



bluebird SOLAR
co-powering the future

PACKAGING & UNLOADING **MANUAL**

APPLICABLE MODEL

Model Code	Cell Technology	XXX = Wattage (in steps of 5W)	MODULE SIZE (L X W X H) +/- 10 mm
BBS24P672FXXX	Poly Crystalline	320-345	1960 x 990 x 35 1980 x 1000 x 35
BBS24M672FXXX	P Type Mono Perc	400-415	1980 x 1000 x 35
BBS24M7108CXXX BBS24M7108CXXX-TB BBS24M7108CXXX-GG	P Type Mono Perc N Type TopCon	400-425 430-450	1735 x 1133 x 35
BBS24M7120CXXX- BBS24M7120CXXX-TB BBS24M7120CXXX-GG	P Type Mono Perc N Type TopCon	430-460 465-500	1920 x 1133 x 35
BBS24M7132CXXX- BBS24M7132CXXX-TB BBS24M7132CXXX-GG	P Type Mono Perc N Type TopCon	465-510 515-550	2100 x 1133 x 35
BBS24M7144CXXX- BBS24M7144CXXX-TB BBS24M7144CXXX-GG	P Type Mono Perc N Type TopCon	515-560 565-605	2278 x 1133 x 35
BBS24M8108CXXX BBS24M8108CXXX-TB BBS24M8108CXXX-GG	P Type Mono Perc N Type TopCon	495-555 560-600	1965 x 1303 x 35
BBS24M8120CXXX BBS24M8120CXXX-TB BBS24M8120CXXX-GG	P Type Mono Perc N Type TopCon	560-620 625-670	2175 x 1303 x 35
BBS24M8132CXXX BBS24M8132CXXX-TB BBS24M8132CXXX-GG	P Type Mono Perc N Type TopCon	625-680 685-735	2385 x 1303 x 35
TB- Bifacial Transparent Backsheet, GG- Bifacial Glass to Glass)			

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1. INTRODUCTION

Contents of this document have been provided for the awareness of the buyer with respect to the standard packaging practices at Bluebird Solar Private Limited. The Unloading instructions have been provided keeping in mind the best industry practices, and in no way provide guarantee against any damages or losses.

The contents of this document may change from time to time, therefore the buyer is requested to ask for the latest version of the document in case of any doubt or misinformation.




Bluebird Solar Private Limited reserves the right to update the content of this document, following which the latest version shall be applicable for all their sales there on.

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2. PACKING COMPONENTS

COMPONENT	IMAGE	QUANTITY	SIZE (mm)	SPECIFICATION
PALLET		30 pc modules packed on 1 Pallet (unless mentioned otherwise)	(Module Length + 5) x (30 x Module Frame Height) x 150 mm	Solid Wood Plank Thickness > 15mm
TOP SHEET & BOTTOM SHEET		1 pc Top Sheet 1 pc Bottom Sheet	(Module Length + 5) x (30 x Module Frame Height)	3 Ply Corrugated Sheet 550 gm/m ²
SIDE SHEET		2 pc per Pallet	(Module Length + 5) x (30 x Module Frame Height)	3 Ply Corrugated Sheet 5590 gm/m ²
ANGLE BOARD		8 pcs per pallet	4 pc x 40 x 40 x Module Width 2 pc x 100 x 50 x Module Length 2 pc x 100 x 50 x (30 x Module Frame Height)	5mm thick
STRETCH WRAP				stretchability - 200% width- 450 mm thickness 0.23 +/- 2 micron

2. PACKING COMPONENTS

CRIMPING STRIP		xx Kg	20 mm	
WOODEN PLANK		Variable as per stuffing requirement	Variable Length x 100 mm x 10 mm	
CORNER PROTECTION (Optional)		(No of Modules x 2		Duplex sheet 450 Micron 450 gm/m2

Images of above components and their specifications are indicative in nature.

Size of each component may vary depending on the packing configuration

above specifications have been calculated based on standard pallet packing of 30 modules per pallet

Above specifications are subject to change without prior notice

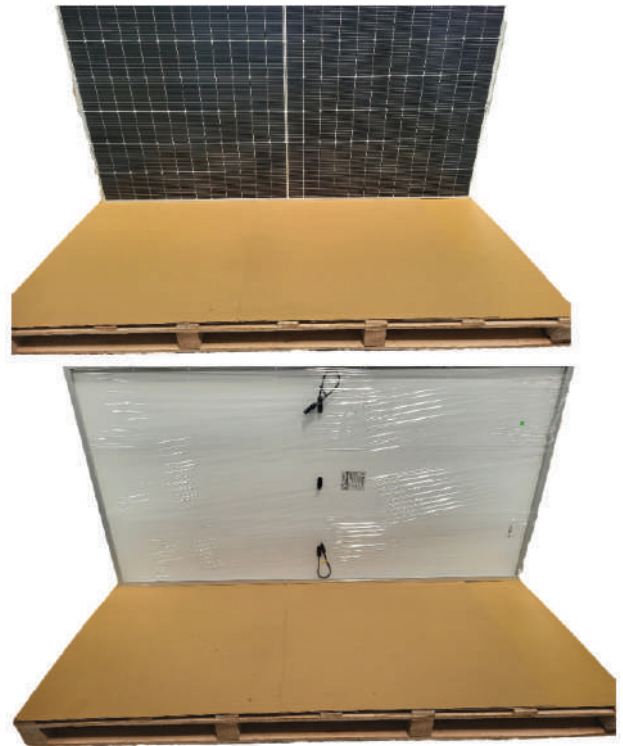
All or some of the above components may or may not be used for packing due to variable reasons.

3. DESCRIPTION OF PACKAGING PROCESS:



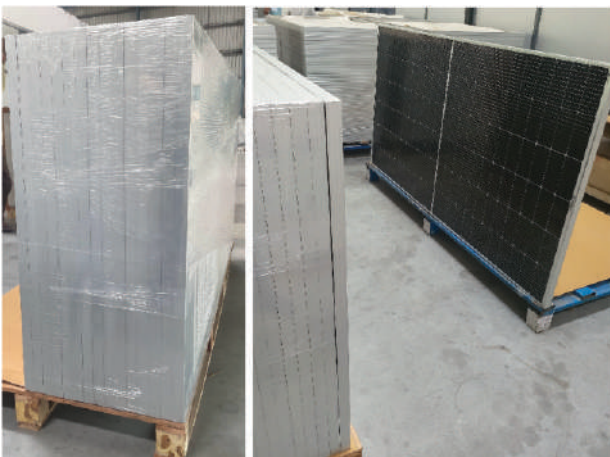
STEP 1:

The Pallet is placed on the ground, followed by Placing the Bottom Sheet.



STEP 2:

First Panel is placed facing Inside followed by Second Panel Facing the First Panel, on the pallet, followed by Stretch Wrapping the first two Panels.



STEP 3:

3 Modules are added and the Stretch Wrapping Process is



STEP 4:

Top Sheet is Placed on the top of the Packed Pallet and

3. DESCRIPTION OF PACKAGING PROCESS:

repeated

The process of adding 3 modules and Stretch Wrapping is continued till the desired (Nth) quantity of Modules have been stacked and Wrapped on the Pallet. (generally 30 pcs)
Please Note: the Nth Module is kept Facing Inside as the First Module

secure using Tape/Stretch Wrap



STEP 5:

10 pc of Angle Board L corners are taped and secured on to the pallet
4 pc covering the Vertical edges of the pallet along the Width of the 1st and Nth Module
2 Pc covering the Horizontal Edges at the Top of the Pallet along the length of the 1st and the Nth Module
2 pc covering the Horizontal edges at the Top of the Pallet Along the Frame width of all the Modules

STEP 6:

The Pallet is secured and strengthened for long distance transport, using Pet Straps as follows:
5 vertical Straps Along the length of the pallet
3 horizontal straps along the length of the pallet
2 vertical straps along with width of the Pallet

4. LOADING DETAILS

Panels are received with Pallet Packing. The Configuration of the Pallet is generally 30 Modules per Pallet, unless mentioned otherwise.



Panels are received with not more than 2 Pallets stacked Vertically.
The Vertically Stacked Pallets are always interlocked with each other using wooden planks.
The interlocked arrangement of the pallets is then interlocked with the truck body using additional wooden planks.
Two consecutive Rows of Vertically stacked pallets are further interlocked using wooden planks from the width side of the pallet.
(if space is available for doing so)

5. UNLOADING AND UNPACKING INSTRUCTIONS



STEP 1:

Remove the interlocking wooden planks (row wise), using nail puller/ remover.



Li the pallet from the length side.



Do not Li the pallet from the width side. It will pose the danger of damaging the material

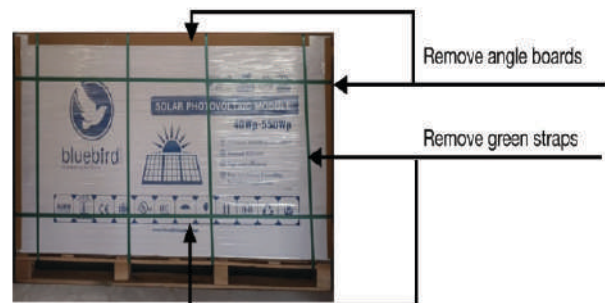
STEP 2:

Remove all pallets row wise with the help of a Crane or Forklift. Always using lifting belts from the Length side of the Pallet and fork arms from the width side of the Pallet



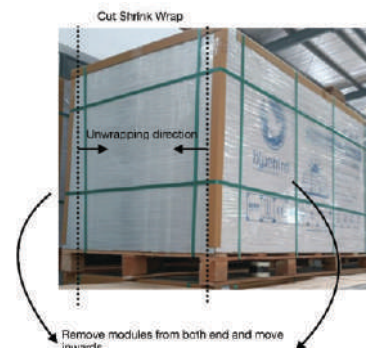
STEP 3:

Store the panels in an enclosed area. Max Two pallets should be stacked vertically. Hand Trolleys or forklifts can be used for the movement of the pallets on ground. Hand trolley to be used along the length of the Pallet, whereas forklift can be used along the length and width depending on the size of the Lifting arms.



STEP 4:

Cut all the Green Pet Straps. Remove all the L Angle Production Boards The Stretch Wrapping of the modules will keep the Pallet assembly intact.



STEP 5:

Cut the shrink wrap at both extremities of the pallet and remove modules from each side of the pallet, moving inwards, with the modules being fed directly to the installation point.

5. UNLOADING AND UNPACKING INSTRUCTIONS



STEP 6:

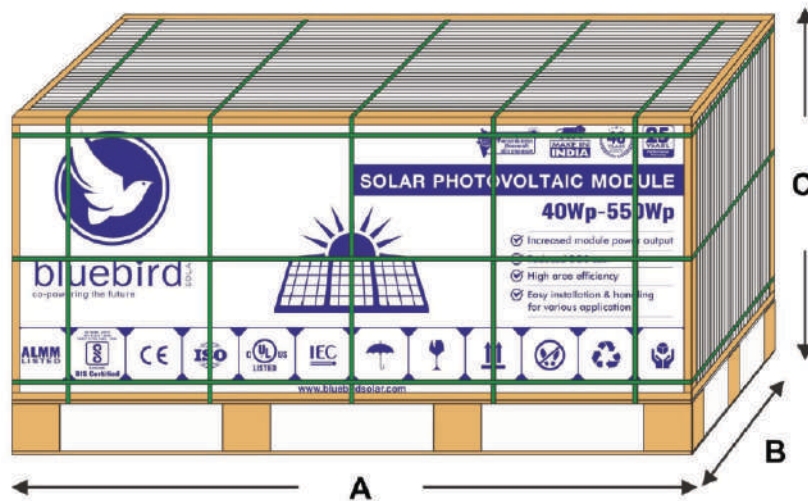
In case modules are unpacked from the pallet, but not installed on the structure, only store the panels horizontally facing downwards and cover the backside of the top most module, till installation, unless proper packing material is available for vertical on a pallet packaging and storage.

ADDITIONAL INSTRUCTIONS

1. Ensure stable transportation and prevent any damage to the packaging structure when modules are handled with forklifts/ Cranes/ Hand Pallets.
2. Verify that Pallet packaging is not damaged before unloading & unpacking,
3. Do Not Carry out Unloading and Unpacking under rainy conditions, when unpacking outdoors.
4. In case of strong winds, it is recommended to pause the unloading and unpacking process to avoid any damage.
5. Surface where the pallets are unpacked should be even to avoid toppling of the modules.
6. Wear protective gloves during unpacking to avoid injury in form of scratches, cuts etc, and to prevent fingerprint stain on the glass.
7. Before unpacking, please check the product type, power bins, serial number and relevant suggestions on the Packing label of the Pallet.
8. Modules should always be handled/ carried by 2 people. Single person is prohibited to lift and carry modules, to prevent slipping, hiring other modules, causing scratches, cracks, or deformation on the modules.
9. Do not lift modules by their cables or junction box.
10. Do not lean the module on any unstable objects, such as poles or mounting columns.
11. Do not support the back of the modules directly with materials such as wooden strips.

6. PALLET PACKING DIMENSIONS:

(30 MODULES STANDARD PACKING WITH 35MM FRAME HEIGHT)




Model Code	Cell Technology	Wa age (in steps of 5W)	MODULE SIZE (L X W X H) +/- 10 mm	A (mm) +/-5mm	B (mm) +/-5mm	C (mm) +/-5mm
BBS24P672FXXX	Poly Crystalline	320-345	1960 x 990 x 35 1980 x 1000 x 35	1965 1985	1080 1080	1150 1150
BBS24M672FXXX	Mono Crystalline	400-415	1980 x 1000 x 35	1985	1080	1150
BBS24M7108CXXX BBS24M7108CXXX-TB BBS24M7108CXXX-GG	P Type Mono Perc N Type TopCon	400-425 430-450	1735 x 1133 x 35	1740	1080	1280
BBS24M7120CXXX- BBS24M7120CXXX-TB BBS24M7120CXXX-GG	P Type Mono Perc N Type TopCon	430-460 465-500	1920 x 1133 x 35	1925	1080	1280
BBS24M7132CXXX- BBS24M7132CXXX-TB BBS24M7132CXXX-GG	P Type Mono Perc N Type TopCon	465-510 515-550	2100 x 1133 x 35	2105	1080	1280
BBS24M7144CXXX- BBS24M7144CXXX-TB BBS24M7144CXXX-GG	P Type Mono Perc N Type TopCon	515-560 565-605	2278 x 1133 x 35	2283	1080	1280
BBS24M8108CXXX BBS24M8108CXXX-TB BBS24M8108CXXX-GG	P Type Mono Perc N Type TopCon	495-555 560-600	1965 x 1303 x 35	1970	1080	1450
BBS24M8120CXXX BBS24M8120CXXX-TB BBS24M8120CXXX-GG	P Type Mono Perc N Type TopCon	560-620 625-670	2175 x 1303 x 35	2180	1080	1450
BBS24M8132CXXX BBS24M8132CXXX-TB BBS24M8132CXXX-GG	P Type Mono Perc N Type TopCon	625-680 685-735	2385 x 1303 x 35	2390	1080	1450

7. PACKAGING ARTWORK



8. PACKING LIST (SAMPLE)

 bluebird SOLAR co-powering the future		Bluebird Solar Private Limited Plot No.5 Ecotech-II, Udyog Vihar Greater Noida, U.P.-201306 Incase of any query/ concerns kindly email: info@bluebirdsolar.in			
Module Type		Power Output		Quantity	
Module Weight		Net Weight		Gross Weight	
Pallet Dimension		Pallet Number		Barcode	
Cell Type		Frame Color	SILVER	System Voltage	1500 VDC
MODULE SERIAL NUMBERS					
REMARKS: Modules manufactured for the U.P. SWSM-JJM Project. Not for Sale in the Retail Market.					



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Works

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