

TerraLUX Case Study #2 – AC Powered Sewing Machine Lighting



A private manufacturing company specializing in the after market sewing business needed a custom designed LED light that would work with virtually any sewing machine on the market and provide superior quality lighting to anything available. This company recognized a need in the market which was not being met by the sewing machine companies and was not being met in the aftermarket either.

This new sewing machine light design had a number of engineering constraints which called upon the technical expertise of TerraLUX including optical, mechanical, electrical and manufacturing engineering. First of all the light had to be small so it would not obscure the vision of the sewer while at the same time it had to focus a bright spot on the small needle area which is very close to the eye of the user. In addition, it had to be cool so the sewer's head could be in close proximity to the light and it could be touched for repositioning at any time. Another challenge was that there are many different styles of sewing machines and that to make a universal one-fits-all design required a novel attachment including a flexible arm to deliver the light exactly where the user wanted it. This flexible design also had to stay put while the sewing machine is in use and vibrates. Finally, the device needed to be removable because sewing machines have a case that goes over them when not in use or for moving. The final constraint was that this product had to go through multiple levels of distribution which meant that it had to be very inexpensive to manufacture to hit a high volume consumer price.

TerraLUX was chosen as the OEM manufacturer for this product because it solved all of the above constraints including low cost to manufacture. This product has taken the sewing after market by storm and is shipped by the container load for distribution channels in the USA. TerraLUX enabled a first advantage position in the marketplace for a company with no previous experience in the lighting business. This happened because TerraLUX could solve a complex of interwoven engineering constraints simultaneously and provide Asian manufacturing to deliver a low cost solution.