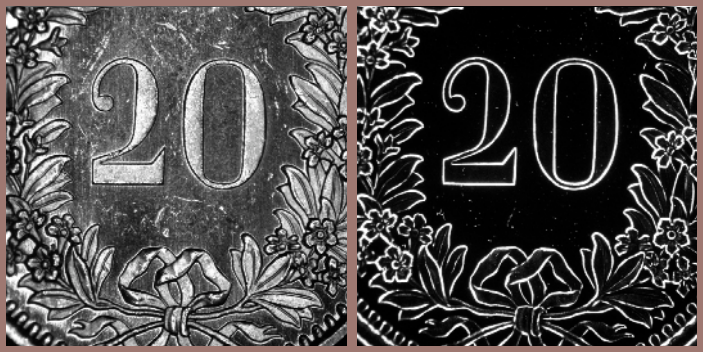
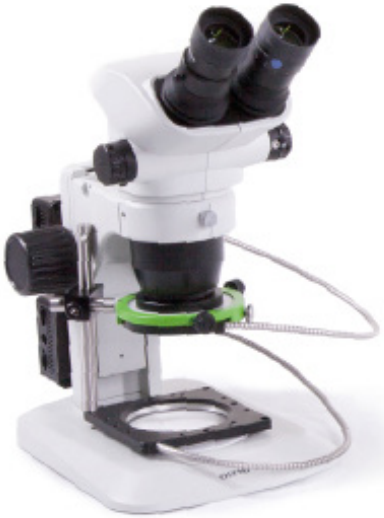
APPLICATION NOTE
INDUSTRY



INSPECTION OF CD'S OR WAFERS

AVOIDING REFLECTIONS AND COLOUR FRINGES.

CONTRASTING FLAWS AND CONTAMINATION ON THE SURFACE.



Using standard LED illuminations to inspect specular surfaces creates reflections on the surface, and in many cases even colour fringes will appear in the image as clearly illustrated with a lit CD herewith on Fig.1.

FEATURES OF L.E.S.S. LIGHTING SYSTEMS

- Darkfield illumination, the light hit the sample at low angle
- Easy working distance adjustment
- Uniform and diffuse illumination with neutral white light (5400 °K)
- No heat dissipation from the ring lights
- Free view and easy access to the specimen

SWISS MADE

APPLICATION

Fig.1 has been taken with a customary 80 LED ring light, at a working distance of about 100 mm. Disturbing reflections and colour fringes appear on the surface of the CD. Contaminating particles or scratches on the surface are hardly visible.

Fig.2 has been taken with the L.E.S.S. Darkfield positioned at 20mm above the CD. In this configuration, the light is hitting the CD surface at low angle, from the side: reflections and colour fringes disappear, the particles on the surface are clearly highlighted from the uniform background.

Because of the crisp and clear contrasting of the scratches, even automated inspection by image analysis systems is easy and reliable with L.E.S.S. lighting systems.

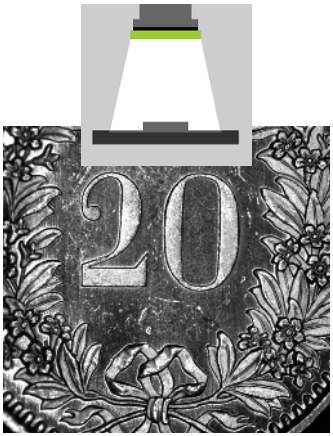


Fig.1

80 LED ring light

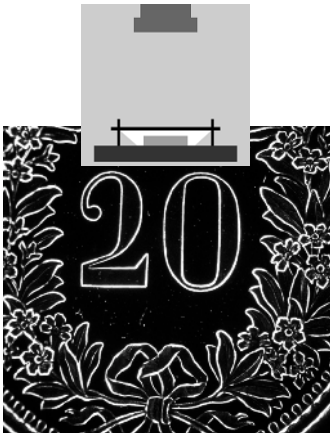


Fig.2

L.E.S.S. Darkfield illumination

RISK CLASS 0
EN 62471 : 2006

TYPE 5401
CLASS 1 LASER PRODUCT
IEC 60825-1:2014-05

CE

RoHS2 COMPLIANT

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LESS
BE BRILLIANT