

Optics Trends – an Inside Perspective

The economy has been tumultuous in the last years and economic recession is a phrase the world is familiar with – political unrest, currency instabilities, and social change have swept over large parts of the globe. This time of uncertainty encourages people and technologies to rise to the challenge and we will continue to see a lot of new opportunities and innovations within our evolving industry. Technology that was once designed for a specific market will be adapted for use in existing or emerging markets. We have seen this in the early 2000's when the burst of the telecom bubble led to the redeployment of optical thin films technology into the life sciences. Another example is SWIR imaging, a technology traditionally reserved for defense applications, which is now used in machine vision, firefighting, produce inspection, and materials processing.

In addition, we see a strong trend towards automation, robotics, and autonomous vehicles that all require next generation of imaging technologies. As robots move beyond a predictable environment, like factory floor automation, into an environment with human interaction or the outside elements, the demands on imaging performance greatly increase. The industry must be proactive and develop imaging solutions that are flexible, easy to handle, and affordable as we are going to see even more applications emerge. Liquid lens technology, which can be used for rapid autofocusing, is a great example of innovation to conquer this challenge.

The recent years have also shown a transformation in new end-user applications. In the life sciences, for instance, there has been a tremendous increase in the development of non-invasive diagnostic tools, making advanced screening more accessible to the general population. Additionally, medical devices are being designed for portability and wide scale deployment, all with an emphasis on miniaturization and OEM manufacturability. Over 60 % of the applications for the Edmund Optics' Educational Award Program are based on life sciences applications ranging from Optical Coherence Tomography (OCT) to portable screening devices.

Whether it is increasing productivity through automation or solving today's most complex healthcare challenges, the redeployment of technology is key to emerging applications because it enables faster development – a key requirement in today's pressured markets. This is in part why we see a continued demand for flexibility and speed. At Edmund Optics, we evaluate these trends, proactively adapt to change, and continue to make investments to best service our customers. For example, EO continues to increase its portfolio of optical and imaging components, offers a quick adaptation or modification of products according to unique application needs and we service our customers from idea generations, to proof-of-concept and prototyping all the way through volume production.



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