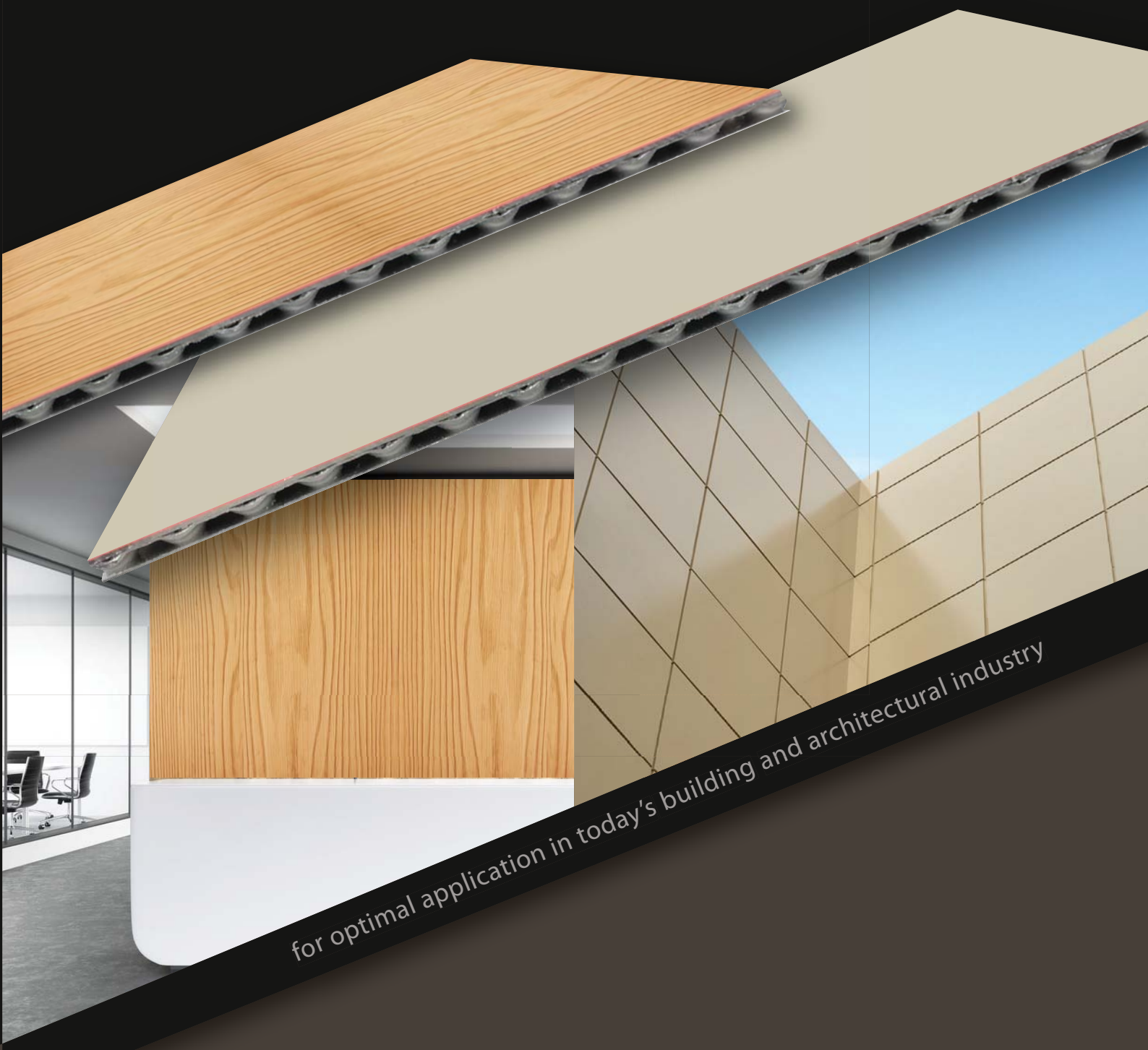
LiTEN™

The World's Thinnest
non-combustible bead core panel



for optimal application in today's building and architectural industry

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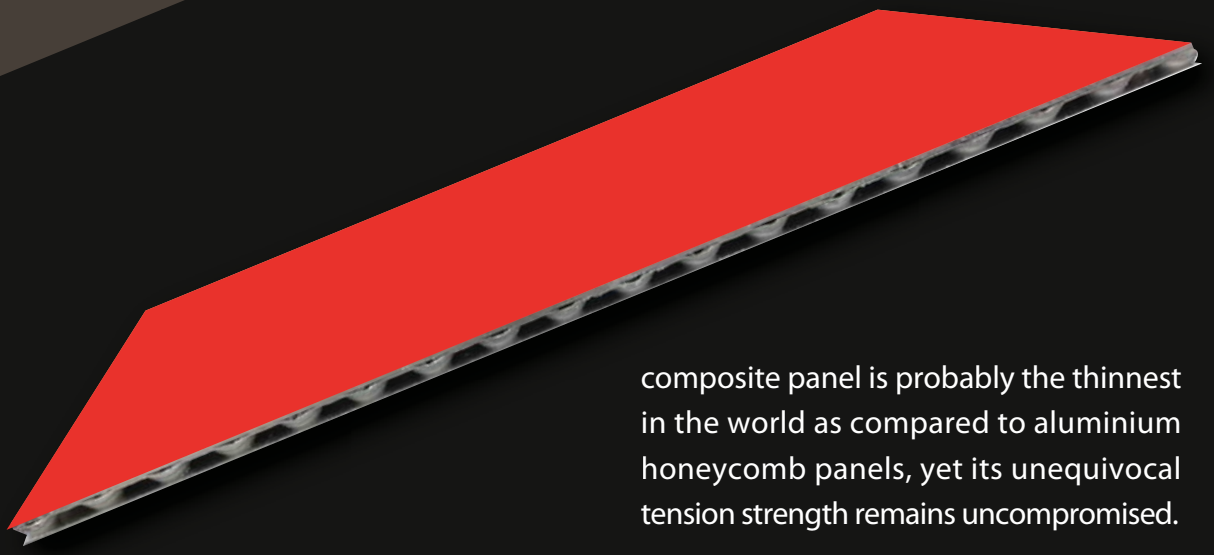
Aesthetically pleasing, functional, strong yet lightweight

4mm thin aluminium bead core panel



Aluminium bead core (ABC) composite panel is made by layering a thin skin above and below a piece of ABC structure and is usually coated with PVDF (Fluorocarbon) coating on the surface for durability, weatherability and corrosion resistant.

However, **LiTEN**™ is a more advanced ABC panel. With its unique ABC structure design which utilizes minimal core materials in production, has made **LiTEN**™ an extreme lightweight and cost efficient panel. Scientifically condensed to 4mm thin, **LiTEN**™ ABC composite panel is probably the thinnest in the world as compared to aluminium honeycomb panels, yet its unequivocal tension strength remains uncompromised.

LiTEN™ ABC composite panel has been widely used on flat or slightly curved surfaces where its uncompromising tension strengths are required. It comes in a wide range of surface finished color choices including wood grain like coating finishes for a more aesthetically pleasing application finish.

LiTEN™ ABC composite panel - delivering result that is a cut above the rest. Most effective, cost efficient and installation friendly for today's building and construction application.

Features

Lightweight

The laminate structure comprising of light aluminium sheets and foamed polyethylene resin is very light weight, which reduces work load by simplifying the process.

Durability

The aluminium sheet is coated with an ultra-weatherable resin coating which possess durability, weather resistance, corrosion resistance, staining resistance and wear resistance.

Strength & rigidity

Since there is an aluminium layer on each side, the coefficient of expansion is about the same as aluminium. Dimensional stability with regard to temperature fluctuations is excellent.

Water resistance

Since the closed-cell foamed resin is used for the core material, it performs differently from a traditional plywood core material, and ensures that it has an excellent waterproof quality and prevents corrosion.

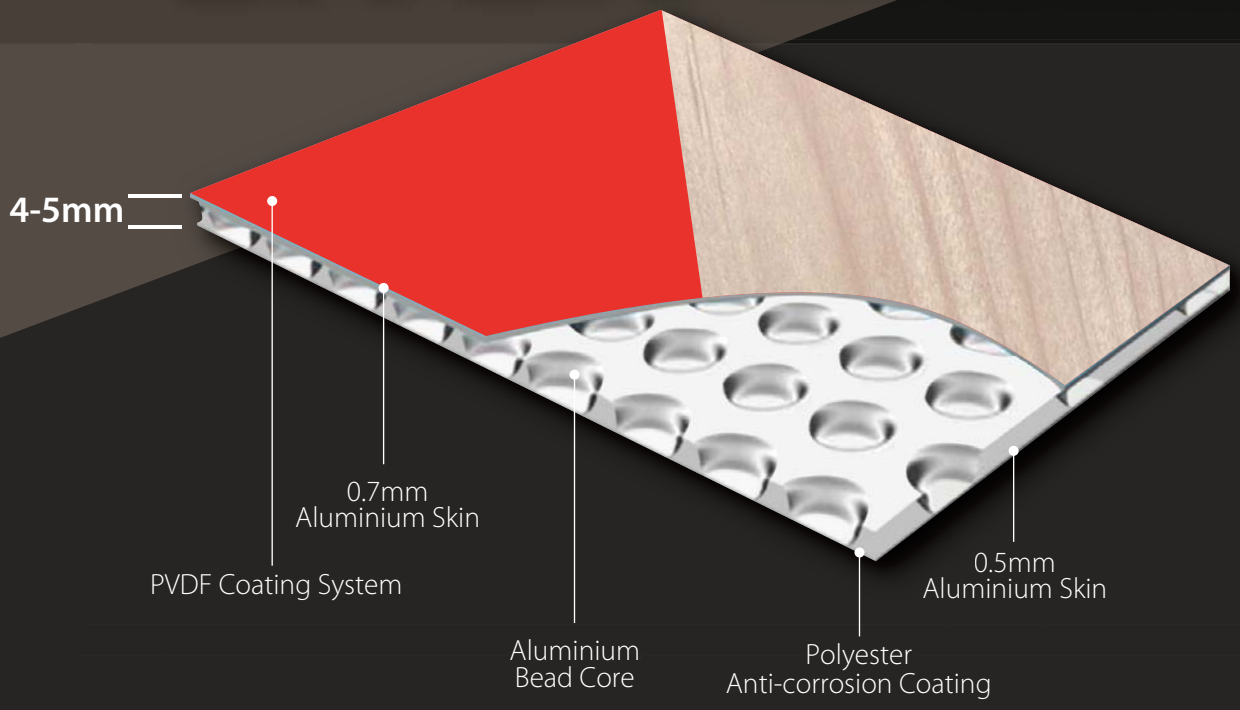
Flatness

The layers of aluminium and resin prevent the material from bending and distortion which allow them to maintain its long lasting flatness.

Color consistency

Because of the laminating effect using aluminum and resin, the stiffness is high, without deflection and distortion and the flatness is excellent.

LiTEN™ non-combustible



PRODUCT STANDARD SIZE

Part No.	Std Width	Weight	Painting
LiTEN™ 407	1220	4.4kg/m²	One side Fluorine Resin Baked coating (One side Service coating)
	1500		

* We can do both sides fluorine resin baked coating as a special order.
* We can make custom sizes (other than the sizes above) as a special order. Please contact our nearest sales office.

TECHNICAL DATA

Inspection Item	Result	ASTM Mechanical Test Results
Alloy/Temper of Aluminium Layers	3003 H24	-
Flexible Modulus (MPa)	30.5	ASTM C353 - 06
Measured Flexural Load, P (N)	653	ASTM C353 - 06
Flexural Stress (MPa)	114.1	ASTM C353 - 06
0.2% Proof Load (kN)	1.15	ASTM E8/E8M :15
0.2% Proof Stress (N/mm²)	129	ASTM E8/E8M :15
Maximum Load (kN)	1.55	ASTM E8/E8M :15
Tensile Strength (N/mm²)	173	ASTM E8/E8M :15

bead core panel

MANUFACTURING STANDARDS

A dedication to the total fulfilment of our client's and customer's expectations is reflected by a complete quality control system, beginning at the point of specification and continuing through to delivery of the guaranteed products. All activities are carried out in a manner which:

- Uses the framework of ISO9000 Quality Standards to verify the quality of our systems.
- Ensures that our products and services are of the highest standards.
- Create continuous improvements to our product through the application of the best quality practices.

TOLERANCE

Width	±2.0mm
Length	±4.0mm
Thickness	±2% for 3mm & 4mm; 3% for 6mm
Bow Maximum	0.5% for the length and/or width
Squareness Maximum	5.0mm
Surface Defects	The surface shall not have any irregularities such as dents, scratches and other imperfections in accordance with our quality assurance.

SUMMARY OF FIRE TEST

LiTEN™ has passed the following fire tests for external cladding, roof covering and interior:

Category	Country	Test Standard	Specimen Type	Result & Classification
External Cladding & Roofing & Interior	Singapore & United Kingdom	BS476 Part 4	4mm	Non Combustible
	Australia	AS1530.1-1994	4mm	Non Combustible
		AS1530.3-1999	4mm	Index 'O'

WARRANTY

The standard warranty is 10 years, with longer warranties available on a project specific basis.

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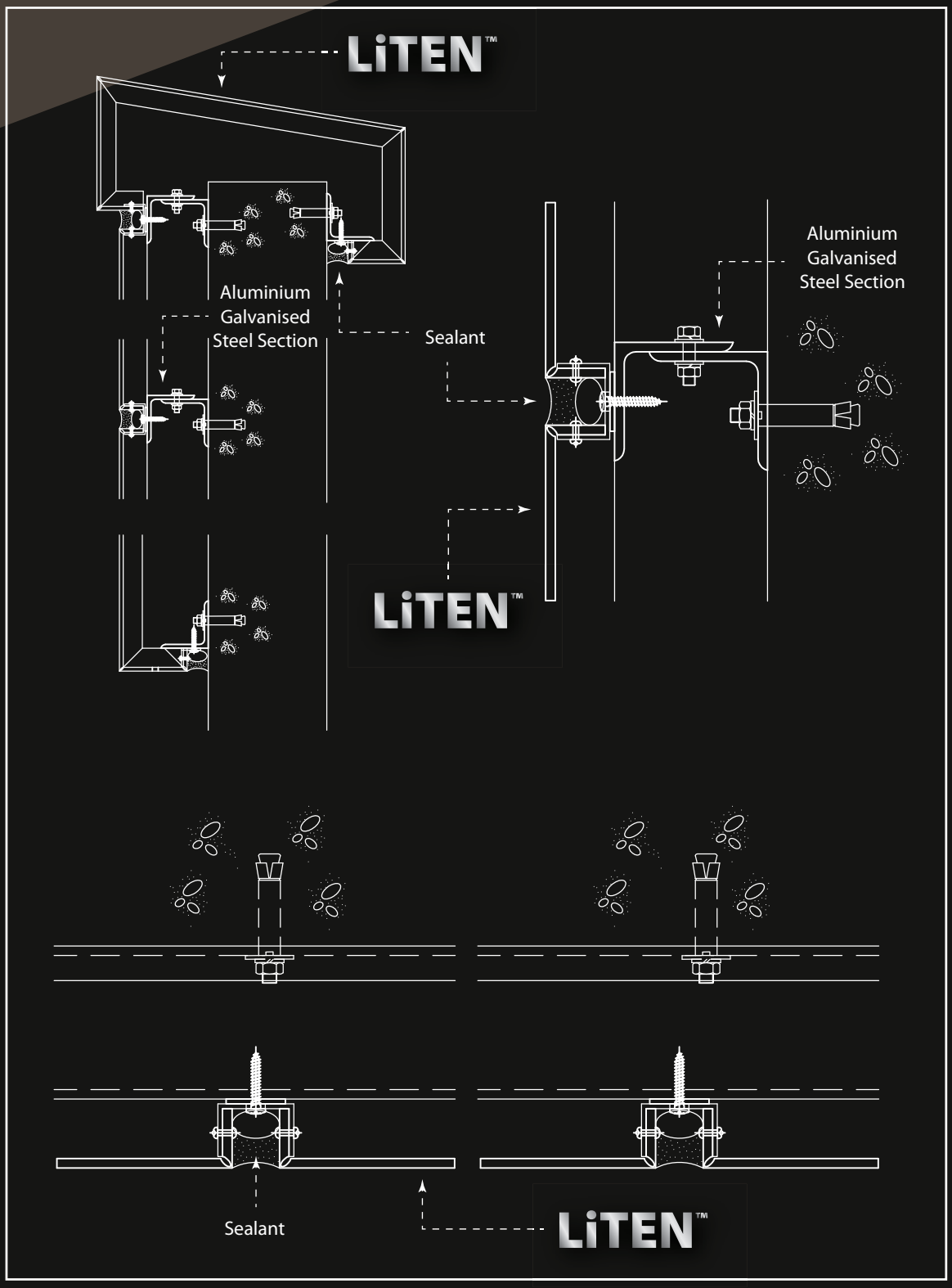
TYPICAL CLADDING SYSTEM



This drawing is provided for informational and illustrative purposes only and may not be drawn to scale. For exact drawings, please consult our representative nearest you.

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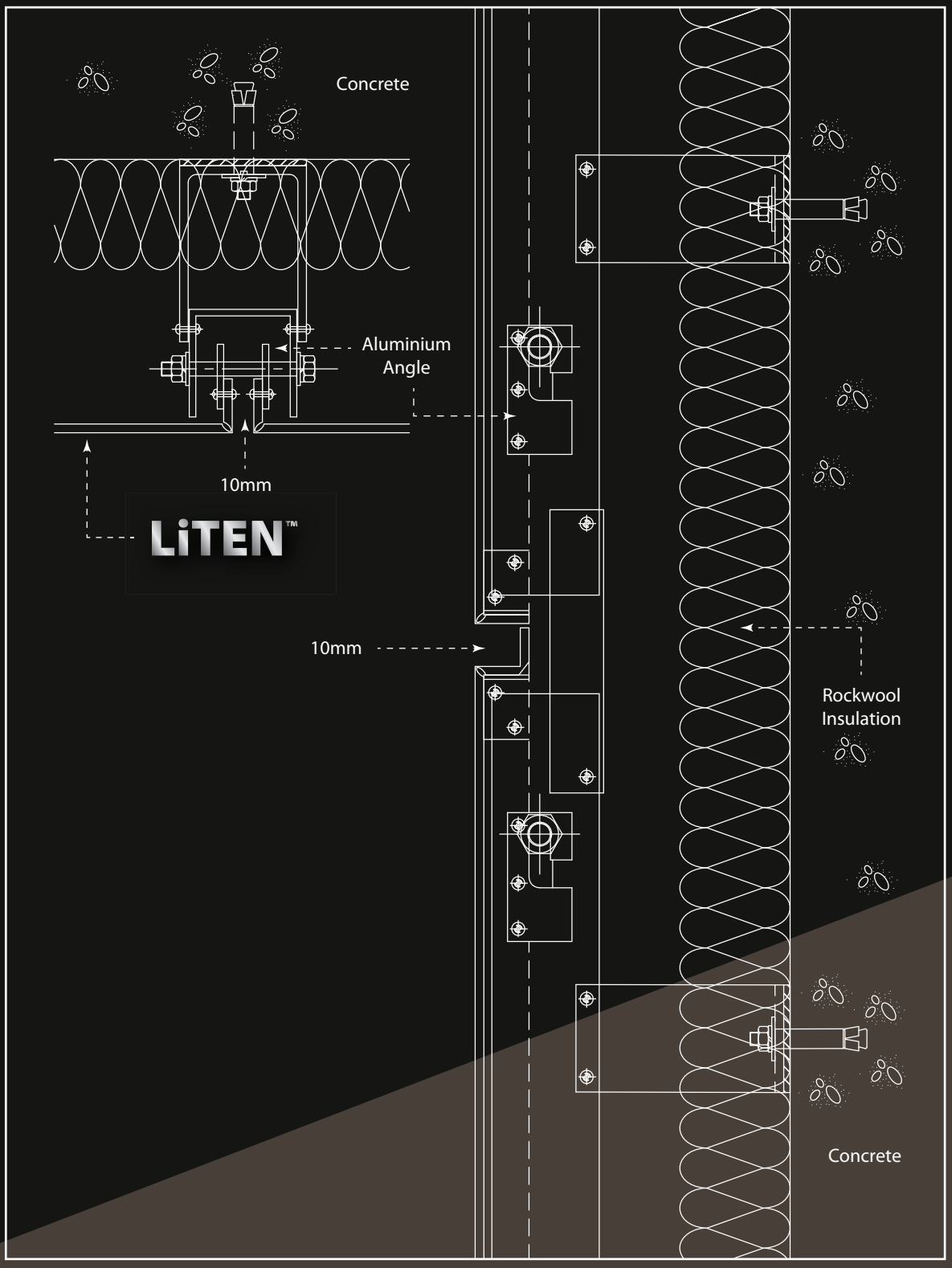
HOOK ON CLADDING SYSTEM



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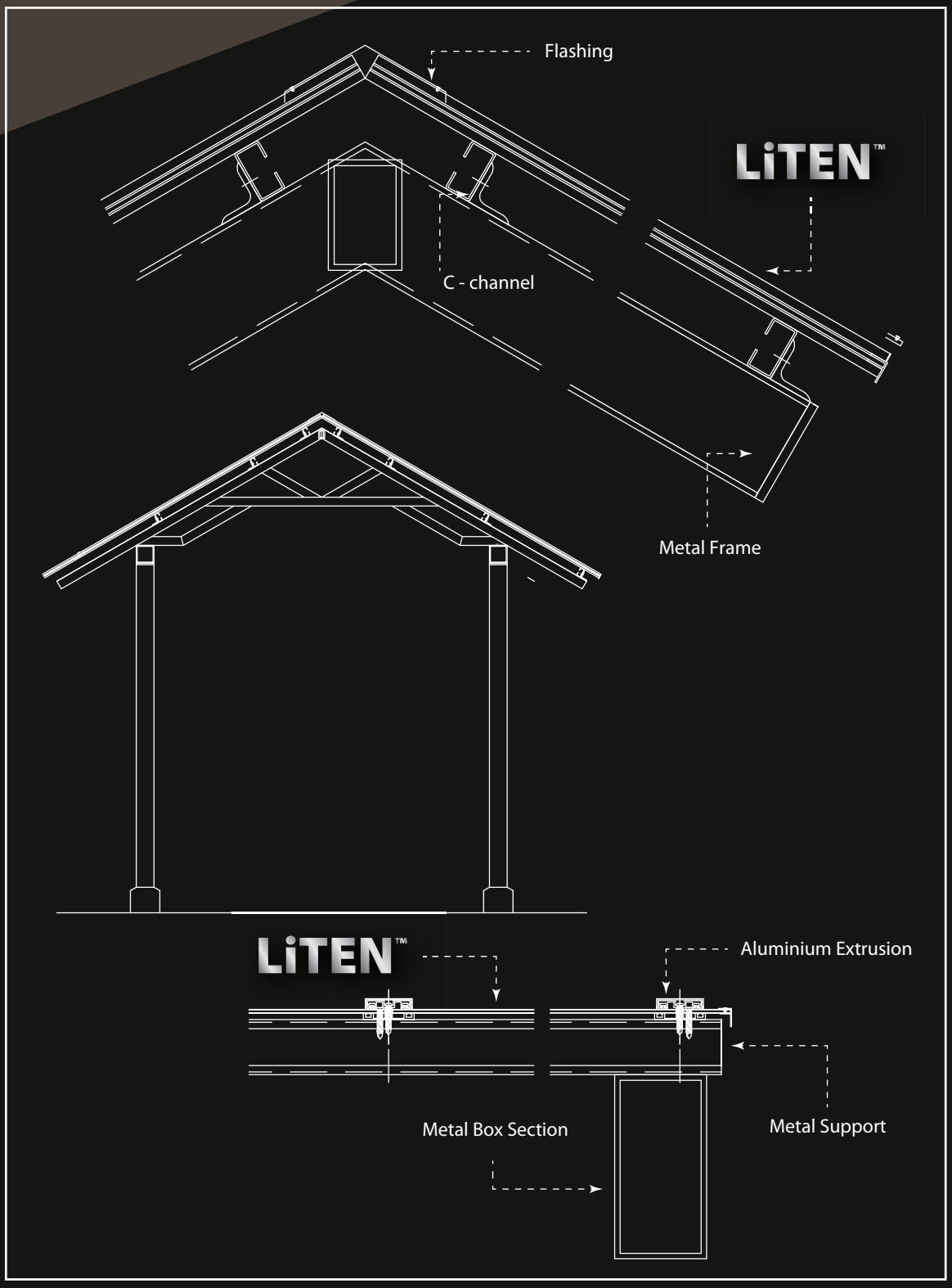
COVERED LINKWAY (PITCH ROOF)



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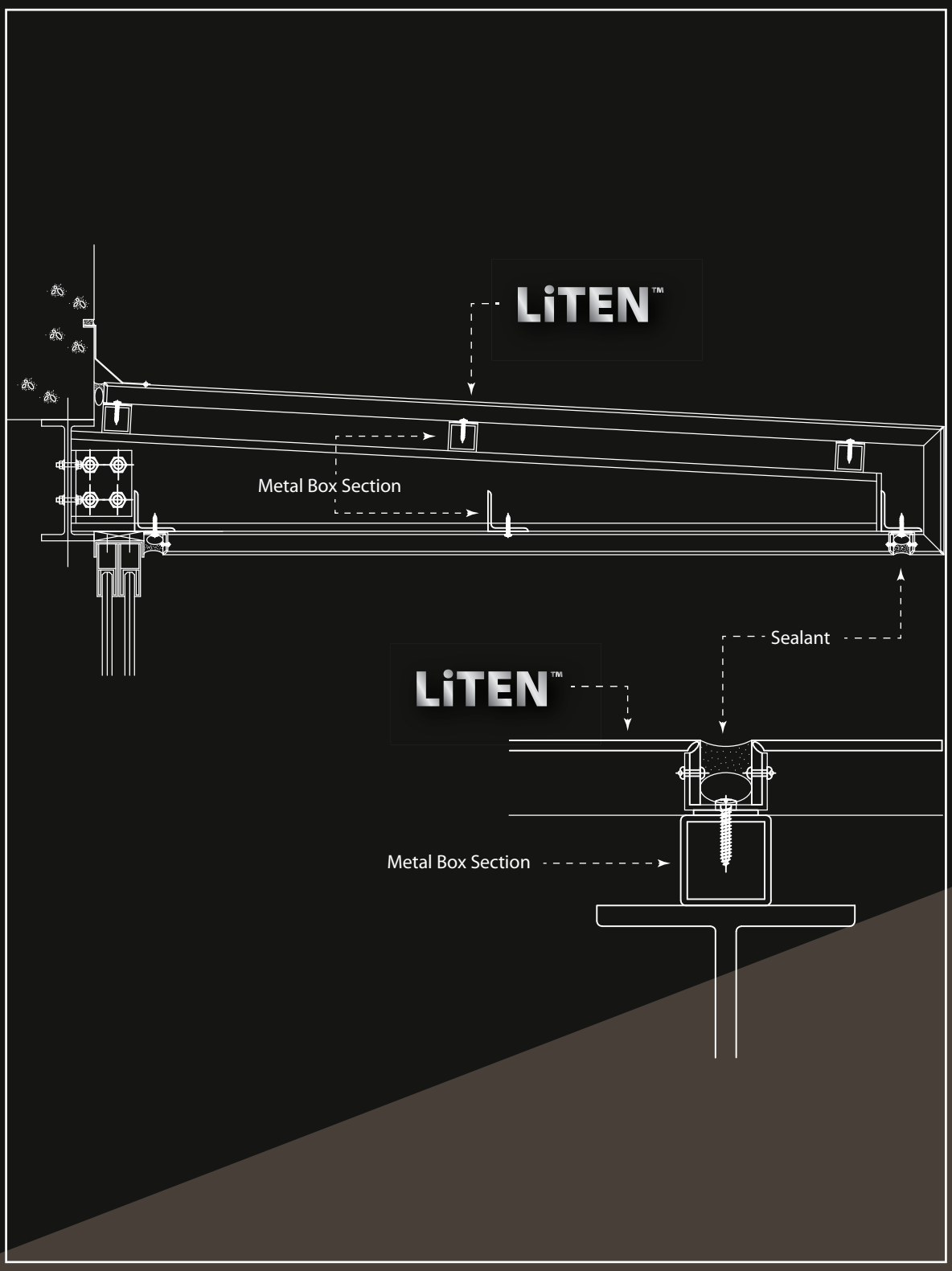
SUNSHADE OR CANOPY



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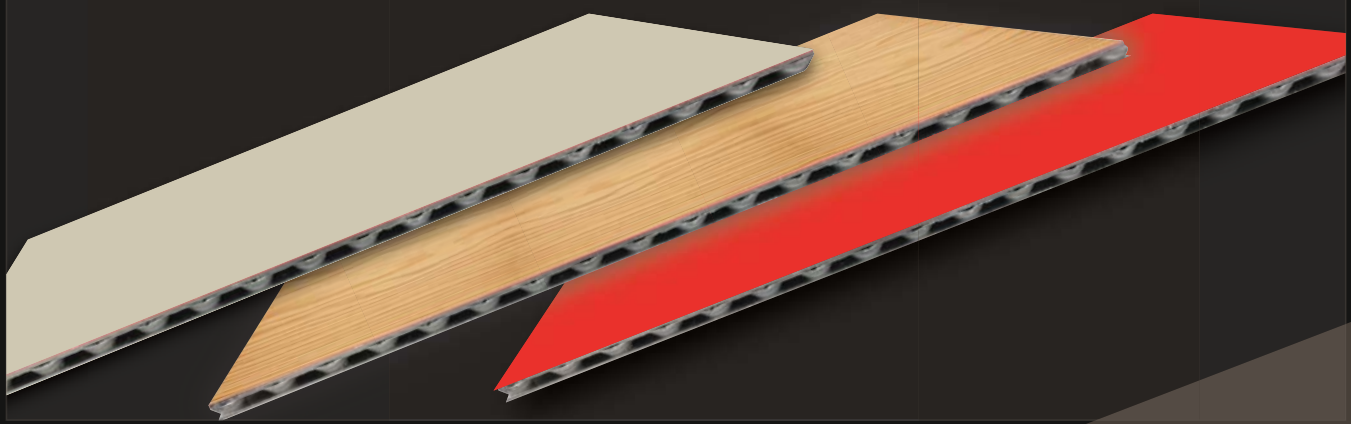
TECHNICAL SPECIFICATION ON PVDF COATING FINISHES

Test Item		Ref Standard	Test Condition	Test Result
Adhesion	Original Sample	ASTM D3359-08 Method B	Tape : 3M® 610# Space 1mm	5B
	After immersed in boiling water for 2 hours			5B No visual change appeared on the coating
Gloss		ASTM D2457-08	600 geometry	31
Film Thickness		ASTM D7091-05	-	25.8μm
Pencil Thickness		ASTM D3363-05	Scratch hardness Pencil: Mitsubishi®	2H
Resistance to MEK Reagent		GB/T 17748-2008 section 7.7.10 and client's requirement	Load: 1kg Speed: 60 cycles per min Total 200 cycles	The backing wasn't exposed
Resistance to Acid and Alkali Reagent		ASTM D1308-02 (2007)	Reagent : 5% HCl Condition: 23°C, 24h	Color difference $\Delta E^*_{ab} = 0.2$ No blistering or chalking appeared on the sample's surface
			Reagent: 5% NaOH Condition: 23°C, 24h	Color difference $\Delta E^*_{ab} = 0.3$ No blistering or chalking appeared on the sample's surface



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APPLICATION

Hospital

Airport

School

Mall

Hotel

Station

Office

Subway

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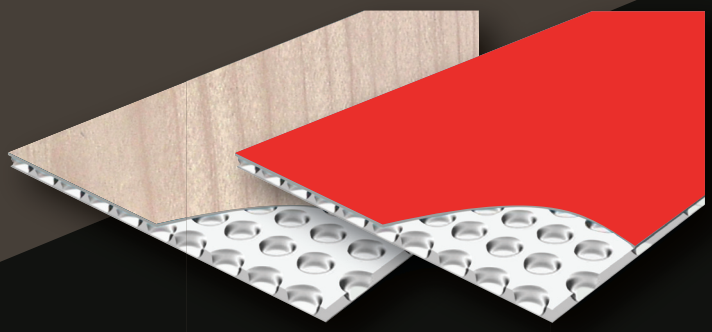

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