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(54) Title: CELL OVERCHARGE PROTECTION CIRCUIT

(57) Abstract

Overcharge protection circuit for rechargeable cells charged in series which have predetermined maximum permitted charging voltage and an open circuit voltage, comprising: diode means coupled across each of the cells to provide a shunt path if the voltage across the associated cell exceeds the maximum charging voltage; a charger circuit coupled to terminals of the series chain and applying a charging current of predetermined direction, wherein the diode means is a light emitting diode (LED) with a forward voltage substantially equal to the maximum permitted voltage and the charger circuit comprises current and/or voltage limiting means (R) limiting the current through the series chain of the cells at most to a value that corresponds substantially to the current that flows through the light emitting diode when the maximum permitted voltage being applied thereto, the light emitting diode (LED) is substantially non-conductive when a voltage corresponding to the open circuit voltage is applied in forward direction, whereby the light emitting diode constitutes no remarkable load for the associated cell when being stored or discharged, and fully shunts the cell after the cell has reached the fully charged state and providing simultaneously a visual indication that the associated cell has been charged.

