

WELDEYE

Camera and Illumination Modules for laser welding

Process visualisation – Process monitoring – Quality control

Lessmüller Lasertechnik is one of the leading providers of real-time quality control systems for laser welding. The smart **WELDEYE** quality system has been customised to complement the laser head, supplementing it with visualisation and automated quality control functions for reliable weld / braze quality.

Your Advantages:

- Real-time process visualisation, monitoring and quality assurance for tactile guided laser welding and brazing
- Recording, evaluation and documentation of image based data and process parameters (wire speed etc.)
- Real-time detection of weld faults for reduced scrap rate, inspection costs and rework
- Communication via standard fieldbuses
- Compact, robust, lightweight, easy maintenance, and cost-effective design
- Tailor-made applications

Features:

- Automatic check of “beam to wire” position with **OPTIKCHECK**
- Weld quality monitoring by means of patented evaluation of the camera images under different illumination conditions
- High industrial suitability due to replaceable protection glasses and crossjet integrated directly into the illumination module
- Over 600 systems sold



WELDEYE camera-illumination module APL 3.0

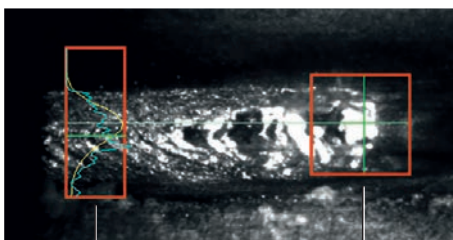


WELDEYE illumination module LM6



WELDEYE illumination module LM4

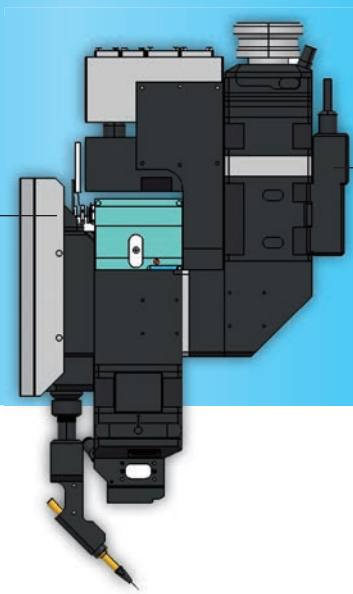
Process monitoring:



POST process

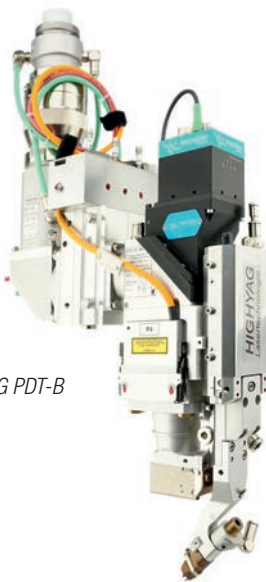
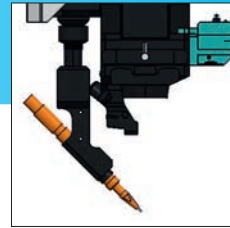
IN process

WELDEYE camera-illumination module APL 3.0

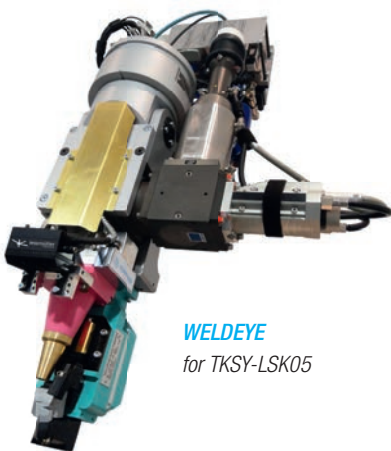


Scansonic ALO3

WELDEYE illumination module LM6



WELDEYE
for HIGHYAG PDT-B



WELDEYE
for TKSJ-LSK05

Technical data:

Light source

Illumination	Laser pulsed
Laser class	4, IEC EN 60825-1:2014
Wavelength	805 nm
Optical power	12 W (typ. 10% dc)

Lateral image area

Image size	typ. 18 mm x 9 mm
Camera resolution	typ. 600 px x 200 px at 300 fps
Image rate	typ. 48 px/mm
	typ. 350 fps, up to 500 fps

Communication interfaces

Fieldbus protocols	Profinet, Ethernet/IP, Ethercat, Profibus, Devicenet
Connection	RJ45, 100 Mb/s
Data and service protocol	Ethernet TCP/IP
Connection	RJ45, 100 Mb/s
Internal interfaces	Ethernet

Electrical data

Supply voltage of supply cabinet	100 - 240 VAC
Current consumption	6 A / 3 A
Supply voltage of camera	+24 VDC from supply cabinet
Supply voltage of illumination module	+24 VDC from camera

Mechanical data

Overall dimensions of camera-illumination module APL 3.0	99 mm x 82 mm x 66 mm
Total net weight of camera-illumination module APL 3.0	< 1 kg
Degree of protection	IP 65, DIN EN 60529:2014
Dimensions of supply cabinet	600 mm x 400 mm x 210 mm
Net weight of supply cabinet	26 kg
Degree of protection	IP 65, DIN EN 60529:2014

Our team supports your application testing as well as system planning and integration on- and off-site.



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