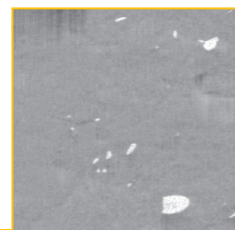
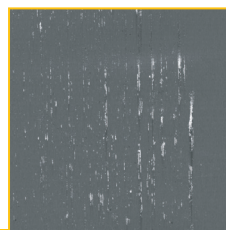
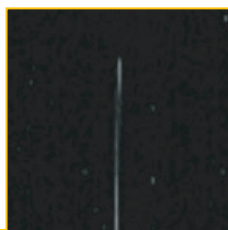
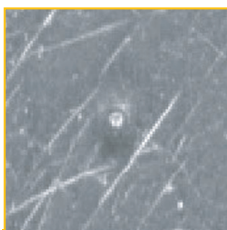


Automatic Inspection of Protection Film for Glass, Metal, Plastics and Painted Surfaces



The complete inspection solution for all protective films



Protective Film

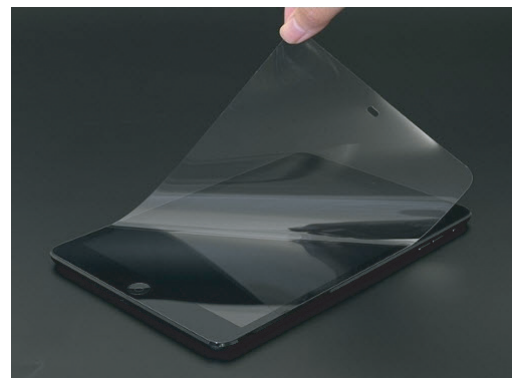
EasyInspect & EasyMeasure

Inspection of protective films for all types of substrates

The production of protective film has a number of challenges: The top layer of the film must be tough and resistant, while silicone layers and adhesive coating must be thin, with low thickness variation and be guaranteed to remove without traces on the protected substrate (like high quality display glass or automotive parts). In addition, the protective film must not have any functional or cosmetic defects that impact the protected product. EasyInspect identifies scratches, gels, black spots, contaminations and holes in the material as early as possible in the production. EasyMeasure monitors the thickness, haze, reflection and formation of adhesive, acrylic and silicone layers. This way, the resulting product quality remains high, while downstream waste is reduced.

Materials

- PE, PP, PU film to keep metal, plastic, glass and painted surfaces clean and protected from scratches, stains and abrasions during fabrication, transport, installation and storage
- PET Silicone film for protection of all types of high quality display glass products during fabrication, transport, installation and storage
- PU film for permanent protection and decoration of architectural glass, automobile glass and car body components



Protection film on smartphone

Trackpad protection film



Paint protection film on automobile

Applications

- Sheet glass (window glass, mirror glass, architectural glass)
- Display glass (smartphones touch screens, tablets, E-readers, camera displays etc.)
- Automotive (paint protection, body protection, headlight protection, window protection)
- Metal (stainless steel and aluminium panels, electric home appliances)
- Interior surface protection
- Other applications: Plastic sheet and film protection, high-pressure laminate protection, building site protection, floor and carpet protection, window/security film, and many more

Ensures Quality, Improves Your Process

YOUR BENEFITS

Cost Savings with Superior Technology

- Improved defect detection and classification through Multiple Image Defect Analysis (MIDA)
- Super-fast cameras allow multiple optical channels in one camera line
- Reduced costs and installation space through Twin-Line illumination – multiple optical channels in one illumination
- Perfect inspection for all types of protective film applications

100% Monitoring of Material Quality

- Full monitoring of adhesive and coating layers for high quality and reduced waste

Unparalleled User-Friendliness

- Easy and automatic creation of defect classification rules with the Auto-Classifer
- Freely configurable reports with the Dr. Schenk Classification Toolkit



MIDA for protective films

Dr. Schenk's Multiple Image Defect Analysis (MIDA) enables viewing a defect on a protective film in multiple ways at the same time: Using different channels, different perspectives (brightfield/darkfield, reflection/transmission) and different illuminations (diffuse/focussed, multiple wavelengths), as many as eight distinct optical channels can be achieved - with only one camera. As a result the top and bottom side of all film layers can be inspected for defects simultaneously in different optical channels, with fewer cameras than other inspection systems need. In parallel layer properties, for example thickness of silicone coating and adhesive layers, are monitored with EasyMeasure.

EasyMeasure

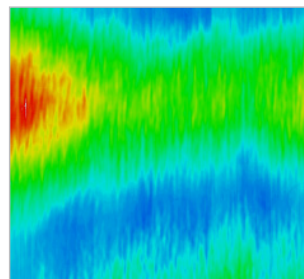
Monitoring options for the coating process:

Layer Thickness: Thickness variations of silicone & adhesive coatings

Haze: Scattering behavior

Reflectivity: Reflectance of materials and coatings

Formation: Material dispersion variations



False color images reflect layer thickness variations

Your Reliable Partner



Dr. Schenk GmbH, established in 1985, is an innovative high-tech company based near Munich, Germany. Dr. Schenk develops, produces and markets optical surface inspection and measurement solutions for automated quality assurance and production process monitoring. This includes high-quality, customizable handling solutions. Our products are a key success factor in the making and converting of many materials, e.g. plastics, textile materials, nonwovens, paper, metal, or glass, for a multitude of markets like display glass, automotive, packaging, medical, renewable energy, and many more.

Throughout the world Dr. Schenk's 220 employees continue to set new standards for the inspection of surfaces. Over 10,000 m² of modern, cleanroom-capable production and testing facilities are available to research, development and production to apply cutting-edge optics and electronics to customer applications.

Dr. Schenk offers extensive from-lab-to-fab knowledge. Customers benefit from our expertise in the translation of lab applications to large scale productions. Our sophisticated handling solutions complete the one-stop-shopping experience.

The company's objective is complete customer satisfaction. This is achieved through innovative and practical solutions that can be implemented into new and existing production lines. Local sales and service facilities around the world ensure fast support, technical service, training and consulting at any phase of a project.

From modular standard units to highly customized systems – Dr. Schenk's solutions have precision in focus!

For more information and contact details:
www.dr.schenk.com
mobile.dr.schenk.com

Germany

Phone: +49-89-85695-0
 Fax: +49-89-85695-200

USA

Phone: +1-651-730-4090
 Fax: +1-651-730-1955

Korea

Phone: +82-2-527-1633
 Fax: +82-2-527-1635

Taiwan

Phone: +886-2-2920-7899
 Fax: +886-2-2920-8198

Hong Kong

Phone: +852-2425-1860
 Fax: +852-2425-6775

China-Beijing

Phone: +86-10-6503-2159
 Fax: +86-10-6503-2161

China-Shanghai

Phone: +86-21-5836-6700
 Fax: +86-21-5836-6701

For further regional sales & service representatives please refer to www.dr.schenk.com

Dr. Schenk GmbH Industriemesstechnik

Einsteinstrasse 37 (Martinsried)
 82152 Planegg
 Germany