

The background of the cover is a dark, high-angle photograph of several solar panels. The panels are arranged in a grid pattern, with some panels in the foreground and others receding into the distance. The lighting is dramatic, highlighting the texture of the panels and the grid lines.

# **PV Modules Logistics & Unloading & Unpacking Manual**

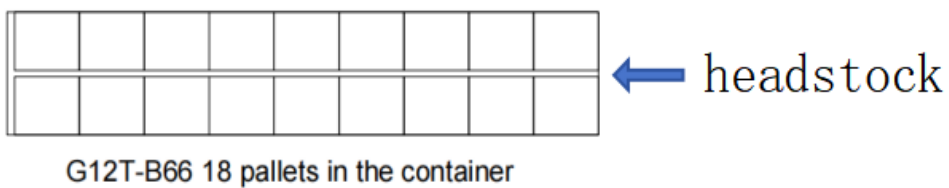
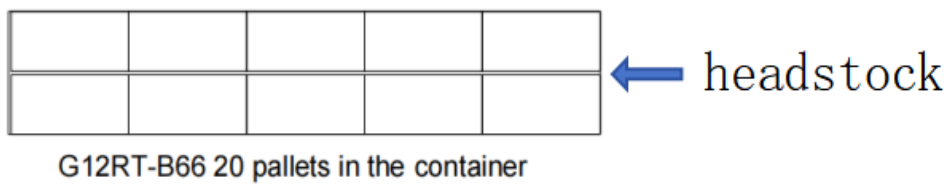
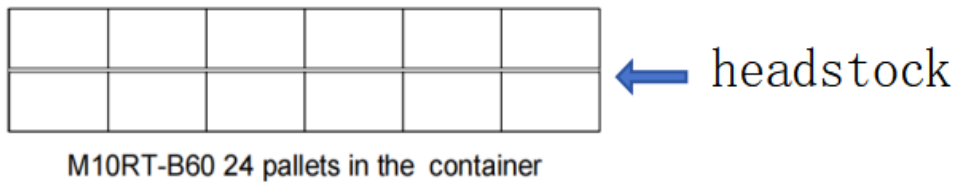
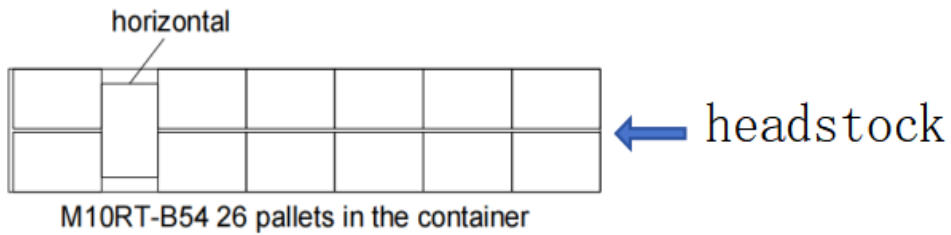
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## I Pallet Specifications & Packaging Details

Module Type	Module Dimension(mm)	Glass Thickness (mm)	Module Weight (Kg)	Pallet Dimension (mm)	Pcs/ Pallet	Pallet Weight- Packaging included(Kg)	Module/Pallet per 40HQ Container
M10RT-B54	1762*1134*30	2.0+2.0	24.5	1800*1140*1250	36	920	936pcs-26pallet
M10RT-B60	1950*1134*30	2.0+2.0	26.8	2000*1140*1250	36	1016	864pcs-24pallet
G12RT-B66	2382*1134*30	2.0+2.0	32.3	2396*1140*1250	36	1205	720pcs-20pallet
G12T-B66	2384*1303*33	2.0+2.0	37.7	1320*1115*2502	33	1300	594pcs-18pallet



## II Site Unloading Instructions

### 1. Arrival Inspection on package

After the goods arrived, please check the packaging of goods on the truck carefully before unloading and unpacking the modules. The modules should be in good condition as shown in below pictures.

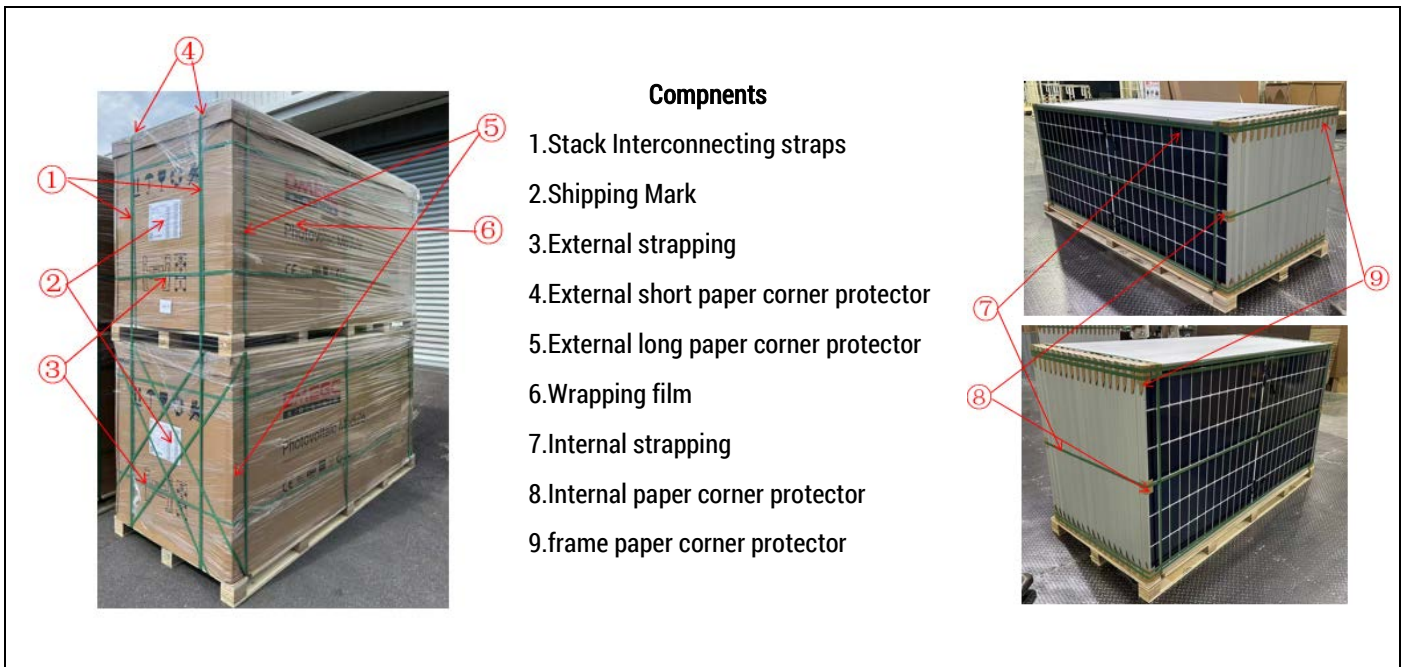


Image 1: Modules in the container/on the truck



Image 2: Modules in stack





**Compnents**

- 1.Stack Interconnecting straps
- 2.Shipping Mark
- 3.External strapping
- 4.External short paper corner protector
- 5.External long paper corner protector
- 6.Wrapping film
- 7.Internal strapping
- 8.Internal paper corner protector
- 9.frame paper corner protector

Image 3: Packaging details of modules.



<b>PV Module</b>		<b>DMEGC</b> S O L A R	
MODEL: DM450M10RT-B54HSW		1	19
POWER:450		2	20
QTY.:36pcs	G.W.:920kg	3	21
GRADE:A		4	22
50103654		5	23
1500V		6	24
Hoarding With air holes		7	25
Connector: EVO2A		8	26
Cable Length: +1200mm/-1200mm		9	27
		10	28
		11	29
		12	30
		13	31
		14	32
		15	33
		16	34
		17	35
		18	36
 Pallet No.  DMAAAD721180822063			

Image 4: Shipping Mark

Shipping mark item details:

Example Item:	Definition
Model:DM450RT-B54HSW	Module Type
Power:450	Module Power
QTY:36pcs	Module quantity
G.W.:920kg	Module single pallet gross weight
Grade:A	Module quality level
50103654	Module product part number
1500V	Module system voltage
Hoarding	Packaging method
With air holes	Breathable holes (not showed in packaging without breathable holes)
Connector	Connector type
Cable length: +1200mm/-1200mm	Cable length from the junction box

If no damage was found on the package, please sign CMR as acceptance.

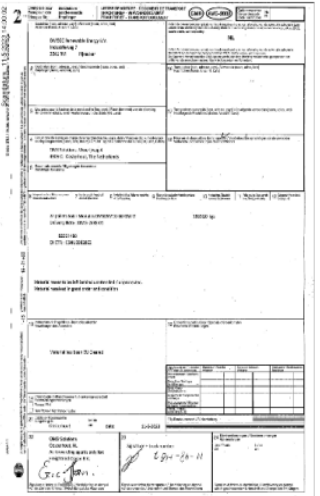
If damage was found on the package, please record it on CMR including container no. / truck no. and pallet no, then follow the steps below to open the package as soon as possible and collect corresponding claim data.

Step 1: Take the pic of damaged package on the truck with clear pallet no.

Step 2: Take video or photograph of the whole unpacking process. Please do not discard the packaging of the goods unless it is confirmed the goods are intact.

Step 3: Submit all necessary claim data including but not limited to pics of damaged package, pics of abnormality, pics of defective serial number located on the rear side or on the frame or under laminate, pics of defective module and copy of CMR to DMEGC.

No.	Data needed
1	Pics of damaged package
2	Pics of defective serial number located on the rear side or on the frame or under laminate
3	Pics of defective module
4	Copy of CMR

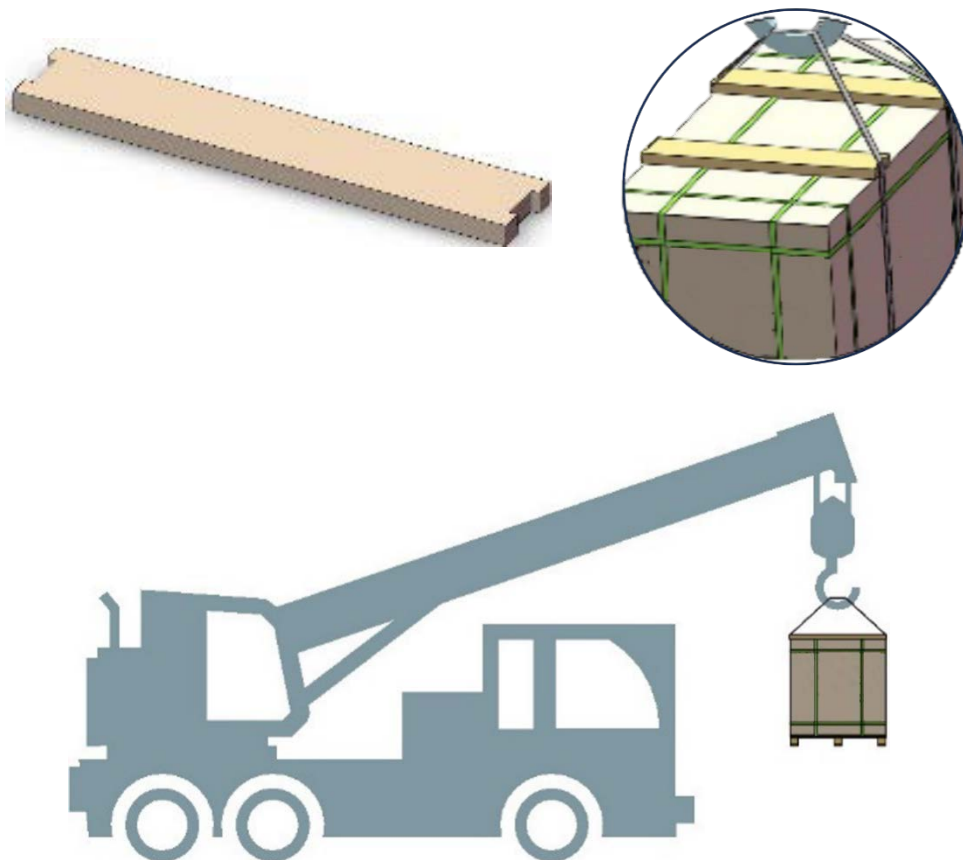
			
<p>Pic of abnormality</p>	<p>Pic of damaged package</p>	<p>Pic of defective module</p>	<p>Copy of CMR</p>
			
<p>Pics of defective serial number located on the rear side or on the frame or under laminate</p>			

Step 4: Please report final loss situation after visual inspection to DMEGC as soon as possible including, but not limited, to the quantity of damaged panels in the damaged pallets, the serial numbers of damaged modules, etc. If 3rd party test is required to be involved, please inform us in advance.

If you cannot open the box for inspection immediately, please report it to us with CMR, where abnormality was marked with container no. / truck no. and pallet no, pics of damaged package on the truck with clear pallet no. etc. Also let us know when you could give us the inspection result. We will first record the claim, and then follow up the case.

## 2. Unloading by Crane

When unloading by crane, please use the special equipment needed to guarantee the safety of the procedure. Before hoisting, choose a hoisting tool with sufficient load-bearing capacity according to the weight and size of the module packaging, keep the center of gravity of the module stable throughout the hoisting, use solid wood to assist in hoisting, and fix the lifting belt in the solid wood support frame buckle.



Do not hoist the modules and packaging under weather conditions of wind level greater than 6, heavy rain or heavy snow.

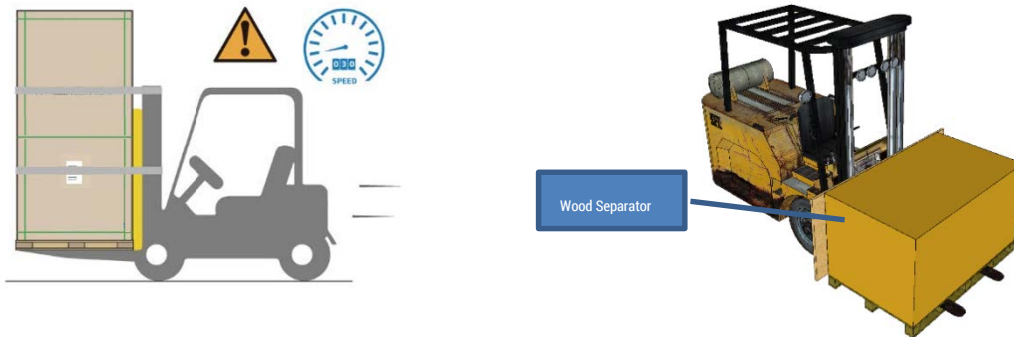


### 3. Unloading by Forklift

Generally, the modules will be delivered either with vertical or horizontal packaging. It is fixed with external packing tape and prohibited from changing the direction.

Forklifts are usually used to transport the modules in pallets, and sufficient safety distance should be reserved during forklift operation. Do not stand or pass by any sides of the forklift.

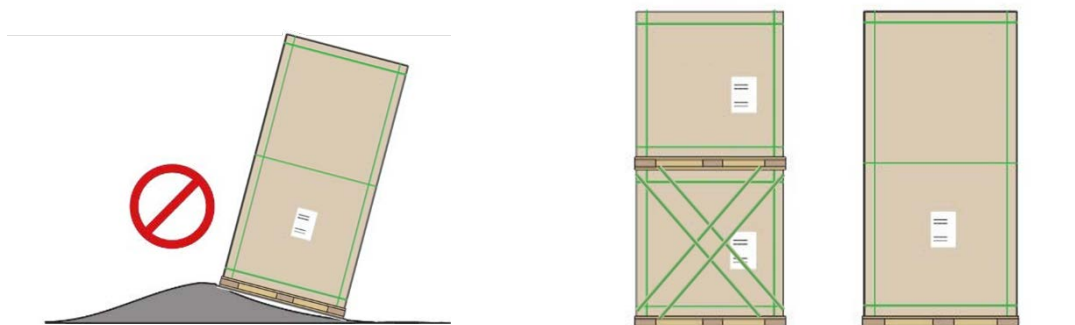
Please place a wood separator between the forklift and modules to prevent forklift components from damaging the package of modules. The wood separator shall be wider than the module package.



Pay attention to controlling the moving speed during the traveling and unloading process of the forklift, in order to prevent the modules from falling over when turning or stopping sharply, causing damage to products or people.

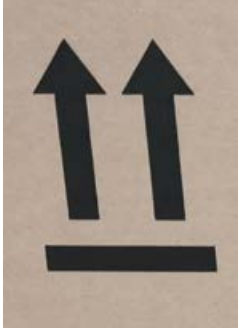





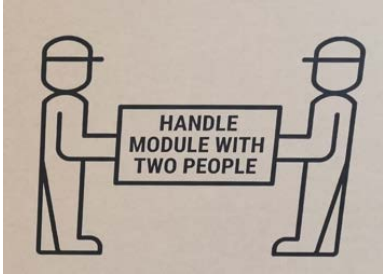
Ensure the modules and packaging are placed on the flat ground without sharp and protruding debris to avoid tipping.

Under any circumstances, do not pile more than two layers of long-side horizontal packaging and short-side vertical packaging, and the piling pattern is as follows.



### III Warehousing instructions

#### Instructions on the Package

				
Up	Keep Dry	Fragile	Recycle	No Treading
				
Do not exceed the indicated maximum layer limit on the packaging carton when piling modules up (n=2 for a maximum of two layers)		One module should be handled by 2 persons at the same time		

#### Do

- Keep the storage environment dry and ventilate, avoiding direct sunlight and chemical corrosive gases in the environment.
- Ensure that all electrical contact points and the operating environment are clean and dry. In case of fire, do not use water to extinguish the fire.
- Place the module package on the ground cleared of debris.
- Always leave modules supported or secured.

#### Don't

- Do not stand, sit, lie down, walk, or jump directly on the package or the modules.
- Do not remove any parts or the nameplate of the module.
- Do not focus sunlight onto modules using mirrors or magnifying glasses.
- Do not carry the module by grasping the junction box or wire by hand, otherwise, the broken insulation of the junction box or cable may lead to electric leakage or electric shock.
- Do not touch the module with any sharp objects, for it may affect the safety of the modules. Do not use the module if you find scratches on the surface glass or back sheet of the module.
- Do not apply direct pressure to the front glass or back sheet of the module, including stacking heavy objects or impact.
- Do not touch the surface of the coated glass with bare hands. Wipe the module surface if it is found to be dirty.
- Do not leave the module backsheet directly in contact with the supporting structure underneath when handling or installing the module.
- Do not expose the modules and its electrical contacts to any unauthorized chemical substance (e.g., oil, lubricant, pesticide, etc.).
- Do not change the wiring of bypass diodes.

## IV Unpacking Instructions

When unpacking outdoors, do not work under rainy conditions. If the site is windy, please pay special attention to safety issues. Especially in windy conditions, it is recommended not to carry the modules and to secure the unpacked modules properly.

Before unpacking, please check the product model number, classification information, serial number and other precautions on the outer box mark (A4 paper) and read the relevant operation instructions carefully before operation. After dismantling the outer box, please check whether the barcode of the modules inside is consistent with the mark.

Please keep the box horizontally and stable on the working floor to avoid tipping.

When removing the internal strap packing belt, please protect the modules in advance to prevent tipping.

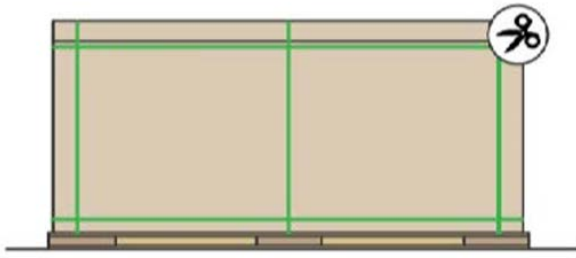
Two people are required to lift each module. When lifting the module, do not pull the junction box and wires.

Do not stand on the pallet when unpacking, and the modules should be carried from both sides of the pallet. Please wear protective gloves when unpacking to avoid scratching your hands and leaving fingerprints on the glass.

If the operation is not in accordance with the requirements or the operation is not skilled, a small amount of corner protection will fall off, which is a normal phenomenon. The corner protection serves to protect the modules from external damage during transportation and does not affect the reliability of the modules.

If you do not take out all the modules after unpacking, please place the remaining modules horizontally (the glass side of the lowest module facing up, the glass side of the rest of the modules facing down) and adopt simple packaging to prevent damage from tipping. The maximum piling number of modules per pallet is 15.

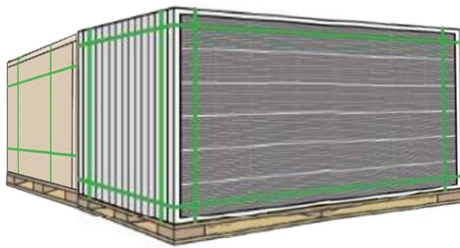
**Method A:**



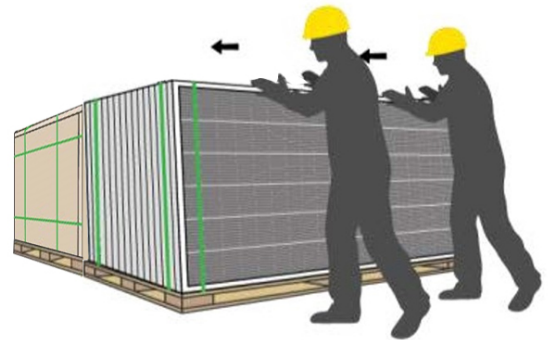
1. Remove the wrapping film and packing belts.



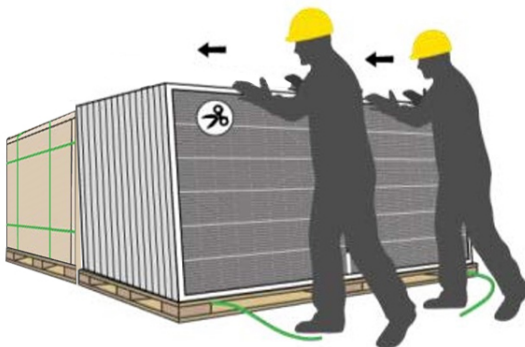
2. Remove the top cover and the cartons.



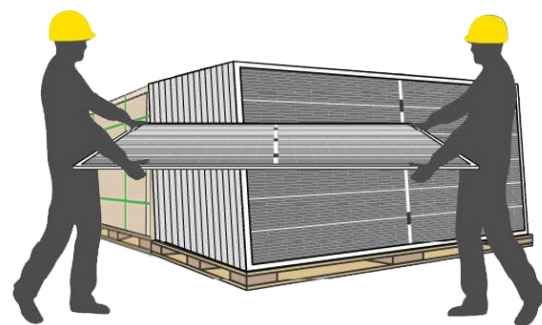
3. Place the stand supporter that is higher or wider than the module in order to avoid hitting and damaging the glass. If there is no stand supporter on site, another carton can be used instead.



4. Cut off all the horizontal packing belts; when there are 1 or 2 vertical packing belts remaining, push the module gently to tilt toward the stand supporter.



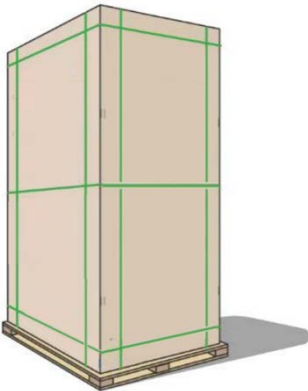
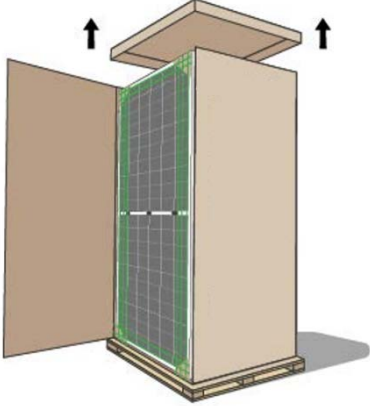
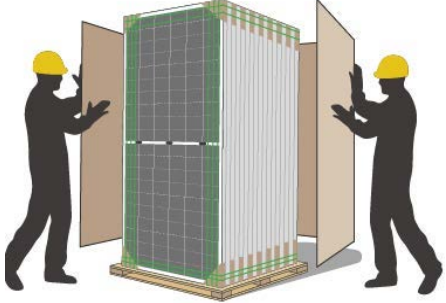

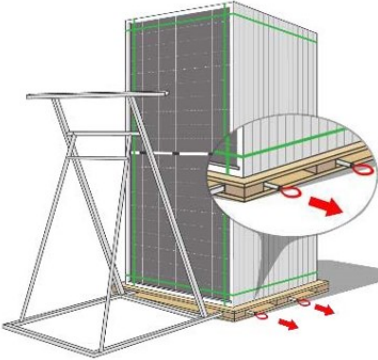




5. Cut off the remaining packing belts.



6. Take out the modules in order.



**Method B (for module type G12T-B66):**

		
<p>1. Remove the wrapping film and packing belts.</p>	<p>2. Remove the top cover and sealing tape.</p>	<p>3. Remove the carton box.</p>
		
<p>4. Place the stand supporter from the glass or backsheet side.</p>	<p>5. Pull out the 4 levers from both sides of the pallet.</p>	<p>6. Cut off all the horizontal packing belts.</p>
		
<p>7. When there are 1-2 vertical packing belts remaining, push the module gently to tilt toward the stand supporter.</p>	<p>8. Cut off the remaining packing belts so that the modules rest on the stand supporter.</p>	<p>9. Take out the modules in order.</p>

## V Packing Instructions



1. Prepare a pallet and back cardboard next to a fixed object (another pallet in this case)



2. Put module corner protectors on



3. Place the remaining module



4. Banding inside modules by 2 vertical strappings after.



5. Put pallet carton sleeve on

## VI Transportation Instructions

### 1. Loading by forklift

How to load/upload and stack:

- Highly request to choose electric forklift truck and take gross weight and long side dimension of pallet into account.
- For pallets with 2320mm length a truck with min. 1.8m length of fork to load / unload a pallet along its long or short fork access shall be used.
- For pallets with 2000mm length, a truck with min. 1.2m length of fork to load / unload a pallet along its long or short fork access shall be used.



- No higher than 2 layers of stacking in transportation or storage
- A 40HC container load fits in with one container truck.
- Permitted stacking layers can be found on each package, strictly follow instruction

## VII Contact information

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