

# JOT - Journal für Oberflächentechnik

10/2019 · October 2019

## UNOFFICIAL ENGLISH TRANSLATION

The original article was published in German in JOT - Journal für Oberflächentechnik, a trade magazine published in Germany. Prepared for CRETEC. The German original remains the reference.

### JOT Journal für Oberflächentechnik Ausgabe 10.2019 Homogene Flächenbeleuchtung für große Prüfteile



CRETEC Pressemappe

Stand: 05.2020

Seite 40 / 116

## Homogeneous LED area lighting for large test parts

Historical technical, standards, warranty and contact statements are translated as published. This is not an update of the original article. Publisher artwork, advertisements and unrelated neighbouring articles remain in their original language. Original publisher artwork, logos and advertisements are retained in their original language.

## Homogeneous LED area lighting for large test parts

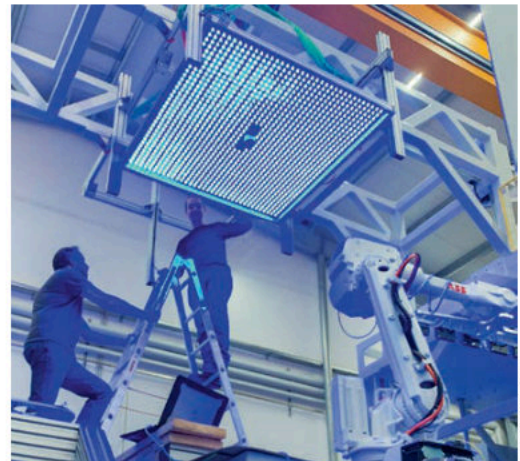
High flexibility and extremely fine feature detection in industrial machine vision are directly linked to intelligently controlled lighting quality. Modular, variable LED systems in customised formats optimise precise image processing economically and technologically.

Flexible automation requires increasingly fine detection of many different features on larger test objects under changing conditions. Optimising lighting quality through intelligent LED hardware and control software is therefore essential.

For large test parts, Cretec offers a broad range of intelligent, large-area, modular LED lighting systems. These modules can be combined in variable geometric formats for backlighting extending to the edges or front lighting. They enable economically and technologically efficient vision solutions even for highly complex requirements.

The LED modules are designed for harsh industrial environments with protection up to IP67. Exactly the right light is available for each requirement. Basic LED modules can be arranged in any geometric format, for example bar lights for conveyor applications or other large-area arrangements. Illuminated areas range from 50 × 50 mm to 6,000 × 6,000 mm. All light colours are available in continuous or strobe

mode. Large-area lighting modules in strobe, colour-change or daylight mode offer a wide range of industrial machine-vision applications.



© Cretec GmbH

mode. The LED boards are developed in-house and fitted with white, red, green, blue, infrared, ultraviolet, RGB or RGBW LEDs.

In the backlighting module, the spacing between the dimmable LEDs and their distance from the cover - a special diffuser - are selected to create an optimised, homogeneous illuminated field extending to the edges. Openings for optics can be incorporated into the lights, allowing a camera behind the light to look through it. The lights are factory-adjusted and need no further manual adjustment when the application changes.

Intelligent control of the individual LED colours (RGB/RGBW), combined with image processing using tone mapping, can considerably improve reliable recognition of structures. In strobe mode, synchronised in the microsecond range, the test objects are effectively frozen with high image sharpness. The extremely short flash duration permits operation at a rated current 300% higher, greatly increasing the available illuminance.

Contact: Cretec GmbH, Creating Technologies, Hammersbach  
Tel. 06185 647 99-00 ·  
mail@cretec.gmbh  
www.cretec.gmbh

## Lenzing OptiFil®

Smart solutions to drive your results



### Automatische Rückspülfilter

- Hohe Rückspül-Effizienz und minimale Verlustströme
- Filterfeinheit bis 1 µm
- Niedrige Investitions- und Betriebskosten

### Anwendungen in der Oberflächentechnik



Lenzing Technik GmbH · 4860 Lenzing, Austria · Tel.: +43 7672 701-3479  
E-Mail: filter-tech@lenzing.com · www.lenzing-technik.com

LenzingTechnik