

# APPLICATION NOTE AN008

## Interior Trim Color Verification

# AUTOMOTIVE

**INDUSTRY:** Automotive

**APPLICATION:** Color verification for automotive interior trim

### The Challenge

A major tier 1 automotive supplier needed to guarantee correct color of multiple components used in automotive interior color schemes to error-proof the manufacturing process.

Current processes generally involve inefficient, labor intensive and subjective manual inspection. Subtle differences in colors commonly used for interior components make visual inspection unreliable.

### The Solution

EMX industries, Inc has developed the ColorMax color sensor with multichannel discrete outputs uniquely suited for integration into automated systems. The challenge presented by variations due to surface texture of parts and carpet was overcome by use of a large, 25mm light spot. The ColorMax integrates the signal over the area illuminated by its light source while rejecting the influences of ambient light.



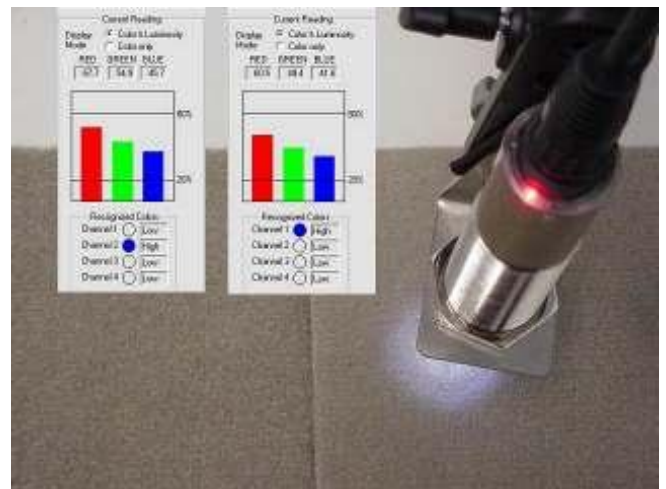
**ColorMax color sensor**

The sensor features a Windows™ Application program used to set up operating parameters, make adjustments and view measurements. Each color sample is assigned a color recognition channel with individual tolerance settings and a discrete output.

### Shades of beige carpet sample

The illustration shows 2 typical carpet colors used on interior door panels. They are very similar, therefore, difficult to differentiate visually. The sensor is positioned viewing carpet sample #1. The readings shown in the photo are screen shots of the Windows™ Application Program frame that indicates the real-time readings and the color recognition channel status for sample #1 (right side) and sample #2 (left side). The ColorMax has also been used to verify color of headliners, visors, armrests and other interior components.

This innovative solution to error-proofing of the color inspection process results in properly matched interior components at a fraction of the time and cost associated with manual, visual techniques.



### Equipment Required

[CM1000-4FLEX25](#)

ColorMax, 4discrete outputs, RGB analog outputs and serial output



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