



All capacitors are of the type electrolytic capacitor (commonly referred to as "elco"), have axial leads and a temperature rating of  $-40\text{ }^{\circ}\text{C}$  to  $85\text{ }^{\circ}\text{C}$ . The "battery symbols" indicate the polarity of the capacitors. It's important to respect the polarity - reversing an elco will damage it. Most electrolytic capacitors have an indication for the *negative* lead in the form of a distinct printed band - either on the side of the negative lead or showing arrows pointing to the negative lead. Axial elcos usually also have a smaller section near the positive lead.

It is ok to use capacitors with a broader temperature range (eg  $-40\text{ }^{\circ}\text{C}$  to  $105\text{ }^{\circ}\text{C}$ ). Although it's unlikely the General Module will ever see temperatures near the stock  $85\text{ }^{\circ}\text{C}$  maximum temperature rating, elcos deteriorate much faster at temperatures above room temperature. Elcos with a higher temperature rating are better protected against this.

Getting capacitors with a higher voltage rating is also fine, but keep in mind the size increases with the voltage rating. A  $100\text{ }\mu\text{F} / 63\text{ V}$  elco is quite a bit larger than a  $100\text{ }\mu\text{F} / 25\text{ V}$  elco. But there's plenty of space inside the enclosure.

However, I do not agree with ah1wcobra's soldering tip to keep the heat away from the elco by only heating the pad - not the lead. That's a recipe for so-called "cold solder joints" which may look fine but actually have bad electrical characteristics. To make a good solder joint both pad and lead must be heated with the tip (press the tip against both) and apply solder where pad and lead meet. If your soldering tip is fine (correctly tinned), making a solder joint should take only about a second so the

heat is well controlled. It should be no problem for the capacitor.