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Abstract

Reducing water permeation into electronic devices

A electronic device such as a display device is proposed. The display device has an array of display elements 103 covered by a transparent composite substrate 207. The composite substrate includes a first transparent polymer substrate 201, a second polymer substrate 203 and between them an electrically conductive layer 202 having electrical resistance. The conductive layer 202 is supplied with electrical power which heats it. This reduces the tendency of water molecules to pass through the first polymer substrate 201 and/or drives any water molecules which do pass through the first polymer substrate 201 out of the display device through grooves or trenches 310 formed in the first polymer substrate 201. Optionally, the conductive layer 202 is patterned in a mesh formation. An inorganic barrier layer 102 is provided to further reduce the risk of moisture penetrating to the display elements' 103.

[Fig. 2]