Product Overview

LumiSheet™

LED Light Panel

CUSTOMIZABLE
- Available in custom sizes & shapes
- Can be used in "frameless" designs

BIGHT & EVEN ILLUMINATION
- 3D V-Cutting technology
- High brightness (2,000 - 10,000 LUX)
- Superior consistent light quality

LONG LIFESPAN
- Patented heat sink technology to maximize LED lifespan (70,000 hours)

ENERGY EFFICIENT
- Low power cwonsumption (70% less than fluorescent)
- Energy saving and maintenance free

WARRANTY
- Advanced 3-year warranty

PERFECT BACKLIGHTING SOLUTION

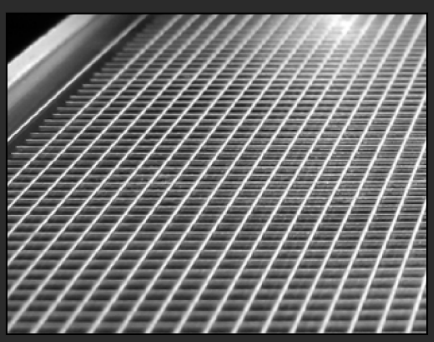
LumiSheet™ is designed to emit a bright, even output of light across the entire surface of the panel. Unlike traditional light panels, which have the light source mounted on the exterior of the LGP (Light Guide Plate), LumiSheet™ integrates high brightness LEDs and the heat sink into our exclusive 3D V-cutting LGP which makes it possible to produce "frameless", rectangular or special shaped LED light panels for various application needs.

INTEGRATED HIGH QUALITY LEDS

LumiSheet™ integrates high quality 12V, constant voltage LEDs into the perimeter of the LumiSheet™ panel without the use of rigid frame materials. This process allows the LEDs to conform to almost any shape.

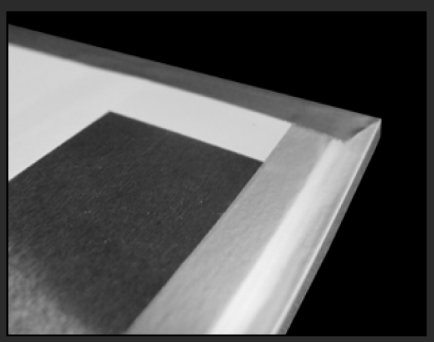
3D V-GROOVE LIGHT GUIDE PLATE (LGP)

LumiSheet™ utilizes crystal clear acrylic combined with a patented 3D V-groove etched grid pattern that provides even illumination to almost any shape imaginable.

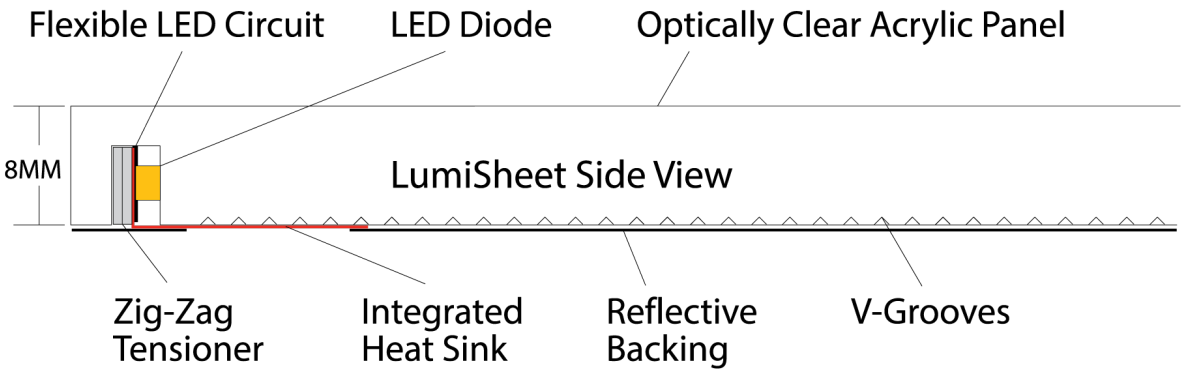


INTEGRATED THERMAL MANAGEMENT

All LEDs create heat which is detrimental to their life span. LumiSheet™ implements a patented technology which integrates the heat sink into the LGP that is easily conformable which allows for customizable shapes.

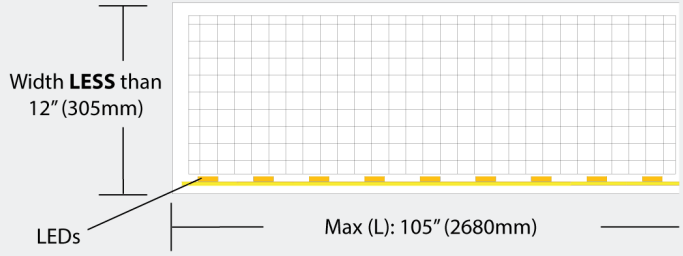


PROFILE OF LUMISHEET

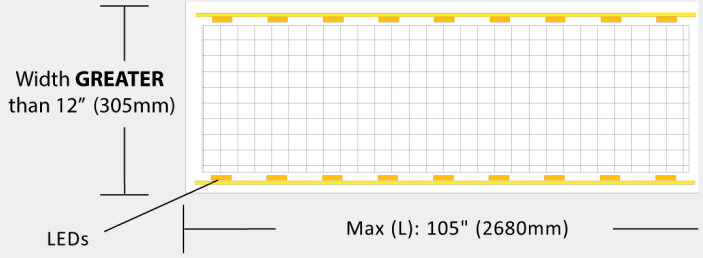


LED LIGHT LOCATIONS

LED LIGHT ALONG 2 EDGES

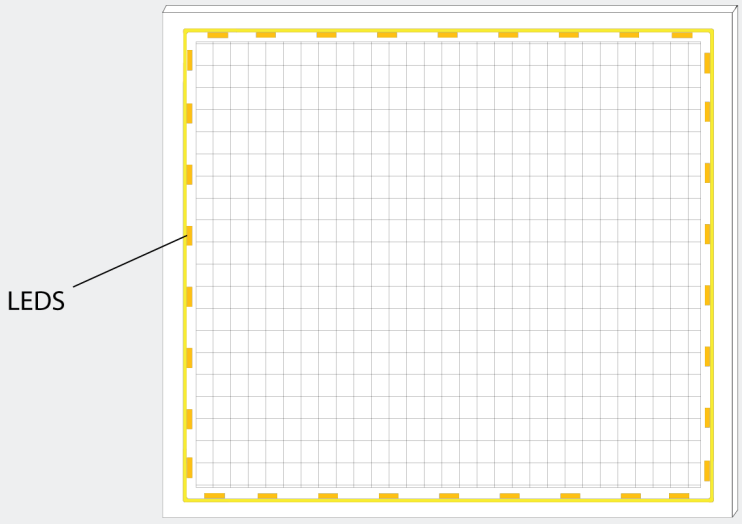


LED LIGHT ALONG 2 EDGES



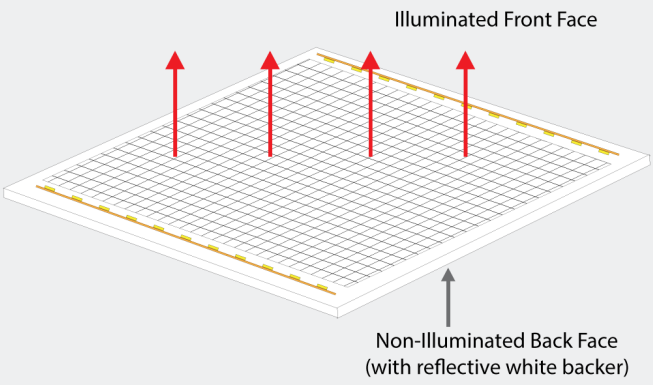
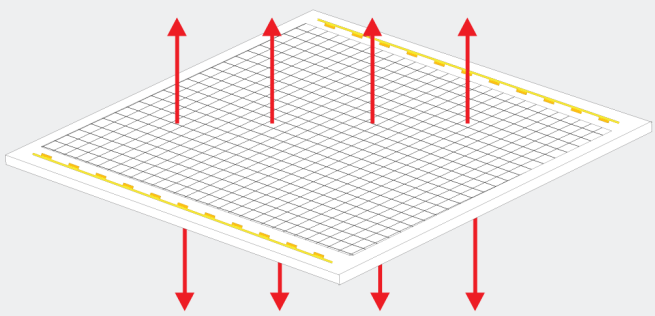
LED LIGHT ALONG ALL 4 EDGES

FOR SQUARE PANELS
For example: 36" x 36" or 48" x 48



**This is only recommended for when panels are "nearly" square. It is not recommended for long narrow panels.

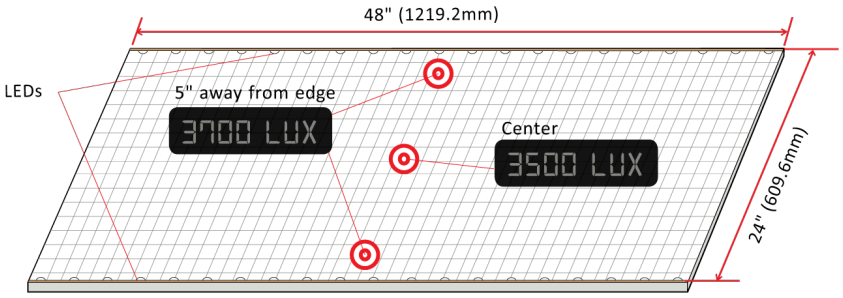
ILLUMINATED FACE OPTIONS

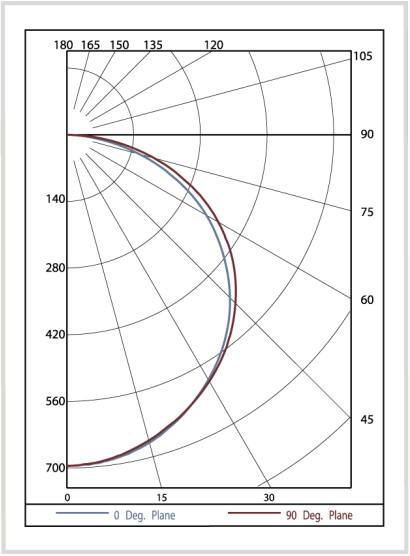
SINGLE FACE ILLUMINATION (STANDARD)	DOUBLE FACE ILLUMINATION (OPTION)
	

Both Front and Back Face Illuminated (no reflective white backer)

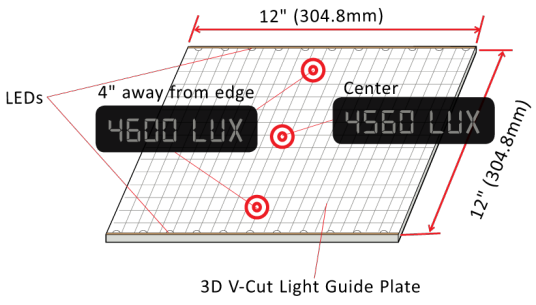
TYPICAL SURFACE BRIGHTNESS MEASURE

24" x 48" LumiSheet with high output 5300K LEDs lit along edges (40W)

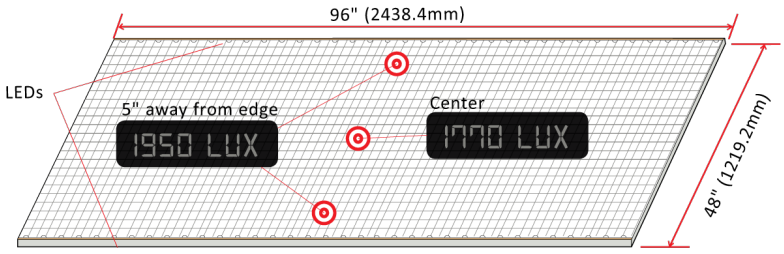




12" x 12" panel with regular 5300K LED lit along 2 edges (8W)



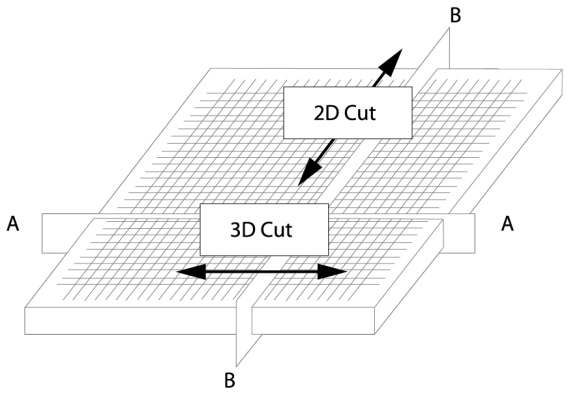
48" x 96" LumiSheet with high output 5300K LEDs lit along 2 long edges (80W)



*Brightness readings are for reference only. Actual reading may differ for different LEDs, LGPs or even different meters.

3D V-CUTTING TECHNOLOGY

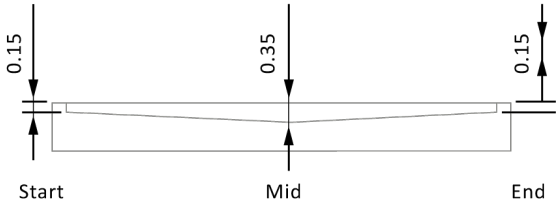
A significant advantage to LumiSheet™ lies in the production of the Light Guide Plate (LGP). Sourced for its rigidity and light transmission properties, an optical grade PMMA acrylic is etched with multiple grooves using patented 3D V-cutting technology to create a uniform matrix. This etched matrix acts as a vehicle to transport light from the unit's embedded LEDs across the entire surface of the panel to deliver homogeneous illumination.



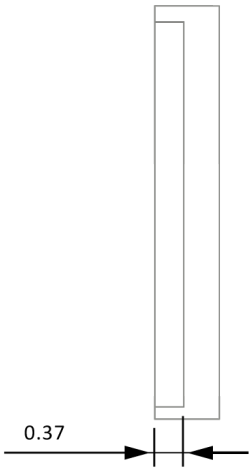
Section A-A

1 Side LED

2 Sides LED



Section B-B



3D V-cutting technology ensures that light is evenly reflected throughout the surface of the acrylic Light Guide Plate (LGP) by making grooves on the LGP at specific intervals according to the location of the light source and the direction of irradiation. The vertical V-grooves are widely spaced when they are close to the light source, but narrowly spaced when they are farther away from the light source. The horizontal V-grooves gradually grow wider and deeper as their distance from the light source increases. Therefore, the brightness of the front surface of the LGP is able to remain uniform.

SPECIFICATIONS

ELECTRICAL				
Input Voltage	12 Volt DC - Constant Voltage			
Power Consumption	4.0 Watts/ft (Standard LEDs)	5.0 Watts/ft (High Output LEDs)	5.0 Watts/ft (White Adjustable LEDs)	4.5 Watts/ft (RGB LEDs)
Wire Size	20 AWG 2 wire (Standard/HO LEDs)	20 AWG 3 wire (White Adjustable LEDs)	22 AWG 4 wire (RGB LEDs)	
Wiring	Each panel must have direct connection to power supply. Do not wire panels in series.			
***Connector**	2.1/5.5mm barrel plug (Standard/HO LEDs)	3 pin molex (White Adjustable LEDs)	No connector (RGB LEDs)	
Certification	UL / cUL (E334549)			

PHYSICAL					
Color Temperature	Warm White approx. 3000K	Neutral White approx. 4100K	Pure/Cool White approx. 5300K	White Adjustable 3000K - 6500K	Color Adjustable **RGB
Mounting Examples	Wall mounted with screws, Z-clips, U-channel, mirror clips or standoffs				
Operating Temperature	-30˚C (-22˚F) ~ +40 °C (+104 °F)zz				
Environment	Dry location (Standard)				
Thickness	***8MM (Standard), 4MM, 6MM and 10MM also available depending on application				
Minimum Size	2"W x 2"L x 5/16" D (50mm x 50mm x 8mm)				
Maximum Size	59"W x 118"L x 5/16"D (1499mm x 2997mm x 8mm)				
Weight	1.95 lbs/sq. ft.		9.54 kg/sq. M		

STANDARD PLUG-IN POWER ADAPTORS			
Power Adaptors	12V DC, 1A, 12W, UL listed	12V DC, 5A, 60W UL class 2 listed	
Spider Cables	PL-2: 2-way long spider cable	PL-4: 4-way long spider cable	PS-2 / PS-4 / PS-6: 2/4/6-way short spider

STANDARD HARDWIRE POWER ADAPTORS		
Power Adaptors	**PA-60W-HW** 60W 12V Hardwire power adaptor Input 110V AC ~ 240V AC	**PA-150W-HW** 150W 12V Hardwire power adaptor Input 110V AC ~ 240V AC
Dimming & Controls	Refer to dimming & control options	

* Standard 5', Optional 10' **See RGB product line for more details ***Please consult an Evo-Lite™ sales engineer if a thickness other than 8MM is desired

Color Temperature: *Warm White 3000K* · *Neutral White 4100K* · *Pure / Cool White 5300K* · *White Adjustable 3000K - 6500K* · *Color Adjustable RGB*

BRIGHTNESS & POWER CONSUMPTION REFERENCE

SIZE (INCH)	SIZE (MM)	LED STRIP	*AVERAGE SURFACE BRIGHTNESS (LUX)	POWER CONSUMPTION (W)
6 x 6	150 x 150	1 side	5,000 (DL)	2.0
12 x 12	300 x 300	1 side	3,500 (DL)	4.0
24 x 24	600 x 600	2 sides	2,800 (DL)	15.0
36 x 36	900 x 900	2 sides	2,000 (DL)	23.0
48 x 48	1200 x 1200	2 sides	1,800 (HO)	40.0
48 x 96	1200 x 2400	2 sides	1,800 (HO)	80.0
Ø 6	Ø 150	all around	17,000 (DL)	5.8
Ø 12	Ø 300	all around	11,000 (DL)	11.2
Ø 24	Ø 600	all around	4,500 (DL)	24.0
Ø 36	Ø 900	all around	3,000 (DL)	36.0
Ø 48	Ø 1200	all around	2,200 (DL)	48.0

*Brightness data was measured from Jan. to Aug., 2009. "DL" denotes regular LEDs. "HO" denoted high output LEDs.

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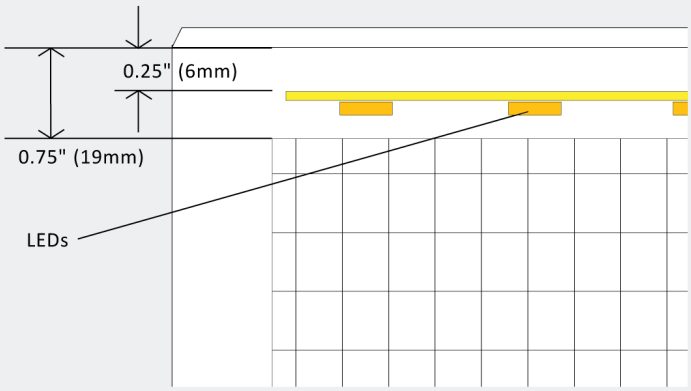
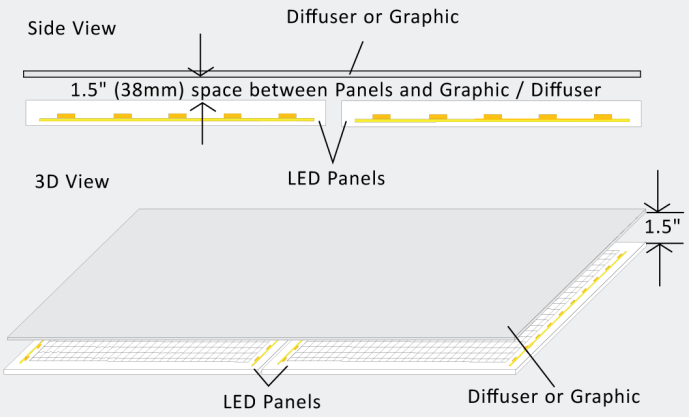
INSTALLATION TIPS

SINGLE PANEL



LEDs are typically installed along a groove 0.25" away from the edge. The hot spots created by the LEDs can be managed in many ways. We recommend testing the material to be backlit in order to determine if diffusion is necessary.

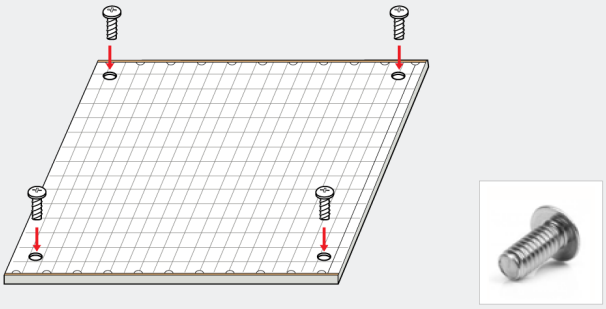
MULTI-PANEL



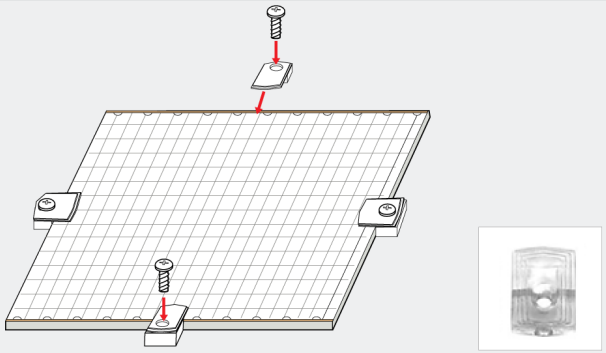
When placing panels side by side to create a larger illuminated area, you may see a bright line (LED illuminated edge) or dark line (non-illuminated edge) where they meet. These areas show differently depending on the overlay material being used. We recommend testing the material to be backlit in order to determine if additional diffusion or space is necessary.

SURFACE MOUNTING EXAMPLES

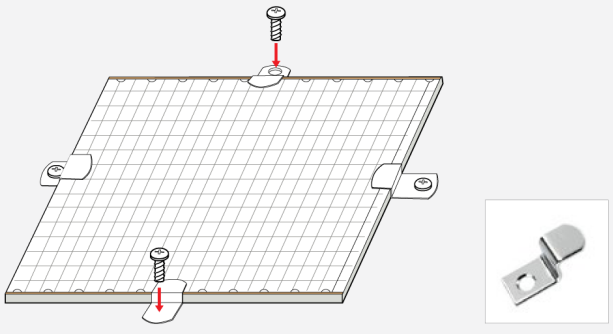
OPTION 1
Screw mounting with pre-drilled holes



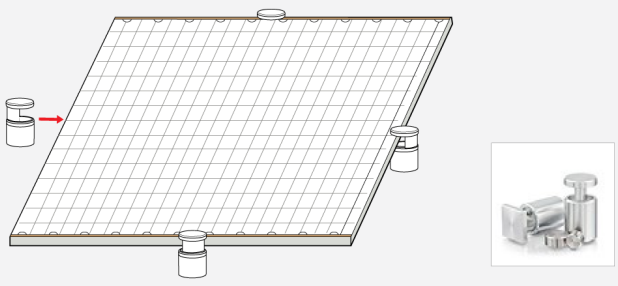
OPTION 2
Mounting with mirror clips



OPTION 3
Mounting with Z-clips

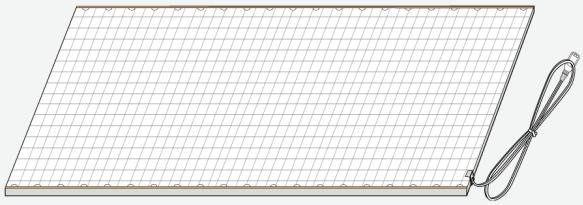


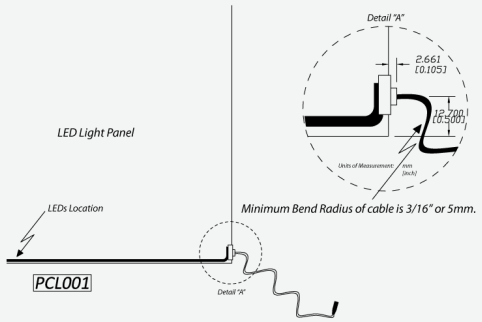
OPTION 4
Mounting with standoffs



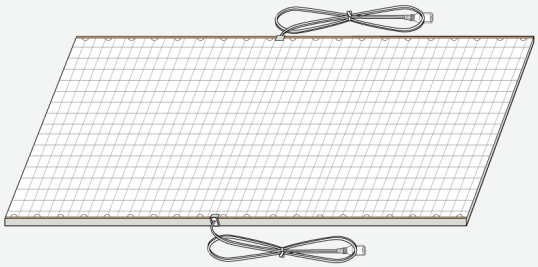
TYPICAL POWER EXITS

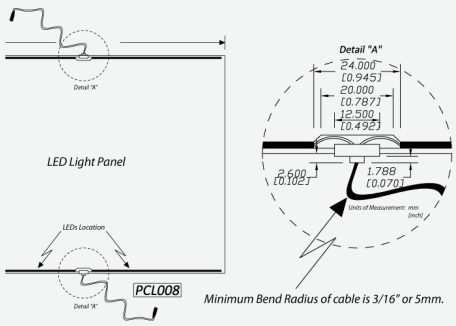
STANDARD 1
Power cord exits from short side (edge) corner (standard)



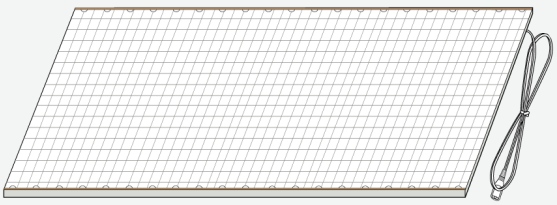


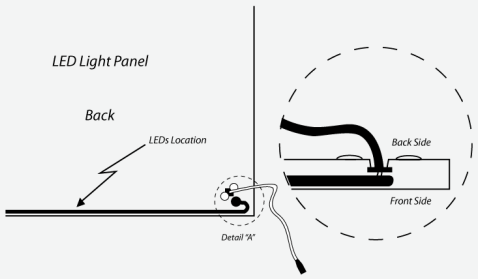
STANDARD 2
Power cord exits from the middle of each long side for LumiSheet longer than 6ft



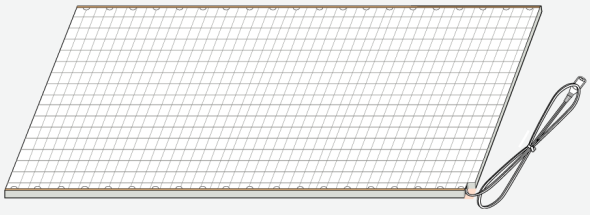


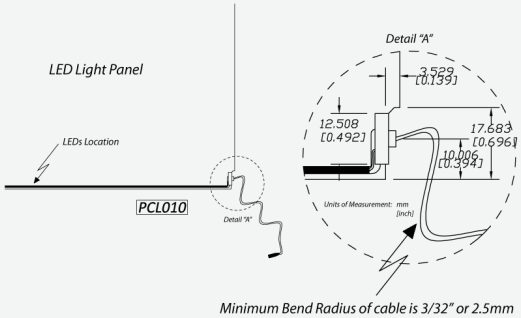
OPTION 1
Power cord exits from the back side of LumiSheet





OPTION 2
Recessed (notched) power cord exits





Day One Lighting, LLC

440 Tall Pines Rd., Suite D
West Palm Beach, FL 33413

Main Phone: 561-318-5424
E-mail: info@dayonelighting.com
URL: www.dayonelighting.com

TERMS & CONDITIONS

Be sure to familiarize yourself with Day One Lighting's **Terms & Conditions**.
By ordering from Day One Lighting, the purchaser agrees to all **Terms & Conditions**.

PATENTS

LumiSheet™ PATENTS

USA: 7473022
CANADA: 2,626,448
JAPAN: 4427528
CHINA: ZL 200610085027.0
TAIWAN: 312899
SINGAPORE: 141901
SOUTH AFRICA: 2008/03676
EUROPEAN UNION: 1,780,584
(Germany, UK, France, Italy, Spain, The Netherlands, Belgium, Sweden, Austria, Poland, Denmark, Greece, Ireland, Finland, Portugal, Czech Republic, Hungary, Romania, Slovakia, Bulgaria, Switzerland, Luxembourg, Slovenia, Turkey, Latvia)

V-CUTTER FOR AN LCD LIGHT GUIDE PANEL

USA: 6619175
JAPAN: 3500466
TAIWAN: 155175

A LIGHT GUIDE PANEL WITH SALANT LIGHT GUIDING PARTS

USA: US 7,018,087 B2

PIN KIT FOR V-CUTTER

KOREA: 10-0552589, 10-0557738, 10-0557741, 0540055, 0540053, 10-0772921, 10-0716543, 10-0565890, 10-0753963, 10-0643604, 10-0736656, 10-0748074, 10-0748073, 10-0762741,
USA: 6792842
JAPAN: 3463060
EU: 1335817
CHINA: ZL 01818623.8
TAIWAN: 163820

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