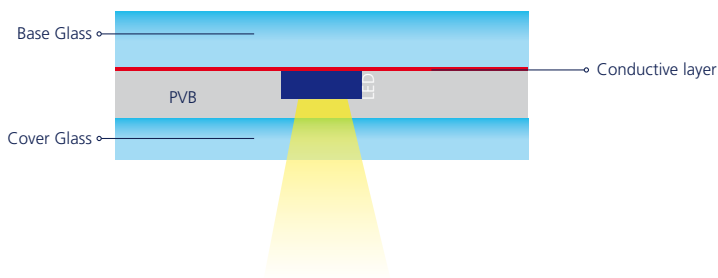# GLASSILED
INDUSTRIAL
PRODUCTS

Glassiled is a laminated glass with embedded mono-colour or RGB **light-emitting diodes** (LEDs). The LEDs are powered through a high-performance invisible conductive coating.

Glassiled is becoming a component to integrate into a range of industrial products: furniture, luminaires, doors, lifts, showers, household electrical appliances, refrigeration cabinets, and many others.

Base Glass
Conductive layer
PVB
LED
Cover Glass

Benefits:

🔹 **Elegant and simple**
Light floats on the glass without any visible wiring. LEDs are integrated into the laminated glass itself. Enjoy the full transparency and elegance of the glass.

🔹 **Create a product that stands out from the crowd**
LEDs can be dispersed on the glass in many possible ways. Industrial designers may use different LED colours and configurations to create exclusive sources of light.

🔹 **Decoration and functional lighting**
Glassiled can be used for decorative or functional purposes (lighting, signage, etc.).

🔹 **Vibration-resistant**
Glassiled has no sensitivity to vibrations and is therefore suited for applications involving shocks.

🔹 **Low thermal dissipation**
Glassiled generates a low thermal dissipation compared to other light sources.

🔹 **Technical assistance**
Glassiled is supplied with a specially adapted power supply that can be integrated into your industrial products.

🔹 **Production excellence**
A fully automated line houses all phases of the production process under one roof.

🔹 **High capacity and competitiveness**
The flexible nature of the Glassiled industrial production line means that batches of differing sizes can be produced without competitiveness being sacrificed.

DESIGN TROPHY GOLD MEDAL Batimat 2007

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GLASS TYPE AND THICKNESS		3 mm	4 mm	5 mm	6 mm	8 mm	10 mm
BASE GLASS	Planibel Clear	●	●		●		
	Matelux clear	●	●		●		
	Planibel Clearvision		●		●		
COVER GLASS	Planibel (clear & colour)	●	●	●	●	●	●
	Matelux (clear & colour)	●	●	●	●	●	●
	Planibel Clearvision		●	●	●	●	●
	Imagin Satinbel, Crepi	●	●		●		
	Imagin Screen		●				
	Stratobel				●	●	●

PVB thickness [1]	Monocolor LED : 1,5 mm PVB RGB LED : 3 mm PVB
Dimensions	MIN = 200 x 600 mm MAX = 1500 x 2700 mm
Edge finishing	Lamination of arised edge glass with PVB (tolerance between Cover and Base glass ± 1 mm) - Option 1: Lamination of grinded/polished edge glass with PVB (tolerance ± 1 mm) - Option 2: Anodised aluminium rail (U profile 30 mm wide) - Option 3: Flat grinded/polished edge glass after lamination (only for straight edge, not tempered, not cable output edge)
Glass finishing	On request : special mono or bi-component silkscreen printing

LEDs

Color	RGB or Monocouleur (cool white 6200 K, warm white 3000 K, red 640 nm, green 640 nm, blue 464 nm)

Type	Standard (Decoration - Signalling)		Extra high power (lighting)		Harsh environments	
	Monocolor	RGB	Monocolor	RGB	Monocolor	RGB
MIN Distance between LEDs	15 mm	50 mm	30 mm	50 mm	50 mm	50 mm
MIN Distance between LED and glass edge	30 mm	50 mm	30 mm	50 mm	50 mm	50 mm
MAX number of LEDs/m²	200	100	200	100	150	100
MAX different LED color / Glass	3	-	3	-	3	-
MAX number of non-overlapping circuits	3	1	3	1	3	1
Intensity / LED [2] (for 4 mm clear glass and function of LED colour)	10 to 600 mcd/LED		100 to 1700 mcd/LED		100 to 1700 mcd/LED	
Light Flux / LED [2] (for 4 mm clear glass and function of LED colour)			4 to 6 lm/LED		4 to 6 lm/LED	

ELECTRICAL PARTS

Power supply	- Start power supply: plug type adaptator - Basic power supply: On/Off - Advanced power supply : dimming and interface to external controler - On request : remote control, synchronization, special effects, animation
Electrical properties	Between 12 VDC to 160 VDC, depend on product size, number of LEDs, LED type and arrangement
Electrical contact	**LED Monocolor :** - 1 bus bar along 1 edge of the glass, 12 mm wide at 10 mm from edge - 2 bus bar along 2 edge of the glass, 2 x 6 mm wide at 10 mm from edge **LED RGB :** - 2 bus bar along 2 longest edge of the glass, 18 mm wide at 10 mm from edge Connecting cable : 1 or 2 cable out of the glass, 3 m long with polarized plug

USE

Restrictions	- All conditions applicable to AGC laminated glass (Stratobel) are valid - Internal use only - MAX ambiance operating temperature (with LEDs ON): 35 °C - MAX temperature (with LEDs OFF): same than standard AGC laminated glass

CERTIFICATION

Laminated Glass Standards Electrical Safety Standards Electromagnetic Compatibility Standards	Compliance to EN 14449 Compliance to EN 60598-2-1 Protection : Class II / IPx4 Compliance to EN 55015, EN 61000-3-2, EN 61000-3-3, EN 61547

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In all cases, the AGC technical team will review the LEDs arrangement and validate the feasibility. Other glasses or coating types, specific glass shapes, different electrical connections can also be evaluated by the technical team.

(1) As all laminated glass products Glassiled can have small air bubbles close to the edge of the glass or near electrical connectors. In specified thermal conditions for Glassiled, these bubbles are stable and can not cause delamination.

(2) The LED light intensity and flux decrease slowly over time. This is inherent to the LED technology. The life time of the current LED technology guarantees 50.000 hours at more than 50% of the initial light flux. This value is typical statistical value and large variations can exist especially but not only in function of conditions of use. The light intensity and flux generated by LEDs in one Glassiled can vary from LED to LED. A small colour variation from LED to LED is also possible and acceptable.

AGC
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