Inline spectrophotometer

CarFlash

Adding value to robotics in automotive manufacturing

This non-contact multi-angle spectrophotometer works in concert with an industrial robot to collect colorimetric data on special effects coatings to ensure fully automated collection of quality control information during the automotive manufacturing process. By integrating CarFlash inline, color quality can be controlled and managed earlier in the production process and with greater repeatability, eliminating expensive color problems that can result in rejection of the vehicle or component.

Non-contact inline measurement mitigates the risk of damaging paint during the measurement process. In addition, there is excellent inter-instrument agreement between

CarFlash and X-Rite multi-angle spectrophotometers used in the laboratory. This ensures color consistency from design through manufacturing for even the most complex special effect paints and coatings.

Benefits:

- CarFlash enables 100% sampling to improve quality and overall process integrity, catching potentially expensive errors early in the manufacturing process.
- Non-contact operation eliminates the risk of damage to paint and other materials along with minimizing the potential resulting waste.
- This fully-automated system integrates inline with an industrial robot.
- Multiple angles of measurement from 15º to 75º are performed simultaneously to ensure full part coverage.
- Combined with compatible multi-angle spectrophotometers from X-Rite in other parts of the automotive design and manufacturing workflow, CarFlash ensures the utmost in manufacturing line quality and consistency.

In addition to colorimetric data, CarFlash collects surface temperature data with each measurement. It is also useful in detecting the Orange Peel effect, a defect in paint layering that occurs when paint dries too quickly or has surface bond problems that result in abnormalities in the surface layer.

Specifications

Short Term Repeatability - White	dE< 0.1
Measurement Geometry	15°/25°/45°/75°
Measurement Time	3s incl. positioning by robot
Measurement Working Distance	35 mm
Spectral Interval	400-700nm
Spectral Range	10nm