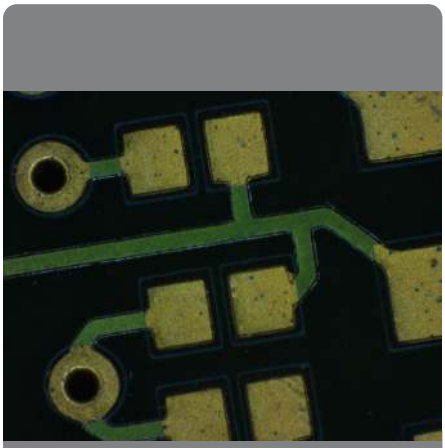
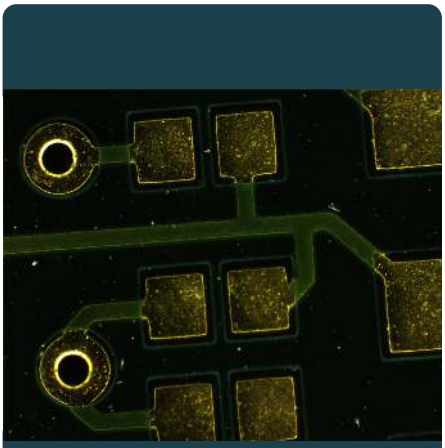
APPLICATION NOTE

INDUSTRY MICROELECTRONICS



LED RINGLIGHT



L.E.S.S. RINGLIGHT

INSPECTION OF MICROELECTRONICS TRACKS AND CONTACTS ON A PCB

HIGHLIGHTING THE **SURFACE QUALITY** OF **MICROELECTRONICS TRACKS** AND **CONTACTS ON A PCB**

PROBLEMATIC

Using standard LED illuminations to inspect PCB does not allow for optimal inspection of the surface quality and more specifically of electric tracks and contacts.

OUR SOLUTION

Using L.E.S.S. light, the user benefits from uniform white light (5400°) illumination.

The light of the L.E.S.S. darkfield illumination hit the sample from the side with optimum intensity and no heat dissipation offering high contrast image.

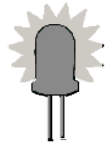
SWISS MADE

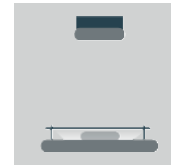
APPLICATION

The image in **Fig. 1** was taken under a stereomicroscope with an entry-level LED ring at a working distance of 100 mm. Scratches, dust and other surface defects are not observable as the different areas are not evenly illuminated. The surface quality of the electronic contacts are undetectable and difficult to inspect.

The image in **Fig. 2** was taken under a stereomicroscope with a L.E.S.S. Darkfield ringlight (DF-5400), adjusted to a working distance of about 10 mm above the PCB. The uniformity and directionality on the light striking the entire PCB provides excellent contrast over the surface to inspect.

Coating defects are immediately visible. The uniformity of the illumination results in sharp, well-defined images leading to a faster and more accurate and reliable inspection of the sample.





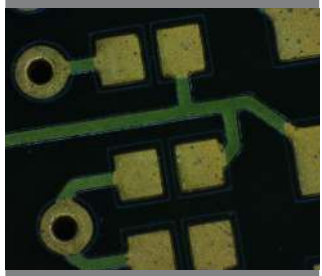


Fig. 1

Image of a PCB lit by an 80 LED ring light

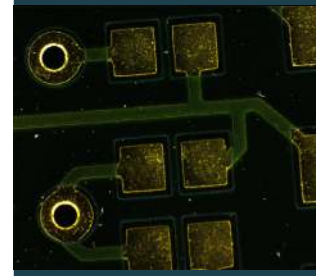


Fig. 2

Image of a PCB lit by L.E.S.S. Darkfield (DF-5400)

RISK CLASS 0
EN 62471 : 2006

EYE-SAFE
CLASS 1 LASER PRODUCT
ICE 60825-1 2014-05

CE

RoHS2 COMPLIANT

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LESS
BE BRILLIANT