

Quality

**Batch color consistency**

Prevents checkered facades and power

**Mismatch detection**

Ensures uniform energy output in multicolored modules

**Quality inspection**

Examines beneath the graphic layer for hidden defects

**Building norms**

Some building norms that apply to BIPV applications include:

- EN 14449 | Glass in building - Laminated glass and laminated safety glass
- EN 12600 | Resistance against impact

**I-V measurement (Flash test)**

Confirms electrical performance

**Degradation & aging tests**

Assesses color stability over time

**Electroluminescence imaging (EL-test)**

Detects hidden cell defects

**IEC**

For custom-made modules*:

- IEC 61215 - Design qualification and type approval
- IEC 61730 - Module safety qualification

*certifications in process

Our solar panels come with a comprehensive Life Cycle Assessment (LCA) for sustainability and performance assurance.



Safety

Mismatch prevention software – Translates multi-colored images safely, avoiding hotspot risks.

Fire safety – The following building norms and IEC norms typically apply:

- EN 13501 | Fire test for building materials
- IEC 61730 | Module safety qualification

Optional heat soaking – Reduces the risk of spontaneous glass breakage from nickel sulfide inclusions. While not always essential, it can improve the durability and safety of PV modules in certain conditions. We offer heat soaking as an additional service and can help determine if this extra step would enhance the reliability of your solar modules based on your project's specific needs.

Glass/glass solar panels offer a impressive expected lifespan of ~ 50 years



Contact Us

Nithin Sai Renewables Pvt. Ltd.

 www.navgrun.com

 bipvproducts.navgrun.com

Corporate Office

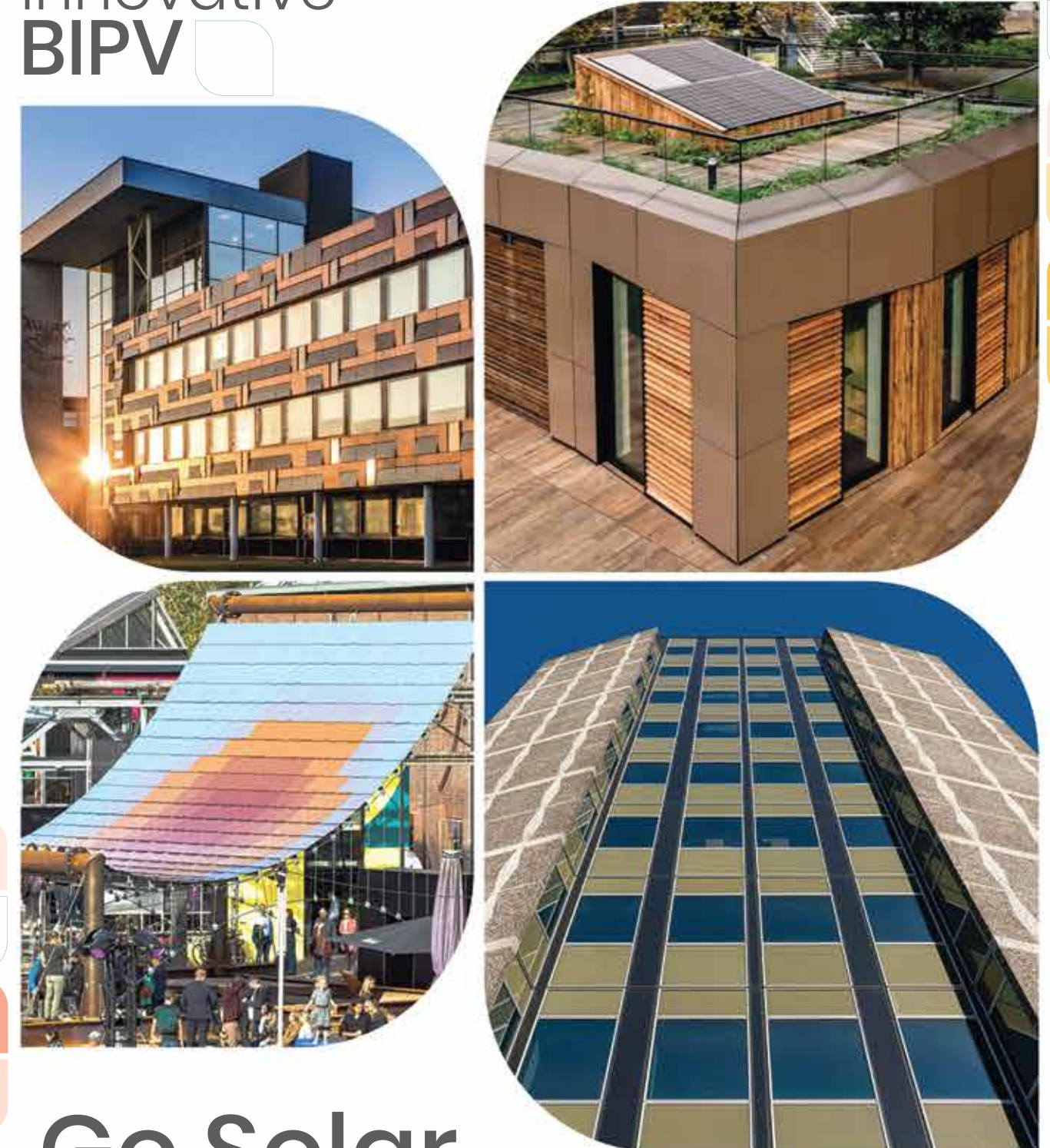
Balsa NI, 2nd Floor, Embassy Manyata Business Park, Outer Ring Road, Nagavara, Rachenahalli Village, KR Puram Hobli, Bangalore, India - 560045

Factory

Plot No. 75- A, 2nd Phase, KIADB Industrial Area, Chintamani Taluk, Mastenahalli Industrial Area, Chikkaballapur, Karnataka - 563128

Navgrun

Innovative BIPV



Go Solar With Style



ColorBlast®: Solar in Any Shade



ColorBlast® uses a precision-printed dot pattern to create the illusion of a uniform color from a distance, enabling intricate designs and patterns on solar panels.

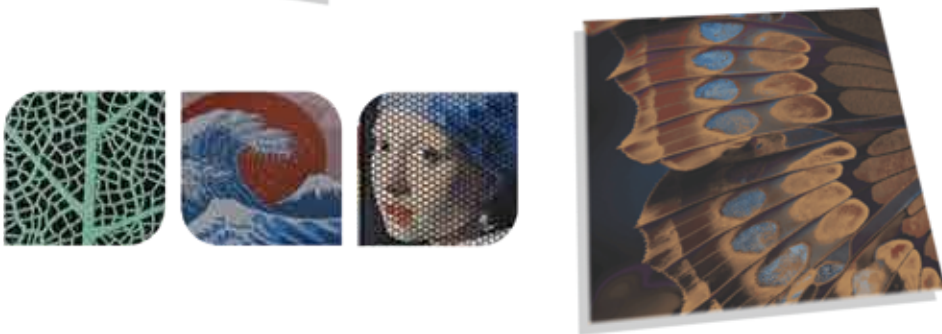
Single Color

Matte-finish with exceptional color accuracy in 1000+ Colors.



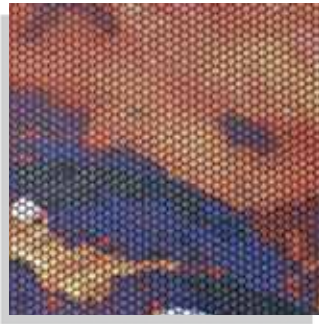
Design

Advanced pattern printing for intricate visuals without performance loss.



Solar Suite

To streamline the design and implementation of custom solar panels, we leverage Solar Suite— an intuitive platform that empowers architects, builders, and installers to seamlessly design solar panels, explore color options, and evaluate technical impacts. With Solar Suite, we can generate detailed datasheets, enabling informed decisions and streamlined project planning.



Product Comparison Chart

Product	ColorBlast Single Color	ColorBlast Design
General		
Type	Digital printing	Digital printing
Color Fastness	50 years	50 years
Power	Low - high	Low - high
Aesthetics		
Number of standard colors	1000+	1000+
Custom color matching	●	●
Aesthetic appearance	Matte ceramic flat, colored glass	Matte ceramic flat, colored glass
Multi-colored design	○	●
Color limitations	Limitation on brightness bright colors have low power	Limitation on brightness
Graphic layer positioning	Printing inside or outside glass	Printing inside or outside glass
Partial printing (for semi-transparency)	●	●
Other coloring options	Custom rear-side coloring	Custom rear-side coloring
Materials		
Patterned glass	In combination with printing inside glass	In combination with printing inside glass
Material requirements	Black background for uniform appearance	Black background for uniform appearance
Standard opacity options	Opaque	Opaque
Reflectivity / matteness	Highly matte to highly reflective	Highly matte to highly reflective
Standard junction box location	Rear	Rear

Mechanical Data

Length x Width	Min 300 x 300 mm, up to 2500 x 3500 mm
Weight	Subject to Dimensions
Junction Box	IP68, 3-6 Split Junction Box with Individual Bypass Diodes
Output Cable	Length: 300 mm / As Per Customer Requirement, Dia: 4 mm ²
Connector	MC4 Compatible
Application Class	Class A (Safety Class II)
Glass Front & Rear	High Transmittance Tempered ARC Glass, 4+2 mm up to 6+6 mm (Customisable)
Solar PV Cells	TOPCON I66B G12R N Type
Cell Encapsulant	EPE (EVA-POE)
Country of Origin	India

Our Process

Our end-to-end process guarantees a smooth journey from concept to installation.

1



Virtual Design

Working closely with our specialists to establish project objectives, aesthetic choices, and energy needs.

2



Technical Design

Leverage Solar Suite to create tailor-made solar panels that match the architectural vision and performance goals of the project.

3



Proof of Concept

Develop samples or prototypes to evaluate color fidelity, materials, and mounting techniques before full production.

4



Detailing

Finalize specifications, coordinate with third parties for mounting solutions, and conduct any required testing and certification.

5



Production

Crafting premium, custom solar panels that meet rigorous quality benchmarks.

6



Installation

We collaborate with experienced professionals to ensure the precise installation of our solar facades.

Our customized solar facades can transform your building into a sustainable energy source without compromising on design.