

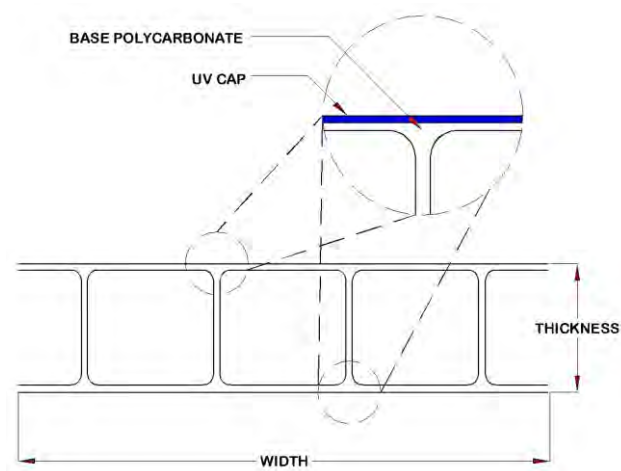
# LASERLITE® MULTIWALL | Product Data Sheet

## STANDARD SIZES

Laserlite® Multiwall is a twinwall-hollow structure polycarbonate sheet, making it lightweight and keeping thermal transmittance low.

|                                  |            |
|----------------------------------|------------|
| Thickness (mm)                   | 10         |
| Area Weight (Kg/m <sup>2</sup> ) | 1.7        |
| Width (mm)                       | 1,050      |
| Length (mm)                      | customized |
| U-Value (W/m <sup>2</sup> .°C)   | 3.170      |
| R-Value (m <sup>2</sup> .°C)/W)  | 0.316      |
| K-Value (W/m.°C)                 | 0.032      |
| Sound Insulation (dB)            | 16         |

\* Other sizes are available upon request, subject to minimum order quantity and/or additional charge





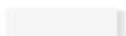
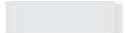
## TYPICAL PROPERTIES

Laserlite® Multiwall is manufactured from best quality polycarbonate resin that providing good technical properties. Making its applications is versatile to use in many, like roofing, facades, canopy, gazebo, carports, partition walls, bus shelters, sport hall, green house, swimming pool covers.

| Property                         | Method     | Unit    | Value      |
|----------------------------------|------------|---------|------------|
| <b>Mechanical</b>                |            |         |            |
| Tensile strength at yield        | ASTM D638  | MPa     | 64         |
| Elongation at break              | ASTM D638  | %       | 90         |
| Flexural Strength                | ASTM D790  | MPa     | 93         |
| Impact falling weight            | ASTM D5420 | J       | 40         |
| <b>Thermal</b>                   |            |         |            |
| Coefficient of thermal expansion | ISO 6946   | mm/m/°C | 0.065      |
| Service temperature              | -          | °C      | -20 to 120 |
| <b>Flammability</b>              |            |         |            |
| Horizontal burn                  | UL94       | mm      | <2.54      |
| Vertical burn                    | UL94       | -       | V1 Class   |
| Ignition temperature, flash      | ASTM D1929 | °C      | 440        |

## OPTICAL & SOLAR PROPERTIES

Clear Laserlite® Multiwall can achieve up to 86% light transmission, allowing sufficient daylight entrance when used as building material. Tints and colors are also available to choose

| Color   | Light Transmission | Heat Transmission | Solar Heat Gain | Shading Coefficient |
|---|--------------------|-------------------|-----------------|---------------------|
| *According to 10 mm thickness   |                    |                   |                 |                     |
| Clear   | 86%                | 76%               | 0.789           | 0.907               |
| Grey Tint    | 9%                 | 24%               | 0.473           | 0.544               |
| Bronze Tint  | 22%                | 30%               | 0.516           | 0.593               |
| Opal         | 16%                | 29%               | 0.343           | 0.394               |
| Platinum     | 11%                | 16%               | 0.327           | 0.376               |

## CHEMICAL RESISTANCE

Laserlite® Multiwall like others may be affected by certain substances that may cause surface cracks. For general guidance, Laserlite® Multiwall can resist below chemicals:

| Resist towards  | Damaged by                       |
|---|----------------------------------|
| Low concentration mineral acid                                | alkali                           |
| Neutral & acidic salt solution                                | Ammonia & amines                 |
| Oxidizing & reducing agents                                   | Aromatic or halogenated solvents |
| Saturated, aliphatic hydrocarbons & alcohol (except methanol) | Aldehydes, ketones and esters    |
| Many oils, fats, waxes  | Methyl alcohol                   |

## WIND LOAD

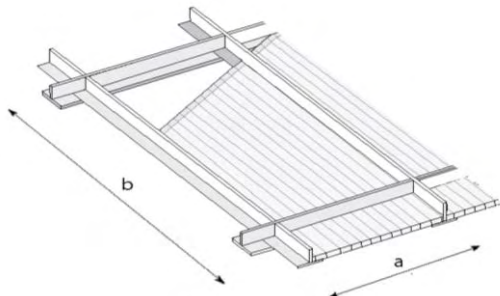
When doing sheet glazing with known wind load and size of glazing spot, it is recommended to set distance between shorter span:

### Four Sides Clamped Flat Glazing

| Thickness (mm) | Wind Load (Kg/m <sup>2</sup> ) | Center to Center Distance (mm) Between Shorter Span According to a:b* Ratio |       |        |
|----------------|--------------------------------|---|-------|--------|
|                |                                | 1:1   | 1:1.5 | 1:>1.5 |
| 10             | 60                             | 1,500   | 1,150 | 815    |
|                | 80                             | 1,375   | 1,070 | 730    |
|                | 100                            | 1,280   | 950   | 670    |
|                | 120                            | 1,215   | 920   | 620    |
|                | 140                            | 1,160   | 850   | 585    |
|                | 160                            | 1,110   | 800   | 545    |
|                | 180                            | 1,070   | 760   | 520    |
|                | 200                            | -   | -     | -      |

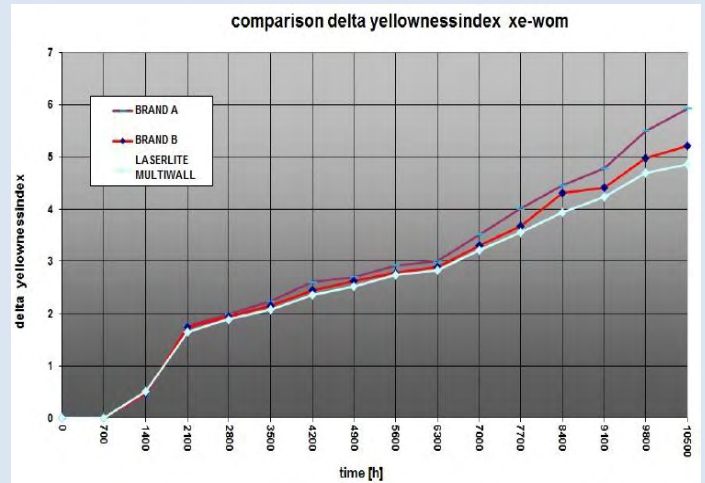
\*a = represents the center to center distance of glazing profiles on the short glazing side i.e. width of the sheet.

\*b = represents the center to center distance of glazing profiles on the long glazing side i.e. Length of sheet.



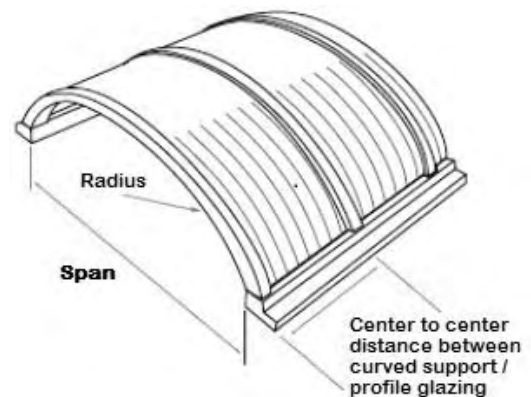
## PRODUCT PERFORMANCE

The UV cap material of Laserlite® Multiwall sheet is co-extruded on both sides, providing excellent protection against degradation and discoloration (evaluated according to ASTM D1925) caused by UV radiation in sunlight, covering 15 years warranty. The sheet is warranted for 5 years to not break due to loss of impact strength as a result of weathering or as a result of impact of hail measuring up to 25 mm diameter, attaining a velocity of up to 21 m/s.



### Two Sides Clamped Arched Glazing

| Thick ness (mm) | Wind Load (Kg/m <sup>2</sup> ) | Center to Center Distance (mm) According to Sheet Arched-Curvature Radius (mm) |       |       |       |       |       |
|-----------------|--------------------------------|--|-------|-------|-------|-------|-------|
|                 |                                | 1,500  | 2,000 | 2,300 | 2,600 | 2,900 | 3,400 |
| 10              | 60                             | 2,100  | 2,000 | 1,700 | 1,450 | 1,220 | 1,000 |
|                 | 80                             | 2,100  | 1,600 | 1,300 | 1,070 | 900   | 830   |
|                 | 100                            | 1,700  | 1,280 | 1,060 | 900   | 790   | 750   |
|                 | 120                            | 1,500  | 1,080 | 890   | 750   | 700   | 700   |
|                 | 140                            | 1,300  | 930   | 780   | 660   | 660   | 660   |
|                 | 160                            | 1,150  | 830   | 690   | 630   | 630   | 630   |
|                 | 180                            | 1,000  | 750   | 620   | 620   | 620   | 620   |
|                 | 200                            | 900  | 680   | 560   | 560   | 560   | 560   |



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