WHAT IS CLAIMED IS:

1. A PV string comprising a first and second PV cell, each PV cell having a busbar, wherein the first and second PV cells are in direct contact with non-conductive bonding material at a region without busbars to form a mechanical connection, characterized in that a direction connection between busbars of the first and second PV cells is formed without use of a conductive bonding material.

2. A PV string according to claim 1, wherein the non-conductive bonding material is disposed 0.1mm – 1.0mm away from an edge of each busbar.

3. A PV string according to claim 1, wherein the non-conductive bonding material is disposed between a side surface of the first PV cell and a front surface of the second PV cell.

4. A method of electrically connecting and constructing the PV string according to claim 1, comprising the steps of:

Step 1: applying the non-conductive bonding material on a surface of the first PV cell, wherein the non-conductive bonding material is applied along a region adjacent to a front busbar edge of the first PV cell and/or along a region adjacent to a rear busbar edge of the second PV cell;

Step 2: placing the second PV cell in a partially overlapping manner, such that the busbars of both the first and second PV cells are aligned with each other, wherein electrical contact is established between the first and second PV cells;

Step 3: curing the PV string.

5. The method according to claim 4, wherein the non-conductive bonding material is disposed 0.1mm – 1.0mm away from an edge of each busbar.

6. A method of electrically connecting and constructing the PV string according to claim 1, comprising the steps of:

Step 1: placing the first and the second PV cells in a partially overlapping manner, such that the busbars of the first and second PV cells are aligned with each other, wherein electrical contact is established between these PV cells;

Step 2: applying the non-conductive bonding material to the first and second PV cell such that the non-conductive bonding material is disposed between a side surface of the first PV cell and a front surface of the second PV cell;

Step 3: curing the PV string.

7. The method according to any of claims 4-6, wherein the non-conductive bonding material is applied in a continuous or non-continuous manner.

8. The method according to claim 7, wherein the non-conductive bonding material is applied using a means selected from a group comprising a syringe, a spray nozzle, a stencil or a pick and place process step.