

Electronic Tool Tip #8 – Lighted Helmet Magnifier

Working with miniatureized compinents can be a challenge in mnore ways than one. Right now, however, we are going to discuss the vision aspect of miniature components – or maybe even not-so-miniature items.

Not very long ago, my vision was failing badly due to cataracts and glaucoma. As a result, I had lens replacement surgery for the cataracts, and I had stents implanted at the same time for the glaucoma. Now, some five months later, my vision has stabilized at the acuity level that it will be from here on out. After wearing eyeglasses for sixty years for extreme myopia, I can now see great distances perfectly well. It is for the close at hand that I now need some help. Most of the time, I find that help in the form of two different pairs of reading glasses, each having a different diopter level. I swap them off depending upon how close I need to see. However, I have found a great tool that helps immensely, in a one-size-fits-all variety.

I am talking about the helmet-style lighted magnifier shown above. This unit is worn like a welding helmet, and it flips up out of the way the same way that a welding helmet does when it is not needed. What is great about this unit is that it is illuminated with three super-bright LED's that can be aimed and can be set to either one of two brightness levels as needed. The best thing of all about this tool is the fact that it uses interchangeable main magnifying lenses, which can be used singly or in any combination of two lenses simultaneously. The lenses supplied include 1.0X, 1.5X, 2.0X, 2.5X, and 3.5X magnification levels. The unit also has a small auxiliary lens at 8.0X that can be swung into place for those really hard to see things. The instruction sheet provides a table that lists the effective magnification and focal lengths of the various lens combinations, which range from 1.0X up to 14.0X and from 35mm (at 14.0X) out to 500mm (at 1.0X). The main lenses snap into holders that can be individually swung up out of the way when not needed.

The magnifier includes a rechargeable (and replaceable) 3.7V 300mAh lithium polymer ion battery, part number 602030, which is readily available from various online sources. From fully discharged, recharging the battery takes about an hour and a half, and a full charge lasts about eight hours. The unit as sold includes a micro-USB charging cable, a set of three static-free stainless steel tweezers, a cleaning cloth for the lenses, and a storage case to hold the lenses when not in use.

This magnifier is available online from Amazon, at a price of \$35.99 (USD) plus shipping if you are not an Amazon Prime member. Of course, the governor has to get his share, so tax will also be applied.

Go to <https://www.amazon.com/dp/B0BKQXP9Z1> to investigate this item for yourself.

