire light guide panel following the Cleaning and Maintenance instructions in the previous section of this document on page 7.