Freedom from the Dark: Using LEDs for the Visually Impaired

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There are over 45 million people in this world of ours that are legally considered blind; millions more fall under the category of visually impaired. While the mobility aids of yesterday such as a guide dog or cane just don’t encompass enough variables to truly give additional freedom. Today’s LED technology has been developed to improve a great variety of applications, including those that assist people with special visual requirements. New progress is removing barriers that, in the past, have limited the mobility of those with visual impairments. LED-based visible light communication technologies are coming to the forefront to aid those faced with visual challenges.

The strides that are being designed to promote the functionality and independence of weak-sighted persons encompass LED use. A few countries, states and cities have already implemented LED based signal lights that assist the visually impaired with traffic signals. These specially designed signals include features that can be interpreted and used by those with extremely limited sight. Recently installed elements for assisting the sight impaired with public traffic control include a variety of configurations from push buttons integrated with LED lights, vibrations and/or audible sounds. Difficulties with these units include clear sounds, clear understanding of the tone meanings and the ability to vary that tone from other environmental sounds.

The latest developments utilize a personal and individual receiver that can communicate with traffic signals and the impaired person utilizing a Global Positioning Software (GPS). This software provides communication with the satellite positioning system, the traffic signaling base and the user. A series of LEDs that are integral to the system allow those with very limited site to see a colored LED that can permit determination of the current safety conditions. This is especially helpful for persons that are sight and hearing impaired. The ability to provide a simple, yet vital message is being further developed with the intended result of applying this technology to a myriad of environments such as production floors, malls and other public events or places that are currently hard to navigate.

As these projects move forward, the ingenuity of engineers and designers has been beyond compare. Future LED application developments are not limited by anything other than imaginations of those involved. We at VCC are impressed and available to help your company move forward with innovations such as the LED personal traffic system for the visually impaired or whatever brilliant ideas you have in mind to push your company into the future and drive the genius made possible with LED devices. Contact us today to get started on your path to helping others through technology.