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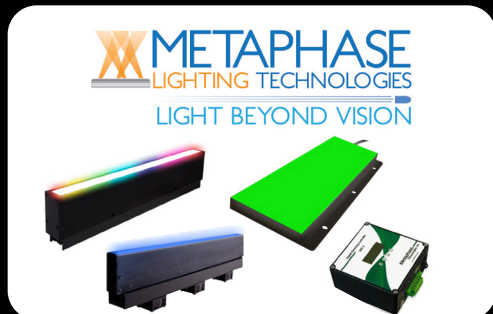the power of sight

Phone: (763) 972-1040 ● (888) 920-0939 ● Fax: (763) 972-1041
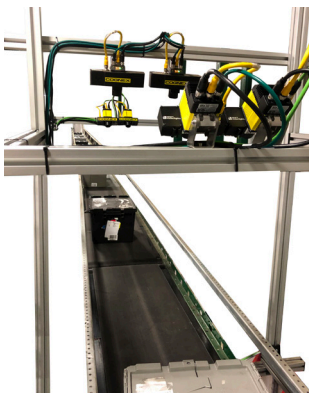507 Kelsey Street ● Delano, MN 55328 ● www.SensorsIntegration.com

Image-Based Omni-Directional Barcode Scanning

A sortation system located at a distribution center had trouble sorting totes with difficult-to-read barcodes. We designed and implemented a multi-head camera system featuring the image-based Cognex DataMan 474 barcode reader. This system was able to read codes and labels at very steep angles resulting in higher read-rates and more throughput for the customer.
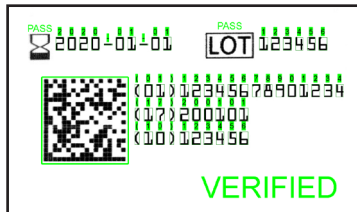
Optical Character Recognition and Verification (OCR and OCV)

Consumer products are increasingly requiring traceability. This system used a camera to verify that the correct text was printed onto a label. As the labels were applied, the camera took an image and used optical character recognition (OCR) and optical character verification (OCV) to determine if the correct text was printed. If incorrect text was printed, the system rejected the product.
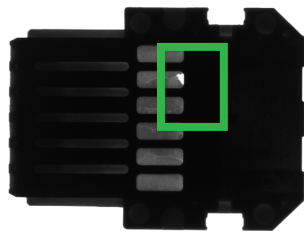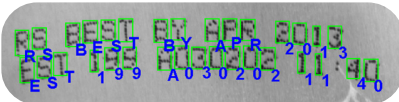
Flaw Detection

An injection molder manufactures components used in electrical connectors. The components have very thin molded sections that can crack or break open during the molding process. A camera inspected key areas of each part and detected cracks or breaks. The parts were presented to a camera using a bowl feeder and were inspected over a backlight area in the feeder track. If a defect was detected, an escapement device in the track removed the bad part from the product flow.
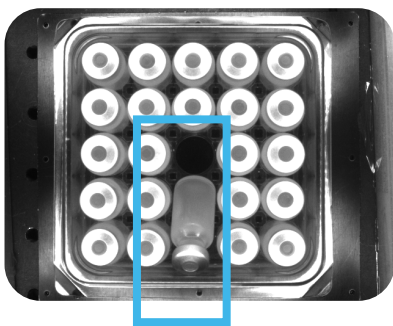
Position and Quantity Verification

A pharmaceutical manufacturer packages standard size vials in a tray of 25. We were tasked with verifying that all 25 vials were present in the molded tray and that all vial caps were in the correct position. The vials were standing on end with an aluminum cap ring and rubber stopper facing the camera. If other vials were missing, vials could be tipped out of position or lay on their side. Each tray was inspected under the camera. If a tray was defective, it was removed from the product flow and re-worked by a line operator. The re-worked tray would then run through the inspection system again to verify its accuracy.
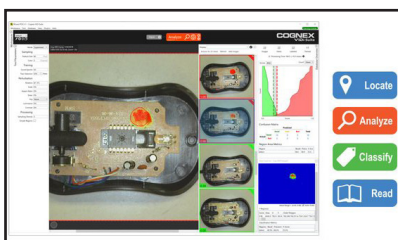
Cognex ViDi

Deep learning-based software is the next breakthrough in machine vision. ViDi from Cognex learns good and bad product and writes its own code to find unique, one-time flaws that could not be detected with conventional machine vision systems. ViDi OCR is also the most robust font reading algorithm capable of adapting to print changes on the fly and still validate Lot and Date Codes.