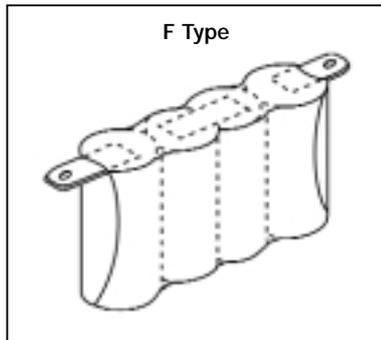


Panasonic can provide specially designed battery pack solutions to meet all our customers energy needs. The requirements of the application, such as charge specifications, available space and operating conditions can determine the type of battery, number of cells and shape of the pack. At Panasonic we are working on the promotion of battery packs which emphasize

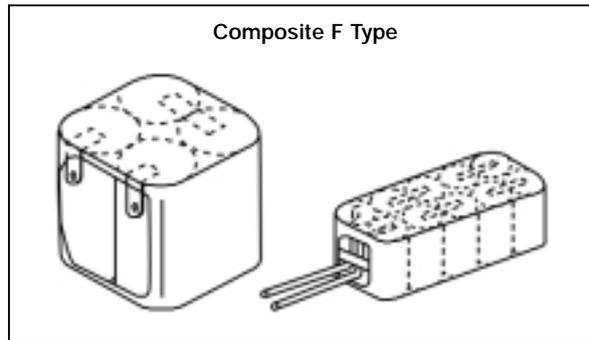
the safety and reliability of the batteries. We can create customised packs to satisfy the unique requirements of each of our customers and are able to design and produce battery packs of all chemistries.

Do not hesitate to contact us regarding your specific needs.

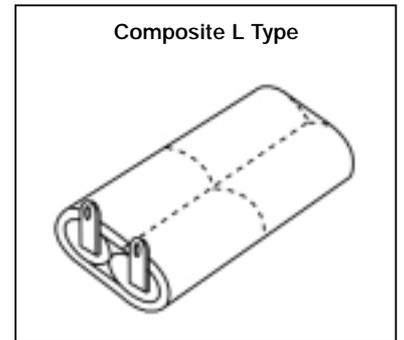
## Shapes of Battery Packs (Typical & Standard Types)



**F Type**  
The required number of single cells are arranged side by side along their diameter, connected by nickel plates, and packed together with heat-shrinkable tubing.



**Composite F Type**  
Single cells are connected in the F type configuration but in two to five rows rather than one row and packed together by heat-shrinkable tubing.



**L Type**  
The required number of single cells are arranged in a line in the axis of the batteries, connected by connecting plates, and packed together by heat-shrinkable tubing.

**Composite L Type**  
Single cells connected in the L type configuration are further connected in two to five rows, and packed together by heat-shrinkable tubing.

## Special Pack Shapes

Panasonic can meet customers' needs for customized specifications (such as battery packs in plastic resin cases). This applies also to prismatic battery packs.

Please contact Panasonic for detailed discussions concerning design-in, specifications, lead times, etc.

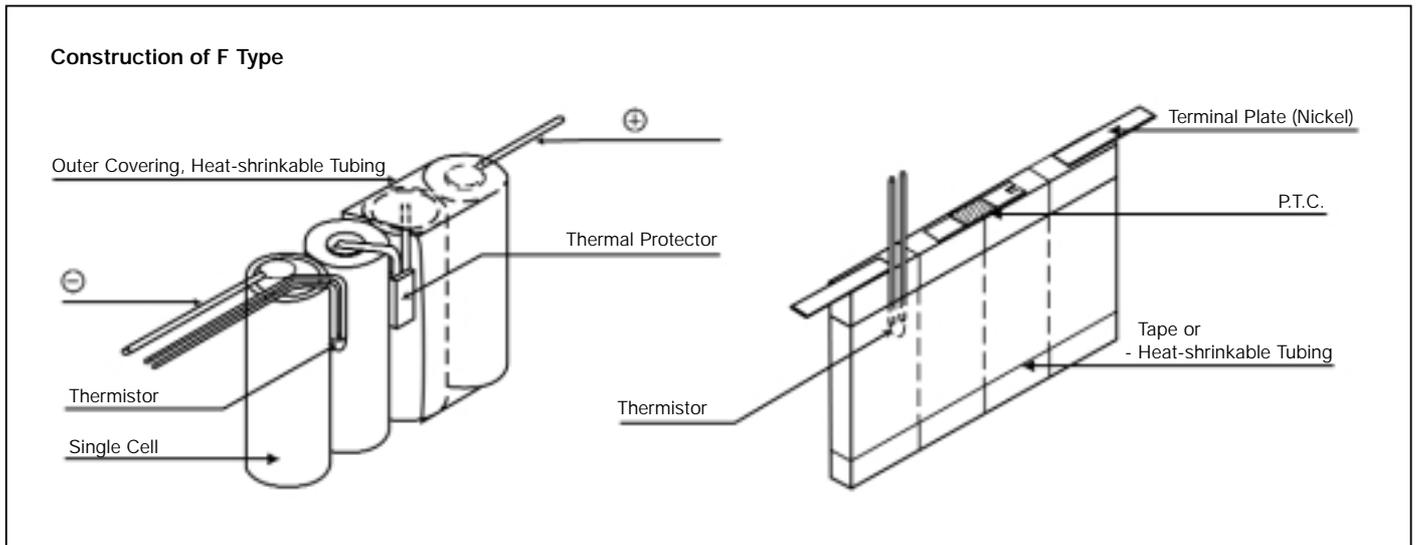


## Examples of Battery Pack Constructions

### Construction of Ni-MH Battery Packs

The figure below shows the basic construction of a battery pack. It is recommended that a thermal protector, which is used for temperature detection and external short-circuiting, be installed in

a nickel-metal hydride battery pack to prevent any rise in the temperature of the pack.



### Construction of Ni-Cd Battery Packs

The basic constructions for battery packs are as shown below.

