DESIGN AND SPECIFICATIONS

Description
LIGHTFRAME is an accessible translucent fabric ceiling and wall system. It provides light transmission rates up to 83% and NRC values up to 0.9. The precision monofilament fabric optimizes artificial or natural light transfusion without any color shift, giving even light illumination. Extremely narrow seams and an elliptic profile ensure illuminated surfaces are practically shadow-free.

Unique finishing and coating techniques ensure UV durability without fading, while the materials remain extremely tough and long-lasting. All fabrics used in LightFrame panels are rated Class A according to ASTM E84, and carry a limited 10 year warranty.

Panels
The LightFrame consists of single panels that can be installed in either butt joint or reveal layouts. LightFrame panels feature stretched fabric construction that is secured in the aluminum frame with a spline. The rear of the panel is faced with a clear or opaque thin film or an additional layer of fabric to optimize light transmission and acoustic properties.

Perimeter
Decoustics offers an extruded aluminum pre-machined perimeter that precisely mates with LightFrame panels. The perimeter is non-structural and must be affixed to a rated structural component in the building (by others).

All perimeter structures must be engineered and meet all local codes. It is essential that the perimeter be designed by a qualified engineer. Typical materials to construct the structural perimeters include: structural steel shapes (consisting of angles, square profile, channels, S and W shapes), aluminum tubes (including square and rectangular shapes) and engineered wood structures. The LightFrame ceiling system accommodates the installation of sprinkler heads, lighting and air diffusers by incorporating these elements into utility channels which are part of the ceiling design.

Utility Channel
Decoustics’ utility channels are custom designed and engineered to work with LightFrame panels. Custom machining ensures that all connections between the LightFrame panels and the utility channel align allowing for easy and accurate installation. All utility channels are fabricated to suite the project installation. Penetrations in the utility channel are available at additional costs. All standard utility channels feature a white finished face, an optional face plate is available.

Size
Panels are custom manufactured to suit project installations. The optimal maximum panel width is 1.5m (5ft) and optimal maximum length is 3m (10ft). Depending on the selected LightFrame construction, available fabric width and site accessibility that may limit the maximum available panel size.
Installation Details

Aluminum profile frame connection between two LIGHTFRAME panels is made using cog-wheel bolt technique.

**ETFE-Foil Options**
- Clear ETFE-Foil
- White ETFE-Foil
- Sefar Fabric (Volare or Seta)

**PVDF Fabric Options**
- Seta (IA-80-CL)
- Volare (IA-85-OP)

Extruded aluminum perimeter by Decoustics (fastened to structural components by others)

Fluorescent or LED face mount (by others)

Steel utility channel by Decoustics shown with optional face plate

PVDF Fabric**

Decoustics' utility channel shown with optional face plate

Gypsum

Ceiling support rod (by others)

80mm (3-1/8")

Structural wall

80mm (3-1/8")

Mission 5mm (3/16")

Acoustical Data (ASTM C423: Type E400 Mounting as per ASTM E795).

<table>
<thead>
<tr>
<th>FINISH</th>
<th>FREQUENCY (Hz)</th>
<th>125</th>
<th>250</th>
<th>500</th>
<th>1000</th>
<th>2000</th>
<th>4000</th>
<th>NRC</th>
<th>SAA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volare (IA-85-OP) Fabric to Foil</td>
<td><strong>ETFE-Foil</strong></td>
<td>0.78</td>
<td>0.55</td>
<td>0.47</td>
<td>0.80</td>
<td>0.64</td>
<td>0.59</td>
<td>0.60</td>
<td>0.57</td>
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<tr>
<td>Volare (IA-85-OP) Fabric to Fabric</td>
<td><strong>PVDF Fabric</strong></td>
<td>0.88</td>
<td>0.76</td>
<td>0.74</td>
<td>0.91</td>
<td>0.74</td>
<td>0.72</td>
<td>0.80</td>
<td>0.78</td>
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<tr>
<td>Seta (IA-80-CL) Fabric to Foil</td>
<td><strong>ETFE-Foil</strong></td>
<td>0.91</td>
<td>0.79</td>
<td>0.53</td>
<td>0.77</td>
<td>0.79</td>
<td>0.75</td>
<td>0.70</td>
<td>0.67</td>
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<tr>
<td>Seta (IA-80-CL) Fabric to Fabric</td>
<td><strong>PVDF Fabric</strong></td>
<td>0.94</td>
<td>0.89</td>
<td>0.80</td>
<td>0.96</td>
<td>0.96</td>
<td>1.07</td>
<td>0.90</td>
<td>0.90</td>
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</table>

Light Technology

<table>
<thead>
<tr>
<th>Light transmission</th>
<th>Footcandles at 3ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fluorescent strips 4ft/28W</td>
</tr>
</tbody>
</table>

Volare (IA-85-OP)
- Fabric and opaque foil (%): 26, 83, 72
- Fabric and translucent foil (%): 15, 31, 27
- Fabric and fabric (%): 23, 51, 45
- Fabric and opaque foil: 30, 60, 54
- Fabric and translucent foil: 44, 30, 59, 53

Seta (IA-90-CL)
- Fabric and opaque foil (%): 24, 78, 64
- Fabric and translucent foil (%): 15, 30, 27
- Fabric and fabric (%): 28, 60, 44
- Fabric and opaque foil: 30, 59, 53

Note: The information provided in this Data Sheet is accurate to the best of our knowledge at the time of printing. However, we reserve the right to make changes when necessary without further notification. Suggested applications may need to be modified to conform with local building codes and conditions. We cannot accept responsibility for products that are not used, or installed, to our specifications. Please refer to our website for most current data.

Note: Only handle panels wearing clean, lightweight, white gloves during installation. Follow manufacturer's printed instructions for installation as well as field cutting of panels.
Typical Details

**Typical LIGHTFRAME Recessed Light Detail**

- Substrate
- Structural steel perimeter frame (by others)
- LIGHTFRAME extrusion
- Sefar Fabric
- ETFE-Foil
- LIGHTFRAME panel

**Typical LIGHTFRAME Cloud Installation Detail**

- Substrate
- Structural steel perimeter frame (by others)
- Cog connector
- ETFE-Foil
- LIGHTFRAME panel
- Sefar Fabric

**Typical LIGHTFRAME Floating Installation Detail**

- Substrate
- Structural steel perimeter frame (by others)
- LIGHTFRAME extrusion
- Sefar Fabric
- ETFE-Foil
- LIGHTFRAME panel

**Typical LIGHTFRAME Cloud Installation Detail**

- Substrate
- Structural steel perimeter frame (by others)
- LIGHTFRAME panel
- LIGHTFRAME extrusion
- Sefar Fabric
- ETFE-Foil
**Performance Data**

<table>
<thead>
<tr>
<th>FABRIC</th>
<th>FABRIC CHARACTERISTICS</th>
<th>SIZES</th>
<th>CONSTRUCTION</th>
<th>THICKNESS</th>
<th>NRC</th>
<th>WEIGHT</th>
<th>COLOR</th>
</tr>
</thead>
</table>
| Seta (IA-80-CL) | • PVDF (polyvinylidene fluoride)  
• Odor free and dirt resistant  
• Low VOC and free of plasticizers  
• Chemically inert  
• Non-yellowing, color fast  
• High resistance to acids and alkalis  
• UV and weather resistant  
• 10 year warranty on fabric  
• Class A flame spread rating when tested in accordance with ASTM E84 | Maximum panel width is governed by the fabric width. Maximum length is 3m (10ft) | LIGHTFRAME consists of single panels that can be installed in either butt joint or reveal layouts. The frames are tightly spanned with fabric and secured with a spline. A second layer is attached to the reverse side of the frame to optimize the light transmission and acoustic properties. This layer is either a clear or white ETFE foil, or a second layer of Sear fabric. | 3-1/8” (80mm) | Refer to NRC values listed on page 2 for a 5’ x 5’ panel and 50lbs for a 5’ x 10’ | approx. 20lbs | Seta and Volare are white fabrics |
| Volare (IA-85-OP) | | | | | | |