LIGHTPLANE™ PANELS

PRODUCT DATA

LightPlane Panels are engineered, edge-lit LED panels that allow you to seamlessly illuminate a wall, column, elevator interior, or standalone panel. This innovative product combines our cutting-edge lighting technology, our VividGlass laminated glass or CastGlass Levels glass, and a highly engineered framing system to create an illuminated panel unlike any other.

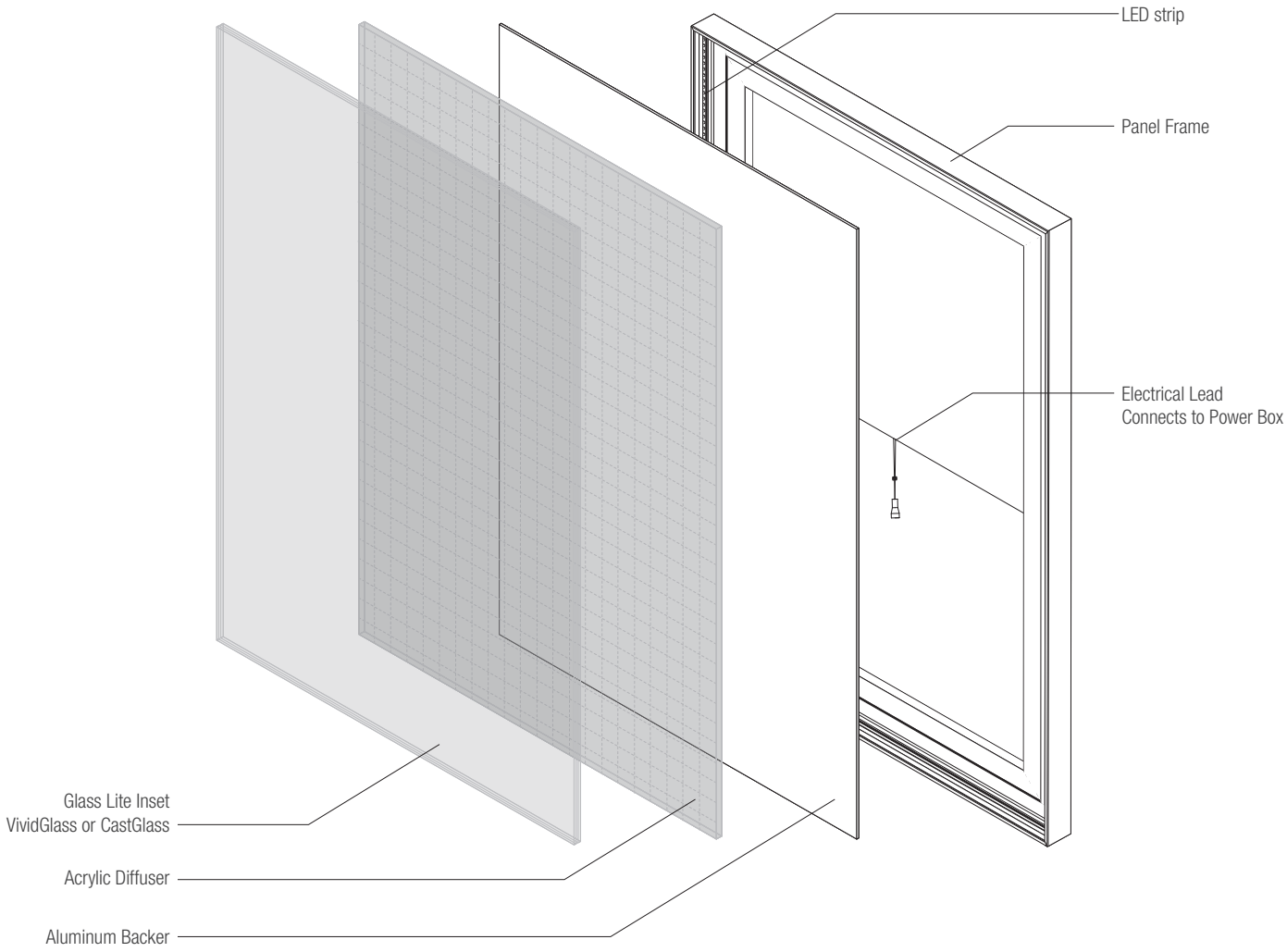
With a remarkably thin profile and a minimal bezel, LightPlane Panels offer uniform light output, energy efficiency, and the unparalleled performance of Cree® LEDs, delivering up to 50,000 hours (roughly 5-6 years) of illumination. Each panel is manufactured with a size-specific algorithm to ensure the look of even, natural light, and eliminate hot spots, haloes or dark areas. LightPlane Panels represent a complete system that is designed to be easily configured to meet your project needs.

STANDARD COMPONENTS

Panel with Edge-lit LED Lighting, Panel Subsystem, Installation Hardware, Power Box and Electrical Lead.

LIGHTPLANE PANEL

See page 3 for mounting details.



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SYSTEM COMPONENTS

GLASS INSET OPTIONS

VividGlass laminated glass has tremendous creative potential. Offering numerous ways to transform spaces with colors, patterns and graphics, many of our VividGlass designs can be specified for LightPlane Panels including selections from our ViviChrome, ViviGraphix, ViviSpectra, ViviStone, ViviStrata and ViviTela families. Please refer to the individual VividGlass Product Data Sheets for swatches and additional information.

CastGlass Levels glass is artisanal kiln cast glass laminated with color and graphic interlayers. Two Levels families, each with its own textural aesthetic, can be specified for LightPlane Panels. Please refer to the individual CastGlass Classic Levels and Profile Levels Product Data Sheets for design swatches and additional product information.

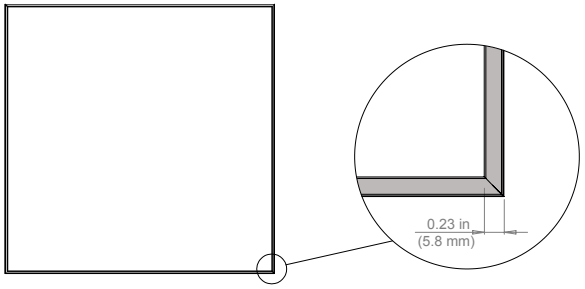
FRAME OPTIONS

- Panel frames are extruded aluminum. All panel frame corners are mitered.
- LightPlane panel frames are available in Clear, Black, or Antique Bronze anodized finishes.

CLEAR ANODIZED

BLACK ANODIZED

ANTIQUE BRONZE ANODIZED



FRONT VIEW

PANEL SUBSYSTEM

- Standalone LightPlane Panels mount to existing walls using a cleat mounting system.
- LightPlane Panels used within our LEVELe Systems incorporate a self-revealing mounting system.
- See page 3 for mounting details.

LED LIGHTING

- LightPlane Panels are designed as a decorative lighting solution and are not intended for functional lighting.
- LightPlane Panels can be dimmed at the power box using the digital controller that incorporates PWM dimming.
- Forms+Surfaces offers LightPlane solutions compatible with energy conserving building systems. Please contact us for additional information.
- See page 4 for more information on Lamp, Power Box & Electrical Lead, and Safety Certifications.

PANEL WEIGHTS & SIZES

- LightPlane Panels weigh approximately 8lbs/sq.ft.
- LightPlane Panels cannot have a width/length smaller than 6".
- LightPlane Panel cannot have a size larger than 5' wide x 10' high.

PRODUCTS & APPLICATIONS

LightPlane Panels can be specified for walls, elevator interiors and columns, and for illuminated displays, architectural accents or custom fabrications. LightPlane Panels are only suitable for dry, climate-controlled, interior applications.

STANDALONE PANELS	LEVELe WALL CLADDING & COLUMN SYSTEMS	LEVELe ELEVATOR INTERIORS
LightPlane Panels can be specified as accents for existing walls or as unique design elements. F+S recommends a 1/4" gap between standalone panels. Gaps are required for heat dissipation and should NOT be caulked closed.	LightPlane Panels seamlessly integrate into our LEVELe Wall Cladding and Column Systems. LightPlane Panels have the same visible profile as LEVELe Capture panels.	LightPlane Panels are available as a standard option in our LEVELe Elevator Interiors. LightPlane Panels have the same visible profile as LEVELe Capture panels.

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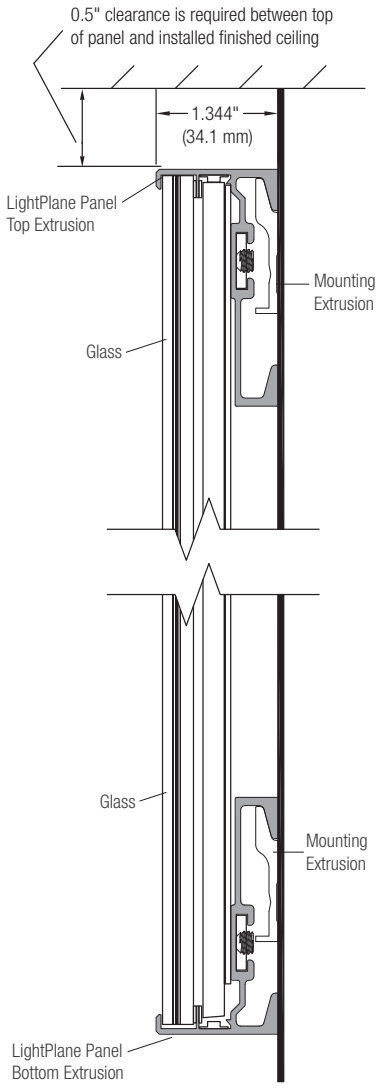
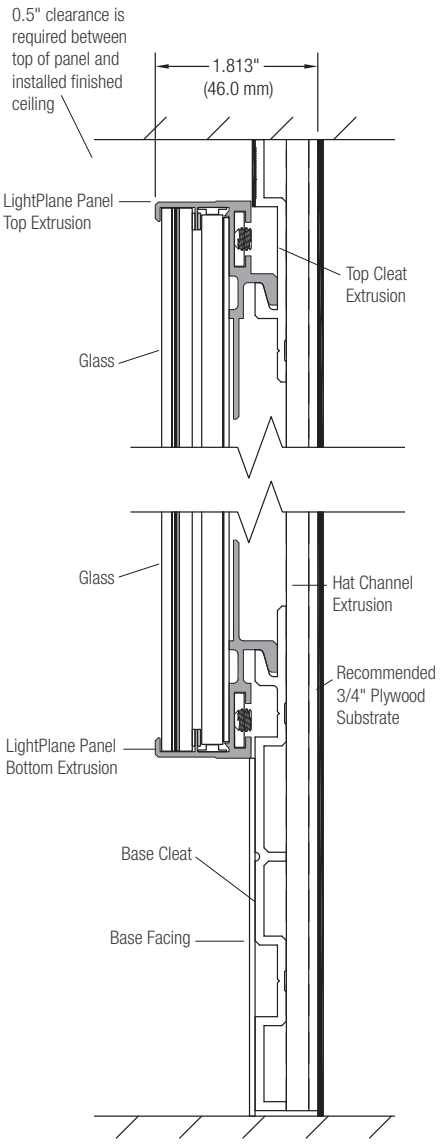
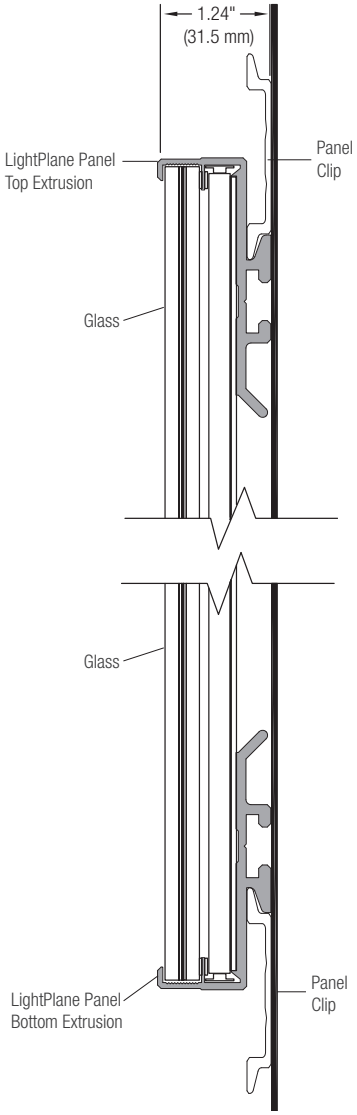
MOUNTING & APPLICATION DETAILS

STANDALONE PANELS	LEVELe WALL & COLUMN SYSTEM PANELS	LEVELe ELEVATOR INTERIOR PANELS
		
0.5" lift off clearance is required for installation of standalone LightPlane Panels. F+S recommends a 1/4" gap between standalone panels. Gaps are required for heat dissipation and should NOT be caulked closed.	0.5" lift off clearance is required for LightPlane Panels installed in LEVELe Wall Cladding & Column Systems.	LightPlane Panels are installed in LEVELe Elevator Interiors using the same methodology as standard (non-LightPlane) panels.

If LightPlane panels are installed in third-party frames, a minimum clearance of .125" is required on each side of the panel for assembly tolerance and thermal expansion of materials.

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LIGHTING SPECS & SAFETY

LAMP

- Lamp type: Cree® LED*
- Wattage: 0.25 watts
- Color temperature: 5,000K (3,500K LEDs available upon request)
- Rated life: 50,000 hours (at recommended illumination)
- Running temperature: 72° F

*Cree LEDs use less than 1/5th the total wattage used by fluorescent lamps, representing an 82% energy savings.

POWER BOX & ELECTRICAL LEAD

- Power box includes one or more high efficiency drivers (maximum power draw is 8.0A per power box) with dimming control(s), on/off switch and quick disconnects
- Input voltage: 100-277 VAC
- Output voltage: 15VDC
- Maximum wattage per panel: 160 watts per 60” x 120” panel
- Power box sizes: 18" L x 8" W x 3" H (2-Driver unit) and 18" L x 18" W x 3" H (5-Driver unit)
- Clearance of at least 3" is recommended on all sides, except the rear, for proper airflow, access to electrical hook-ups, and wire entry/exit
- Mounting provisions: 4x Ø.21 holes on rear of unit
- Connection provided for a remote switch to turn off power to all drivers in the power box. Switch and wire are to provide a dry contact and be rated for the same 100-277 VAC power coming into the box. WARNING: DO NOT SWITCH THE POWER CIRCUIT FEEDING THE POWER BOX.
- Power box is provided with knockouts in side panels for wire connectors/conduit.
- Pre-assembled LightPlane Panels, each with a 12" electrical lead and integral quick connect assembly (to be connected with quick disconnect power box lead). Electrical leads exit the middle of standalone LightPlane Panels, LEVELe Elevator Interior and Wall System LightPlane Panels, unless otherwise specified.
- Power box with integral driver and dimmer with either 25 foot or 50 foot electrical leads with integral quick disconnect. One power box can often supply power and dimming capabilities to more than one LightPlane Panel. In this case, more than one set of leads will exit the box.
- Connection will vary for third-party dimming systems. Please contact us to discuss specific system requirements.

SAFETY CERTIFICATION

LightPlane Panels have been ETL tested and certification has been met for the following:

- UL 48 - UL Standard for Safety for (Interior) Electric Signs
- UL 8750 - UL Standard for Safety for Light Emitting Diodes (LED)
- CSA C22.2 - Canadian Standard for (Interior) Portable and Stationary Electric Signs and Displays

ADDITIONAL SYSTEM INFORMATION

INSTALLER PROVIDED

- LightPlane installers must supply an accessible mounting surface or vented enclosure for the supplied power box within 25-50 running feet of the final LightPlane Panel location.
- Installers are responsible for providing a 100-277 VAC power feed and electrical hook up to each supplied power box.
- If a third-party dimming system is being used, wiring will vary. Please contact us to discuss specific system requirements.
- If customer desires to switch the panels on and off, customer must supply a switch with a dry contact and add a separate wire to run to the switch connection provided in the box. WARNING: DO NOT SWITCH THE POWER CIRCUIT FEEDING THE POWER BOX.

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DELIVERY & HANDLING

DELIVERY
• LightPlane Panels are packed in vacuum sealed packaging which should remain intact until the panel is ready to be installed. • Allow LightPlane Panels to acclimate in a climate controlled indoor environment at least 3 hours prior to opening vacuum sealed packaging. • Panels are shipped in A-frame crates and are grouped by similar sizes. The crate arrives with components neatly organized and includes the back system components and installation instructions. • The LightPlane power box will arrive packaged with the panels. • Prepare boxing, trailer and floor loading schedules in consideration of weight limitations and handling and distribution needs.
RECEIVING
• Before unloading, inspect handling equipment, rigging and surrounding conditions for safety compliance and inspect the general condition of the shipment for load shifting or possible damage in transit. • Inspect the shipment for any shortage, abuse, wetness or other transit damage; note such on the bill of lading or delivery ticket and obtain the driver's signature as acknowledgment.
STORAGE
• Plan the order to avoid off-site storage and to minimize rehandling and time in storage at the job site before installation. • Store indoors at moderate temperature (above the dew point). • Support both sides of vertically stored cases. • Wet glass must be towel dried prior to storage as prolonged moisture exposure can cause permanent surface staining.
HANDLING
• During handling, wear hard-hats, safety shoes, gloves, and glazing gauntlets and follow all established safety procedure. • Exercise care to prevent damage to the glass; edge damage may lead to thermally associated glass breakage after installation. • Check finished surfaces and glass edges for damage before installation; set only acceptable material.

INSTALLATION & MAINTENANCE

INSTALLATION	MAINTENANCE
• Install finished materials after completion of potentially damaging construction activities nearby—such as welding, sandblasting and fireproofing. If the construction schedule does not allow for this, protect the glazing from damage by other processes. • Standalone LightPlane Panels are designed with a horizontal extrusion channel that interlocks with the provided mounting cleats for easy installation on existing walls. • Simple, step-by-step installation instructions are provided when LightPlane Panels are used with LEVELe Elevator Interiors, LEVELe Wall Cladding System or the LEVELe Column System.	• The glass surface of LightPlane Panels can be maintained using standard commercial, non-streaking cleaners and polishes formulated for use on glass. • When cleaning the panels, avoid excessive amounts of liquid solution on the glass, as this can damage the lamps and electrical wiring in the panels. • Aluminum frames can be cleaned as needed using a soft brush or cloth with a minimal amount of warm water and a mild detergent. Do not use harsh abrasives, acids or chlorine-based cleaners or cleaning tools containing carbon steel, such as steel wool or wire brushes. • Do not let liquid sit on or near the panels for an extended period of time. Avoid puddling near the base of the panels.

TECHNICAL SUPPORT & PROJECT MANAGEMENT

Because each project is unique, our knowledgeable support team is ready to help. Our technical sales, engineering, sustainability, and project management professionals regularly assist our clients worldwide. Please contact us at 800.451.0410 or sales@forms-surfaces.com to discuss your project.

HOW TO SPECIFY

A Design Guide is available to lead you through the specification process in a simple checkbox format. Design Guides are also available for each of our VividGlass and CastGlass Levels glass products to lead you through the glass selection process. Please use the two Design Guides together to capture all the information needed to generate a quote: applications, dimensions, VividGlass or CastGlass Levels selections, and other options.

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