

illumiNITE  
Sue Teixeira, Meg DeCubellis, and Michelle Brennan, IllumiNITE  
April 10, 2013

Summary by Tayla MacEachern

The convergence of textiles and science has opened an incredible number of doors for the future. Sue Teixeira (president), Meg DeCubellis (creative director) and Michelle Brennan (design and development) take advantage of this trend by creating technologically advanced reflective clothing for runners and cyclists. Their stylish products look ordinary by day, but glow in the light at night. Instead of using stiff reflective tapes and trims, their brand IllumiNITE by BackAtcha Apparel LLC embeds microscopic beads into the weave of the fabric. IllumiNITE calls these beads “sataLITE™ Dish” beads because their mirror-like surfaces direct light back to the source. When these beads are put into ink form and printed onto the fabric, the reflection is in the shape of the human, rather than just strips or spots of light.

The concept behind IllumiNITE began with Adam, an MIT graduate and avid cyclist. Adam found a reflective coating that he realized he wanted to incorporate into clothing. He bought a company in the UK that made the reflective beads and developed the reflective ink that could be printed onto fabric. This ink had the ability to be washed up to 40 times without losing its reflective abilities. With the success of the reflective ink, Adam bought a fabric business in Cambridge, MA. He used this business to convert regular fabric into reflective fabric, and eventually sold the technology in 2001.

IllumiNITE is a member of the IRRA – the Independent Running Retailer Association. It is primarily a wholesale business that supplies mainly small-scale running and sporting goods companies with its merchandise. Some of its customers include Sail Fast, Dick’s Sporting Goods, and Fit2Run. Most recently, Mercedes Benz has special-ordered reflective jackets for its roadside assistance crew. IllumiNITE provides merchandise for both men and women. The products include innerwear, outerwear, hats, gloves, bibs, and even reflective dog jackets and leashes.

IllumiNITE imports its fabrics to its design and distribution center, which is located in Fall River, Massachusetts. The design process includes creating color boards and design boards, pattern making, and cutting fabric. When developing patterns, it is extremely important to take into consideration the reflective ink that is used on the garments. The print must be all one color and must be made from thin lines. If the lines are too thick and too much ink needs to be applied, the garment will become stiff and unwearable. Two different methods are used to apply the ink: roller printing, which is done mainly in Taiwan, and screen-printing, which is done mainly in China. Manufacturing is done both domestically and overseas. The most recent line in patterns is the Bling Collection, which is made to look like necklaces and jewelry on the garments.

As we have seen time and time again with the merging of fashion and technology, challenges arise along the way. IllumiNITE is not different. One of its main challenges is taking new innovative fabrics and applying their technology. Synthetic fabrics are becoming thinner and more flexible, which makes it more difficult to apply the reflective ink and still retain the fabric’s original hand. Furthermore, IllumiNITE is having a

difficult time figuring out how to print garments using as few resources as possible and as inexpensively as possible. Despite these challenges, IllumiNITE is paving the way for the advancement of safe and stylish performance clothing.