

Supplementary Information

Waterproof treatment on spacer fabric

NUVA N2114 water resistant agent produced by Clariant Ltd was used. The NUVA N2114 solution of concentration 10% was sprayed on the top layer of spacer fabric. A spraying equipment (HD-130, RUIYI, Taiwan) was used at a pressure of 0.4MPa and the moving rate is about 5mm/s. After spraying, the spacer fabrics were cured at 130 °C for 10 min.