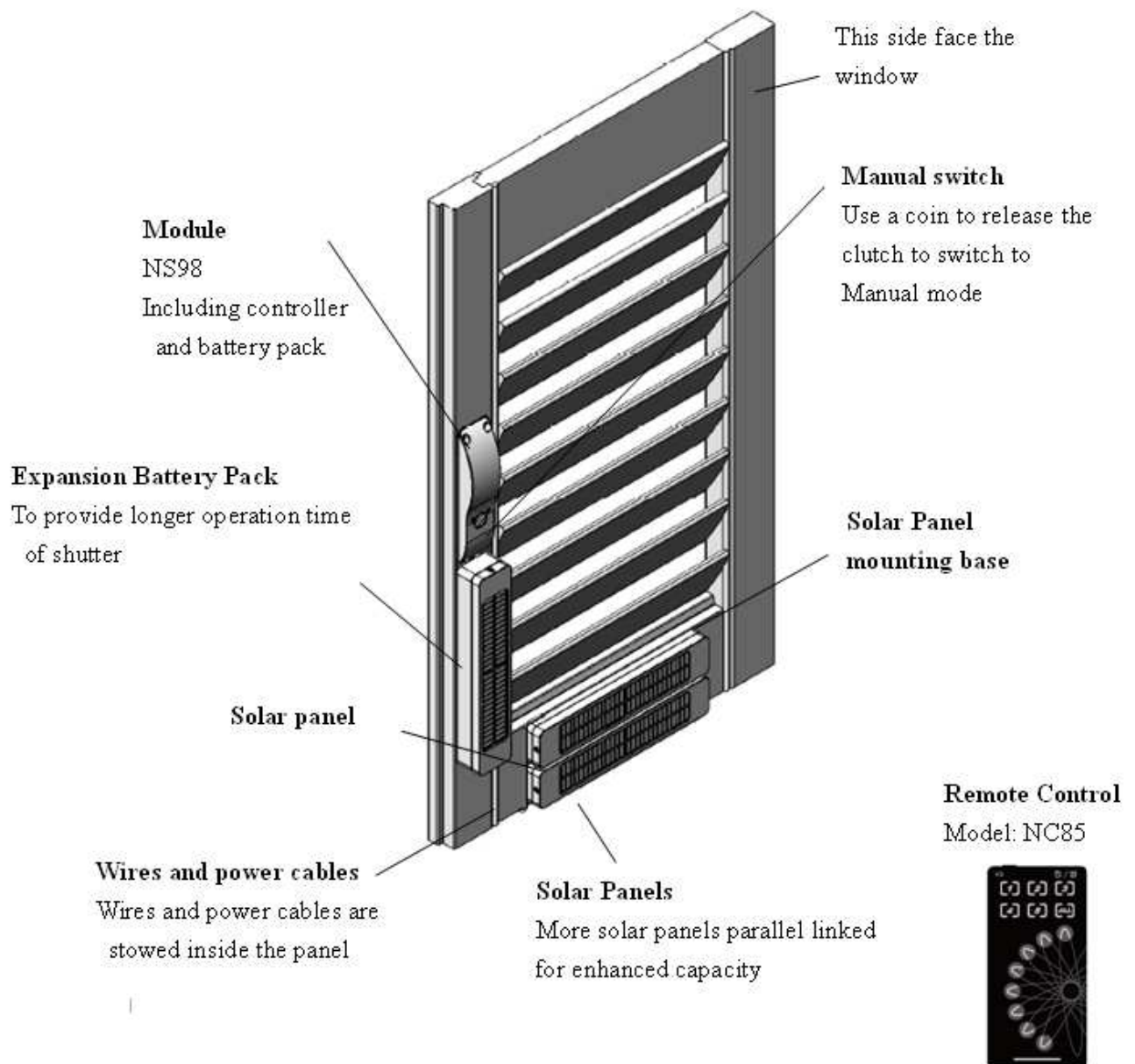


## New RF

The new RF has many exciting features & benefits.

- No need to plug-in, no cords, no hardwiring
- Tilt multiple panels in sync or individually
- Includes Easy Tilt system, a completely tilt-rod-free solution for a more streamlined view and improved energy efficiency
- Larger solar panels on solar modules absorb more energy than ever before
- Ergonomic remote includes 8 preset angles and can control unlimited number of shutters in range
- Utilizes RF signal, not traditional infrared: for precise reception, range up to 65 ft., no sensor holes, and no need to point remote directly at receiver
- Remote is equipped with a timer, allowing you to use your own computer from anywhere at any time with our proprietary web interface
- Whisper quiet, gear-driven system
- RF wires are concealed inside panel, completely hidden from view
- Expansion battery packs can be installed as add-on for longer periods between recharges


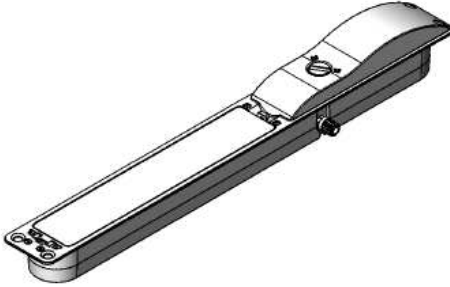
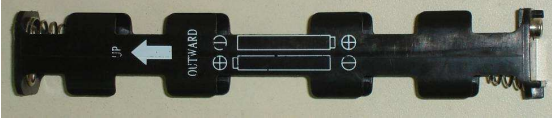
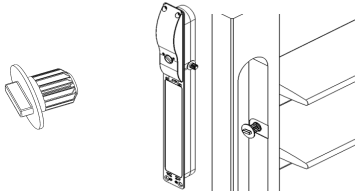
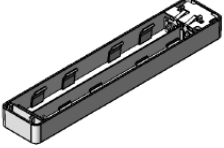
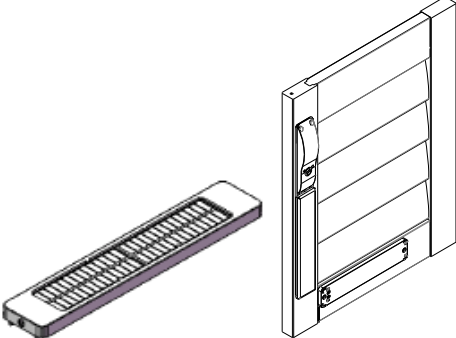
## Parts and Names:

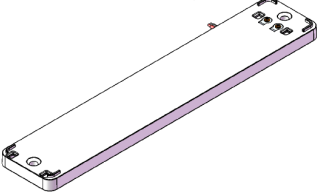

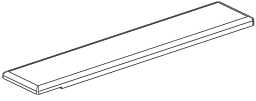
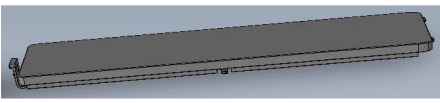



**Specifications:**

<b>New RF</b>					
Material	All Except ABS				
Shutter Type	All types except bi-fold double hung or panel with gap at bottom over 0.1" (no support on bottom)				
Specialty Shutter Shape	All shapes except shapes without a vertical stile in the middle (for example, eyebrow, elongated eyebrow, half-round sunburst without horizontal louvers)				
Tilt System	EasyTilt only, the tilting system will not split unless specified				
Stile Width	57mm stile only Center Stile is not available				
Louver	63mm, 89mm, 114mm Elliptical louver				
Panel Size Limit	<table border="1" style="width: 100%;"> <tr> <td style="width: 30%;">Min. Panel Height (with lined up Motors)</td> <td>Min. Panel Height <b>(With Staggered motors, which is default for 180 degree bifold track shutters; and optional for other types of shutters)</b></td> </tr> <tr> <td style="text-align: center;">457mm</td> <td>Louver space not less than 660mm, so at least 13 louvers for 63mm louver; 9 louvers for 89mm louver; 7 louvers for 114mm louver.</td> </tr> </table>	Min. Panel Height (with lined up Motors)	Min. Panel Height <b>(With Staggered motors, which is default for 180 degree bifold track shutters; and optional for other types of shutters)</b>	457mm	Louver space not less than 660mm, so at least 13 louvers for 63mm louver; 9 louvers for 89mm louver; 7 louvers for 114mm louver.
	Min. Panel Height (with lined up Motors)	Min. Panel Height <b>(With Staggered motors, which is default for 180 degree bifold track shutters; and optional for other types of shutters)</b>			
457mm	Louver space not less than 660mm, so at least 13 louvers for 63mm louver; 9 louvers for 89mm louver; 7 louvers for 114mm louver.				
Max. Panel Height without divider rail: 1981mm for wood and MDF+ and 1879mm for MDF Min. Panel Width Limit: 220mm; 313mm if solar panel is to attach to rail; Max Width Limit: same as regular non-motorized shutters					
Module Type	NS98 Module				
Remote Control	*Radio frequency *6 channels *8 pre-set angles *Built-in timer function *When ordering, customer needs to specify quantity *Press the "Activation Button" to wake up				
Ring Pull	Ring Pull will be supplied as default. Please specify ring pull position on the order form. (Refer to Spec "Bolt & Ring Pull" )				
Options	Solar Panel/Expansion battery pack=> surcharge option; customer can choose to add as many Solar Panels/Expansion Battery Packs as long as space allows				

**Components:**

<p>Items</p> <p>Remote Control Model : NC85</p> <p>Radio Frequency; Battery: 2×AAA.</p> <p>Dimensions : 122 x 62 x 16 mm</p> <p>Distance of transmission (control): 20 meters indoor, 40 meters outdoor</p>	
<p>Module</p> <p>Model : NS98</p> <p>Colors Available: White; Coffee; Caramel</p> <p>Dimensions : 330.5 x 37.5 x 40 mm</p> <p>One for each louver section, 6×AA normal batteries or rechargeable batteries are required. Either alkaline or lithium batteries may be used.</p>	
<p>Battery cartridge</p> <p>Make sure the batteries are fit into the cartridge in correct direction, and when fit the cartridge into the module, also in right direction (follow the arrow).</p>	
<p>Slotted Point Driver</p> <p>One for each louver section.</p> <p>Connect the Easy Tilt and the Module; when fit the slotted point driver into the stile, make sure the angle is the same as that of the louvers.</p>	
<p>Battery Expansion Pack</p> <p>Colors Available: White; Coffee; Caramel</p> <p>Dimensions: 195 x 37 x 21.6 mm</p>	
<p>Solar panel</p> <p>Colors Available: White; Coffee; Caramel</p> <p>Dimensions: 195 x 37 x 13,5 mm</p> <p>Position:</p> <p>A. attached to the module itself (Default)</p> <p>B. attached to rail (Optional with surcharge)—For panels with modules below the mid rail or panels without mid rail, the solar panel will be attached to the bottom rail; For panels with modules above mid rail, the solar panel will be attached to the top rail.</p>	

<p>Mounting base (for Solar panel )</p> <p>Colors Available: White; Coffee; Caramel</p> <p>Dimensions: 195 x 37 x 8,5 mm</p> <p>With Power cable</p> <p>Colors: Coffee; White</p>	
<p>USB Cable</p> <p>Color: Black</p> <p>Connect the computer and the remote control to set up timer function.</p>	
<p>Wood Cover</p>	
<p>Battery Cover of the Module</p>	
<p>Wood Cover Assembly (With Battery Cover of the Module pre-attached with 4 screws, the color of the wood cover will match that of the shutter color)</p>	

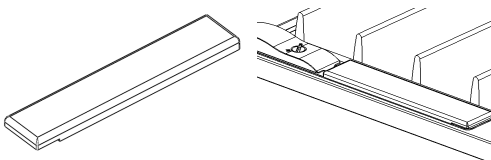
**Color Coordinate Chart:**

NO.	Color ID	Color Name	Module/Battery Expansion Pack/Solar Panel Color
1	001	Pure White	White
2	003	Silk White	White
3	004	Bright White	White
4	006	Pearl	White
5	007	Ivory Lace	White
6	008	Marshmallow	White
7	009	Creamy	White
8	011	Cameo	White
9	012	Crisp Linen	White
10	013	Bisque	White
11	016	Butter	White
12	019	String	White
13	030	Moondust	White
14	032	Sea Mist	White
15	046	Ice	White
16	048	Chai	Coffee
17	049	Stone Grey	Coffee
18	051	Coffee Grey	Coffee

19	053	Clay	Coffee
20	063	Decorators White	White
21	836	Classic Black	Coffee
22	108	Rustic Grey	Coffee
23	110	Limed White	White
24	114	Taupe	White
25	200	Natural	Caramel
26	202	Golden Oak	Caramel
27	204	Oak Mantel	Caramel
28	205	Goldenrod	Caramel
29	206	Pecan	Caramel
30	211	Cherry	Coffee
31	212	Dark Teak	Coffee
32	214	Cocoa	Coffee
33	215	Cordovan	Coffee
34	219	Mahogany	Coffee
35	220	New Ebony	Coffee
36	221	Black Walnut	Coffee
37	227	Red Oak	Caramel
38	229	Rich Walnut	Coffee
39	230	Old Teak	Coffee
40	231	Spring Rose	Coffee
41	232	Red Mahogany	Coffee
42	233	Dark Mahogany	Coffee
43	237	Wenge	Coffee
44	242	Auburn	Caramel
45	247	Bark	Coffee
46	248	Pretzel	Coffee
47	249	Acorn	Coffee
48	250	Sumatra	Coffee
49	251	Raisin	Coffee
50	252	Toffee	Coffee

### Wood Cover

The battery cover of the module would come with a wood cover that covers at least half section of the module. And the color of the wood cover will match that of the shutter.



If Expansion Battery Pack or Solar Panel is to fix on the module, please keep the wood cover and in the future if the expansion battery pack or the solar panel is not needed, the wood cover can be put back in use.

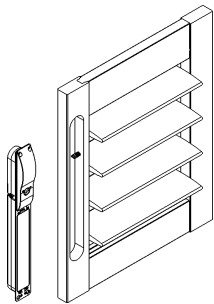
✧ Frame Cut-Out

For single panel or configuration similar to single panel with frame, the module location will conflict with the light block of the frame, so there will be cut-out on the light block of the frame to stop the conflict, the length for the cut-out would be 335mm.

**Clearance:**

Module	Battery Expansion Pack	Solar Panel	Solar Panel Mounting Base
17.5mm	17mm	9mm	8.5mm

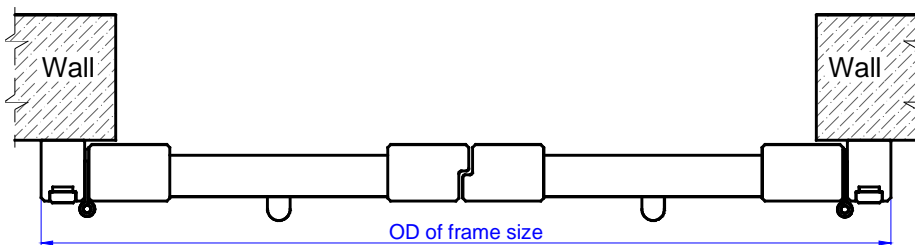
The module will protrude 17.5mm from the back of the stile, please allow 19mm clearance for the module.



E.g.: Below is the situation **not available** for the module unless enough build-out is added to the frame.

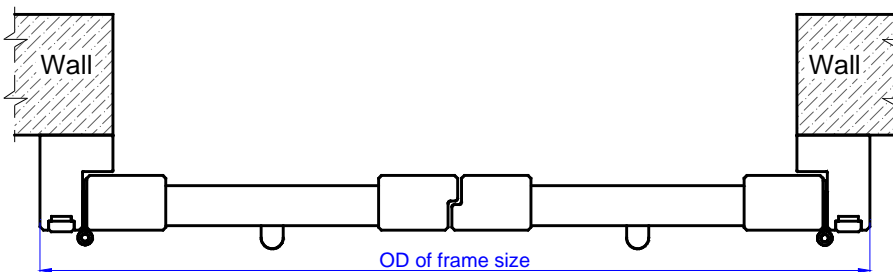
Hang Strip OM: beside the panels

When module is on the left/right most stiles, the protrusion part will conflict with the wall.



L Frame with light block thickness less than 19mm OM:

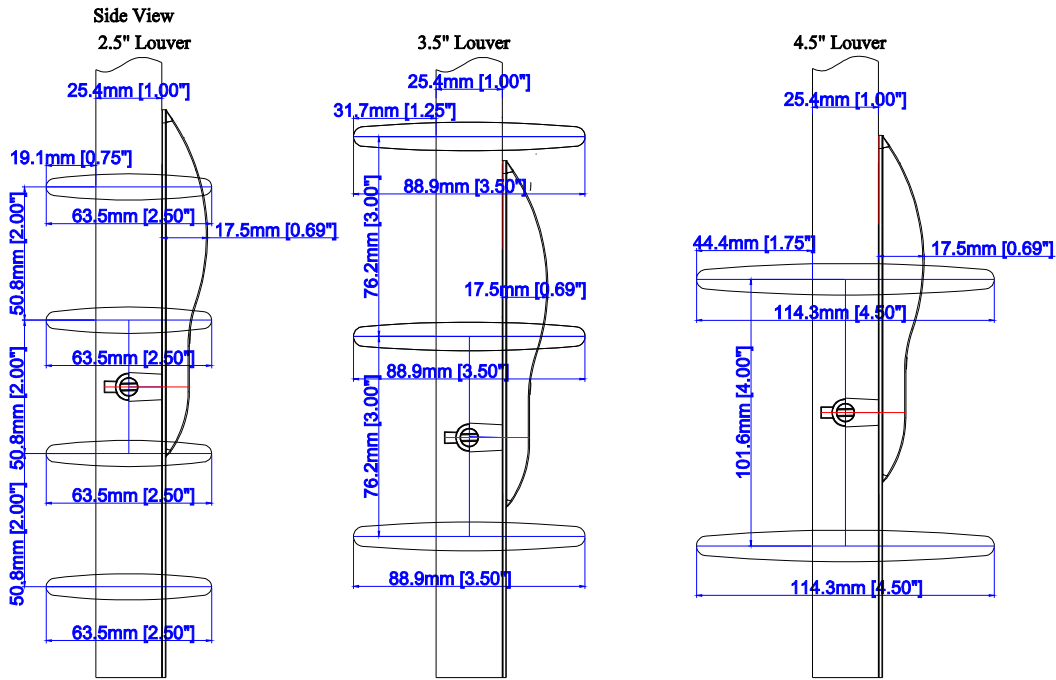
When module is on the left/right most stiles, the protrusion part will conflict with the wall.



If both Solar Panel and one Battery Expansion Pack is attached to the module, the necessary clearance is 28.5mm;

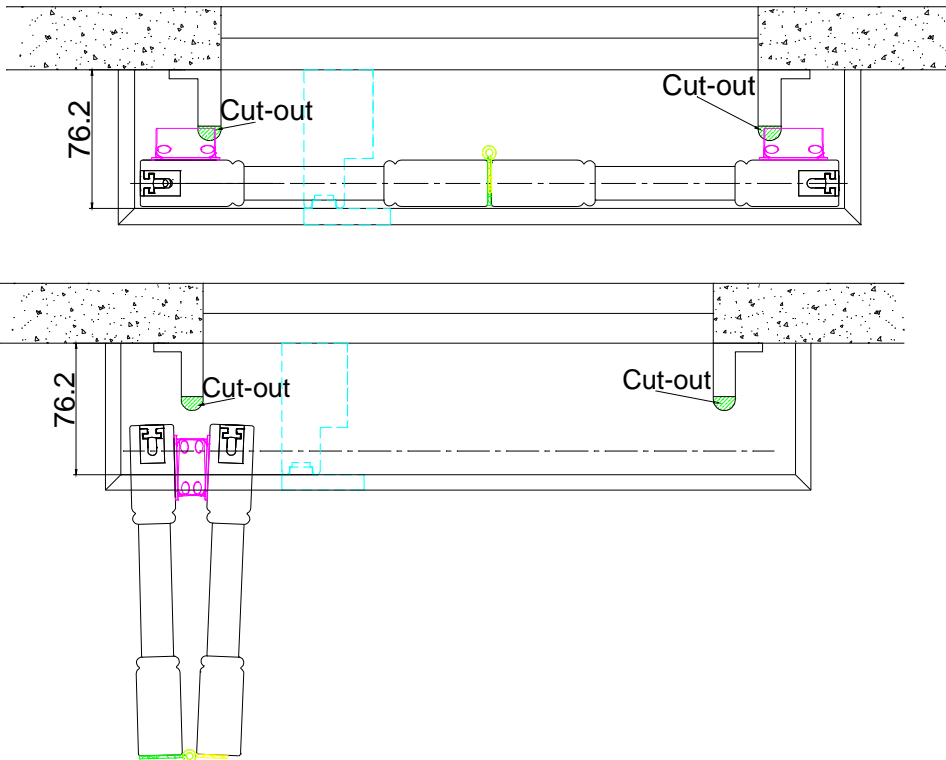
When more Battery Expansion Packs are needed, please add build-out to allow enough clearance.

Side view for module in panel with different louver types



**For Motorized 90° Bifold Track Shutter:**

- 1) Both 76.2mm and 88.9mm Header are available;
- 2) The L Shape Light Block will be cut out 7.9mm to avoid the confliction with the module;



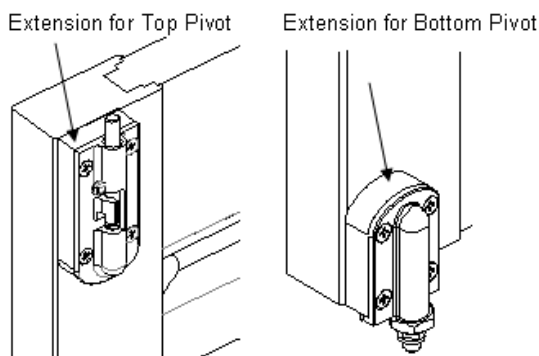
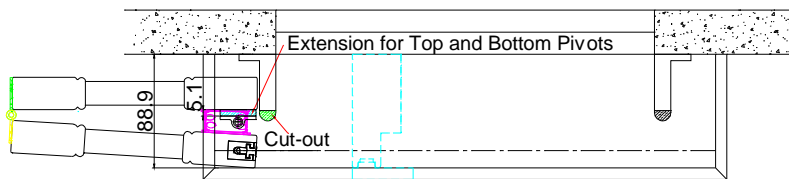
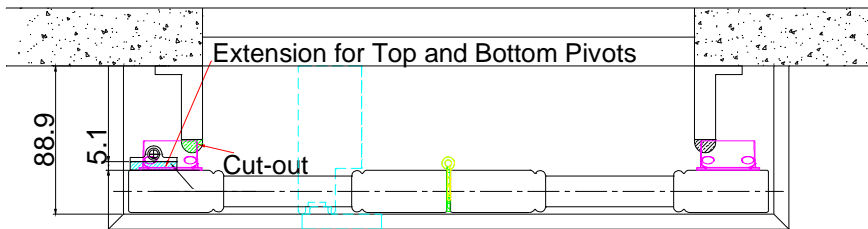
- 3) For Motorized shutter with both Solar Panel and Expansion Battery Pack attached to the back of the module, the L Shape Light Block will be cut out 17.5mm to avoid the conflict;

Available options:

- a. One Solar Panel;
  - b. One Expansion Battery Pack;
  - c. One Solar Panel and One Expansion Battery Pack.
- 4) It is not recommended to have solar panels for the leftmost or rightmost panel due to the lack of sunlight;

**For Motorized 180° Bifold Track Shutter:**

- 1) The default header width is 88.9mm; The min. Header width is 82.5mm; so for 76.2mm header, 6.35mm extension is required;
- 2) The L Shape Light Block will be cut out to avoid the conflict with the module; 5.1mm extension is necessary for installation of the top and bottom pivots;



- 3) For Motorized shutter with EITHER ONE Solar Panel OR ONE Battery Expansion Pack attached to the back of the module, the L Shape Light Block will be cut out to avoid the conflict;

Available options:

- a. One Solar Panel;
- b. One Expansion Battery Pack.

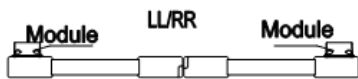
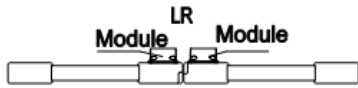


4) It is not recommended to have solar panels for the leftmost or rightmost panel due to the lack of sunlight.

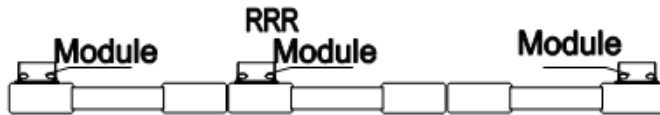
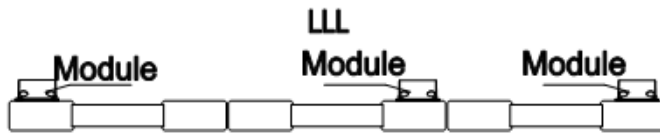
**Module Location:** (Easy Tilt will be on the same side as the module)

**For regular shutter and bi-fold Application (Except for 2014 bifold track):**

- 1) Single Panel: Module will be on the un-hinge stile
- 2) 2 Panels: LL, LR, RR



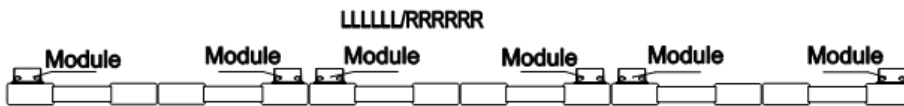
- 3) 3 Panels: LLL/RRR



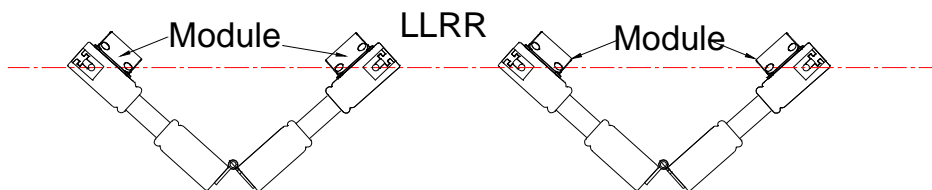
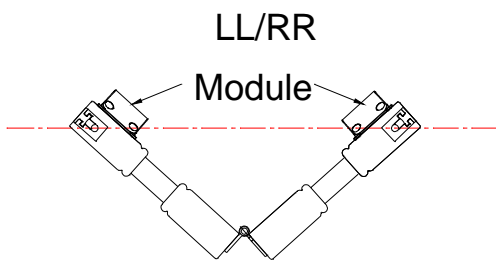
- 4) 4 Panels: LLRR/LLLL/RRRR

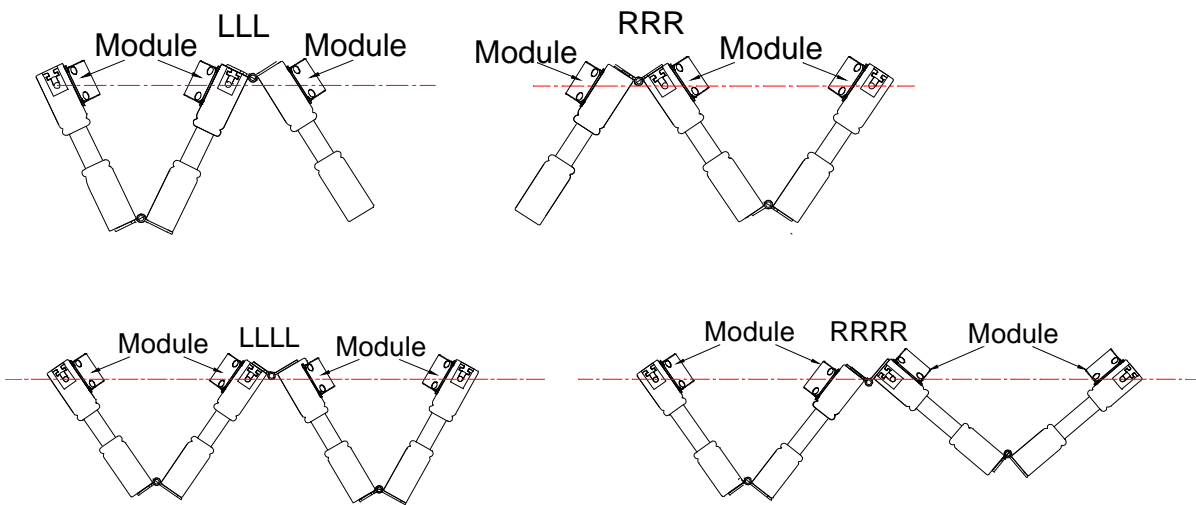


- 5) 6 Panels: LLLLLL/RRRRRR



**For 90° and 180° Bifold Track:**





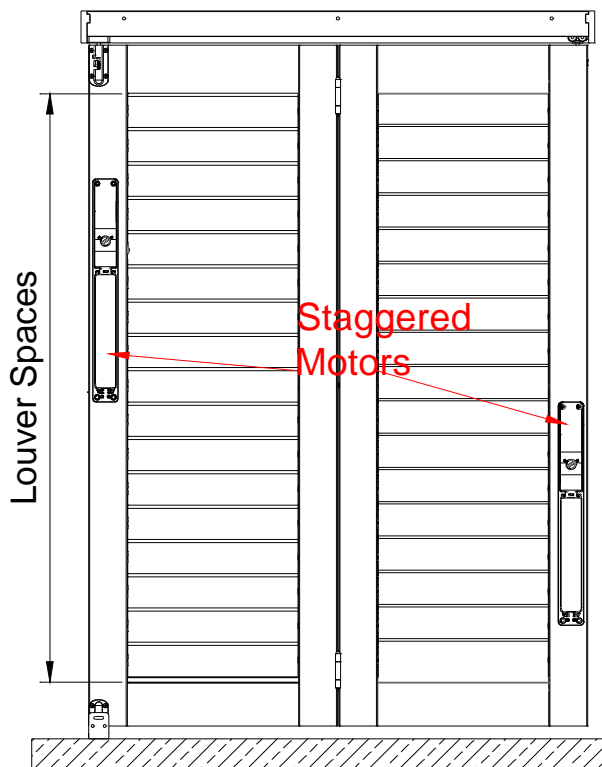
### Special Note on Bi-fold or Multi-fold Configurations

Please be aware that in bi-fold or multi-fold configurations of RF, the motorization modules will touch each other when the panels are folded together, so the panels can't be able to stack together as tightly as that of the non-motorized shutters.

Additionally, before folding the bi-fold or multi-fold panels together, please ensure that the louvers are returned to a completely closed position (either up or down) to prevent louver damage when folding panels.

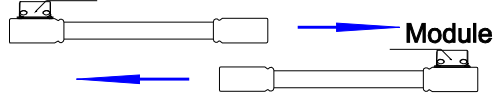
**For better fold, it is optional to have the modules staggered for bi-fold/multi-fold shutters;**

However, for 180° bifold track shutter, the modules can only be staggered.

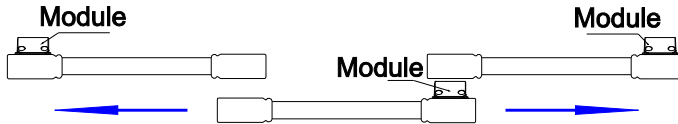


**For By-Pass Application**

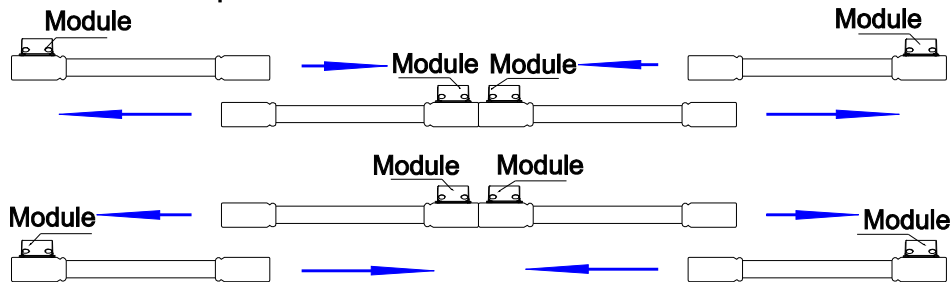
**2 Panels Side Open  
Module**



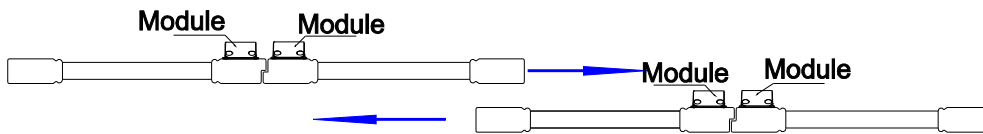
**3 Panels Center Open (Not available for Open Bypass)**



**4 Panels Center Open**



**4 Panels Side Open**



**For Special Shape Application:**

Module location will be the same as the Easy Tilt location.

**Built-in Timer Function:**

The Timer function is now available for remote unit that were shipped on and after June 1st, 2013. Please see below for Website link and follow the User Guide to set up the timer schedule for the remote.

SHUTTER MOTORIZATION RF e-Timer website (No Logo version):

[www.windowcoveringsautomation.com:9000/shutter-override](http://www.windowcoveringsautomation.com:9000/shutter-override)

The following is how to distinguish the remote with and without timer function:

	Original Remote	New Remote w/ Timer
Timer Off Light Color	Red	Orange
PN Number	not available	located beneath the back cover

**Warranty**

The warranty for the Module and the Remote Control Unit is 1-year under normal operation.

## SHUTTER LOOK FROM FRONT AND BACK

The front side of the shutter



\*No Receiver/Louver Cap

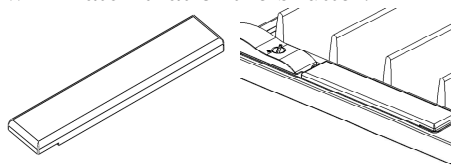
\*Easy Tilt Only

The back of the shutter



\*The light block would be cut out along the module.

\*The battery cover of the module would come with a wood cover And the color of the wood cover will match that of the shutter.



## HOW TO MANUALLY OPERATE THE LOUVERS

At the back of the motor, there is an “M” and “R” which is a remote switch.



\*Turn to M to manually operate the louvers and turn to R to use your remote to operate the shutter.

Note: Forcing the louvers to rotate without turning to M will cause serious damage to your RF system.

## HOW TO USE THE EXPANSION BATTERY PACK

Expansion Battery Pack is to provide longer operation time of shutter.

Remove the battery cover and wood cover, and fix the Expansion Battery Pack to the module. More can be added if the space allows.



\*Expansion Battery Pack can be attached to the module

\*Make sure to use same type batteries in both the module and the Expansion Battery Pack.

## HOW TO USE THE SOLAR PANEL



\* Make sure rechargeable batteries are used in the module or the Expansion Battery Pack when using with Solar Panel

\*Solar Panel Position:

a. Attached to the back of the module or the Expansion Battery Pack

b. Installed on the rail (Optional with surcharge) factory will prewire and install the mounting base.

For panels with modules below the mid rail or panels without mid rail, the solar panel will be attached to the bottom rail;

For panels with modules above mid rail, the solar panel will be attached to the top rail.



If Expansion Battery Pack or Solar Panel is to fix on the module, please keep the wood cover and in the future if the expansion battery pack or the solar panel is not needed, the wood cover can be put back in use.

## HOW TO FIX LOUVERS THAT ARE OUT OF POSITION

Firstly find out the louver out of position;

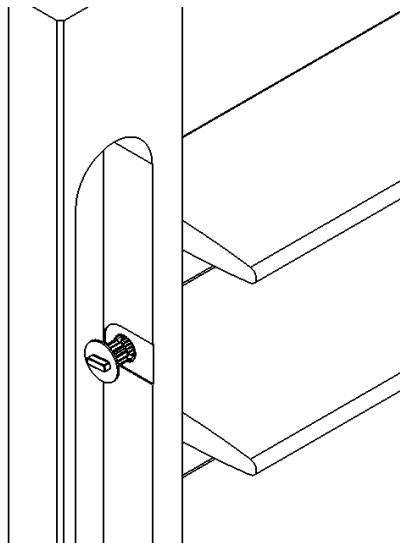


Next please grab three louvers above or below the louver in different position.

Then grab the louver out of position and tilt it up/down to put the louver back to the correct position.



## HOW TO REPLACE THE MODULE

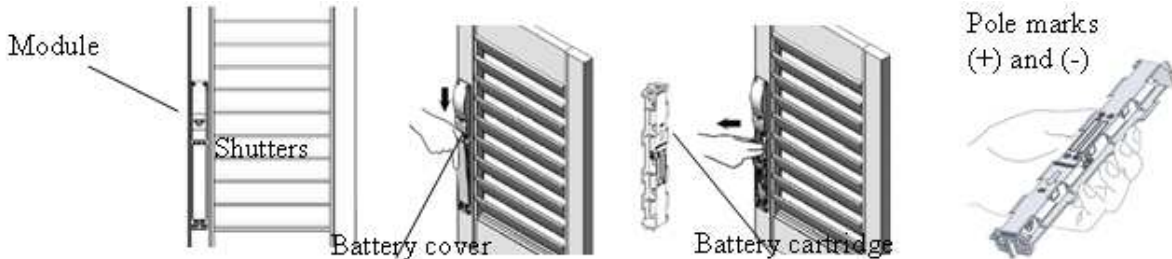


\*The module can be taken out of the stile when the louver as well as the slotted point driver is in horizontal position.

\*The customer could also fix the module into the stile when the louver as well as the slotted point driver is in horizontal position.

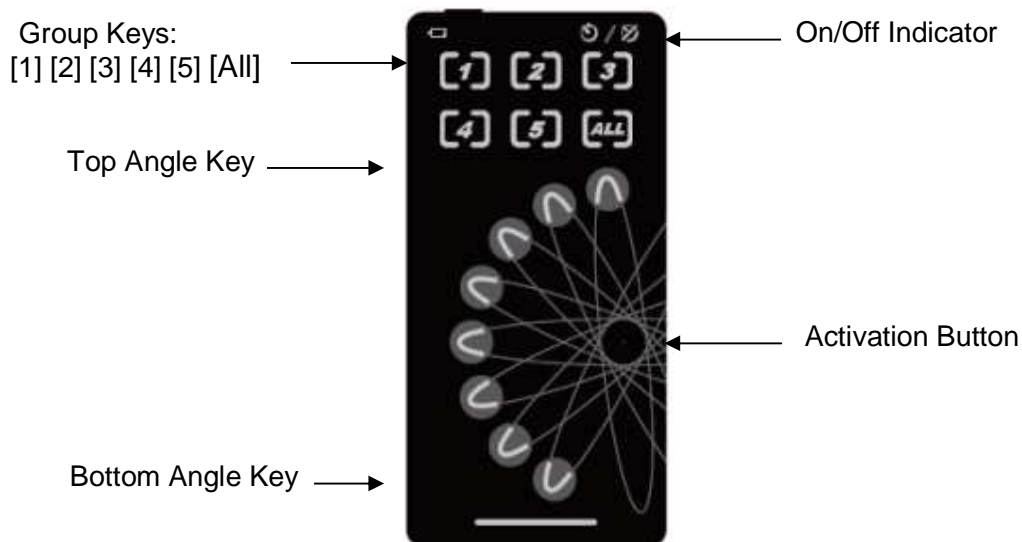
## HOW TO REPLACE BATTERY FOR THE MODULE

To install batteries to the open the battery cover. Remove the battery cartridge. Insert batteries (AA batteries \*6) matching the (+) and (-) marks inside the battery cartridge. Put back the cartridge and reinstall the battery cover.



## HOW TO USE THE REMOTE CONTROL

### Remote Control Buttons and Indicators



### USB Port (Timer Function)

#### Screen Bar Light:

Light on = Remote Control ready

Light off = Remote Control in sleep mode

### 8 Preset Louver Positions

Each of the "Angle" keys corresponds to a desired tilting position, spanning the entire arc of the louver's movement

#### Group keys "1" through "5" and "All" key

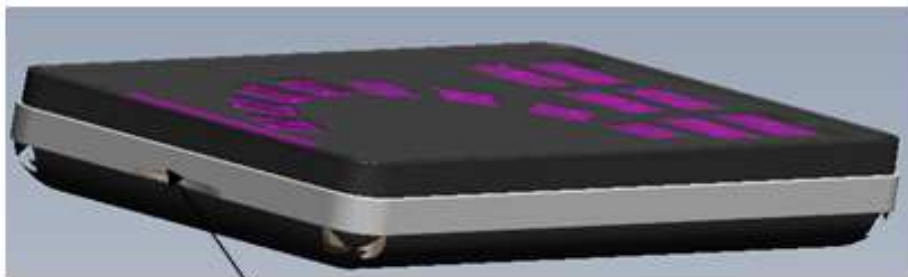
The keys "1" through "5" control shutter modules grouped in "1" to "5" groups, each group can consist of unlimited numbers of shutters that are in range.

The "All" key controls shutter modules in all groups at once.



## HOW TO REPLACE BATTERY FOR REMOTE CONTROL

The RF remote control requires 2 AAA batteries. To install the batteries, turn over the remote and open the cover. Insert batteries (AAA batteries \* 2) matching the (+) and (-) marks and cover the bottom cover. If the battery has been properly installed, the screen bar will light up.



Pop the back cover from here