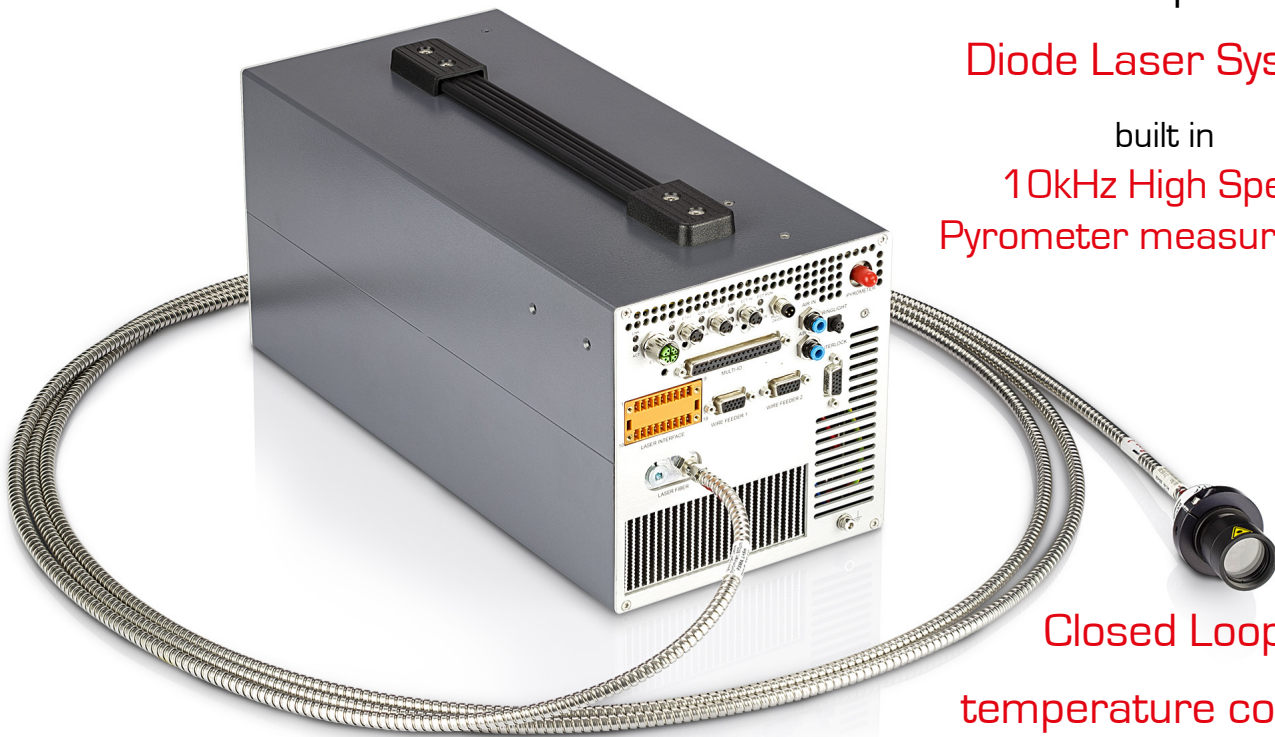


LCL04  
LASCON<sup>®</sup> Controlled Laser



unique  
Diode Laser System

built in  
10kHz High Speed  
Pyrometer measurement

Closed Loop  
temperature control

Typical Applications

Universally applicable in almost all laser heating processes

Laser soldering and brazing  
Laser bonding  
Laser plastic welding  
Laser heat treatment

Laser power up to 130W  
Temperature ranges from  
100°C to 2200°C

Features

All-in-One autonomous working System  
Air-cooled  
Ethernet connection  
Industrial I/O ports

Process visualisation  
Process documentation  
Real time Data storage  
Programmable architecture  
Compact and easy to integrate

## Technical Data

	<b>Laser</b>
Output power:	60W, 75W, 100W, 130W
Laser safety:	laser class 4 (according to DIN EN 60825-1 Safety of laser products)
Wavelength:	915nm, others on request
Laser type:	fiber coupled diode laser
Spot size in focus:	depending on optics in use (typical @100mm distance, 2x diameter of fiber)
Rise time:	0.1ms
Operation mode:	cw, continuous wave
Power Control:	analog IN 0V - 10V (0% -100%)
Sighting:	laser targeting coaxial with pyrometer measurement
Optical fiber length:	3m, 5m, 10m , others on demand
Power supply:	230VAC ( 100VAC - 240VAC)
Ambient temperature:	+5°C to +30°C for operation, no condensation
Dimensions:	363 x 146 x 165mm, Optics: dia 30.6mm, length 100mm
Weight:	10.5 kG

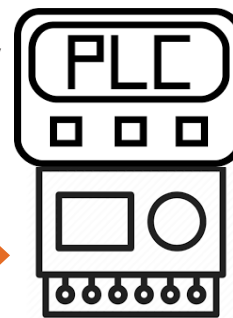
Both units are included in one housing

	<b>built in LASCON® Process Controller</b>	
	<b>Single color</b>	<b>2 color (ratio)</b>
Temperature ranges:	100°C up to 2200°C	200°C up to 2200°C
Spectral range:	1.65µm - 2µm / 1,65- 2,5µm*	1.65 - 2µm divided into two channels
Accuracy (e=1, t90=1s, T=25°C):	< 1500°C: 0.3% +/- 2K	< 1500°C: 0.5% +/- 2K
Repeatability:	0.1% +/- 1K	
Resolution:	0.1°C	
Response time:	100µs, adjustable	
Emissivity:	adjustable 0.01 to 1	independent (see literature)
Data Storage:	internal, typical 5.000 hours of pure process time	
Optical fiber length:	3m, 5m, 10m, 20m, 40m (special lengths on request)	
CE label:	According to EU directives for electromagnetic immunity	
Conformity:	The RoHS Directive 2011/65/EU of 2011-06-08 with supplement from 2015-03-31 is fulfilled	
*low temperature version		
Any optical part installed in the beamway for coaxial measurement can affect given technical data		

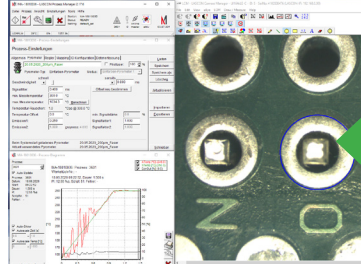
# Typical Setup



Connections can be done alternatively or simultaneously

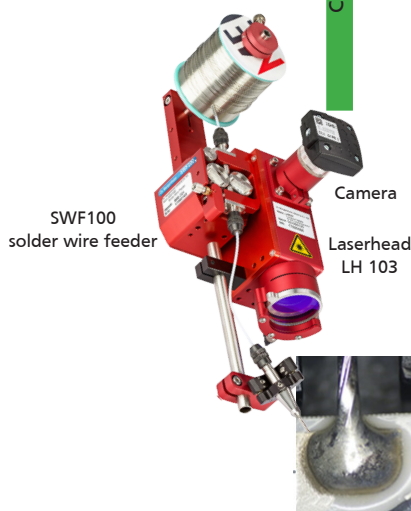


Easy to run and operate the system by the Software package:  
LASCON®Camera Manager and Process Manager



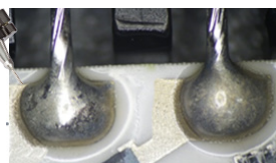
Example: Position control in THT soldering process

## Application example



SWF100 solder wire feeder

Camera  
Laserhead LH 103



Soldering

Camera image

Laser output to process head

Optical fiber for pyrometer

Digital and analog I/O

Ethernet

Connection to a Programmable Logic Controller via Multi I/O interface. All controller parameters are accessible and can be adjusted.

6 analog IN, 3 analog OUT, 16 digital IN, 8 digital OUT for e.g.

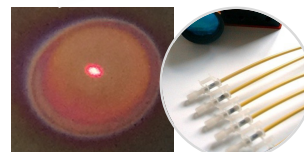
- Script selection
- Process start / stop
- Temperature setpoint
- Laser Power output (0-10V)
- Temperature output
- Status messages
- Error messages

## Application example



Camera

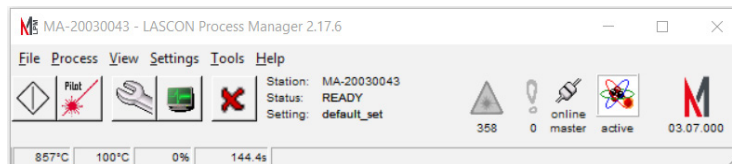
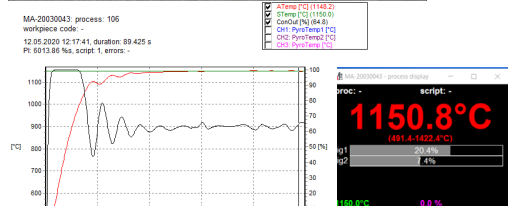
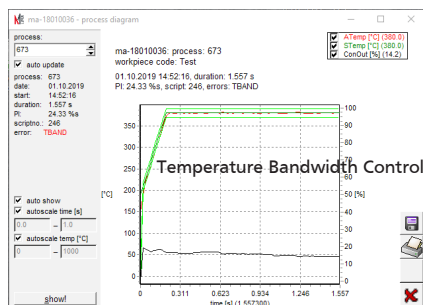
Laserhead LH 103



Heat treatment Plastic welding

## Included Software

### Process Manger Software (LPM) Windows® operating system

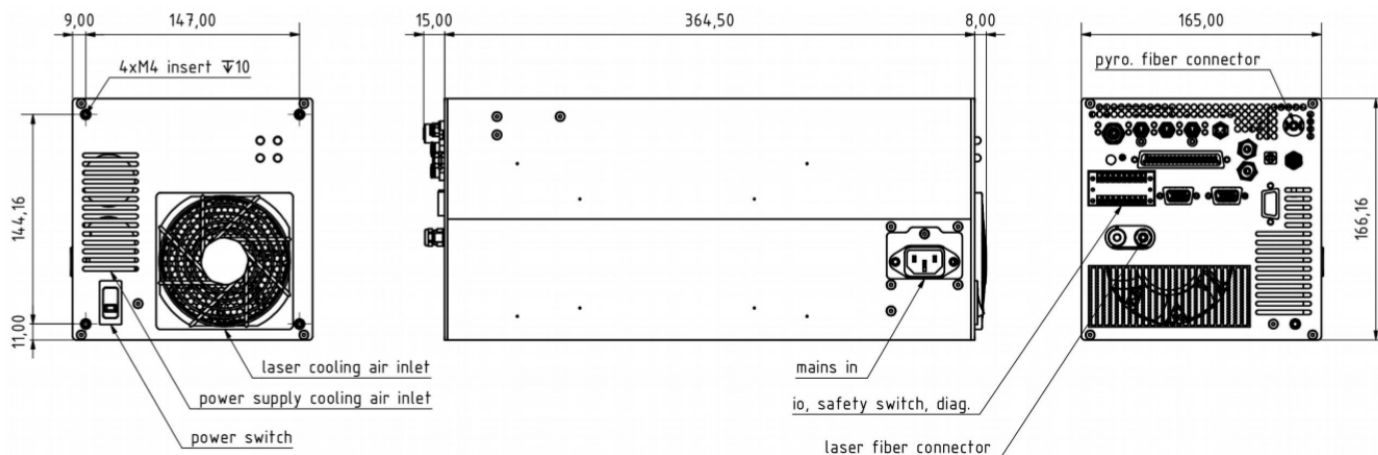


- Adjustment of all pyrometer and controller parameters
- Providing variety of control commands and functions for script
- Storage capacity for infinite number of processes (5.000h) and scripts
- Process visualization, automatical data export in csv format
- Free configuration of Multi I/O interface
- Pyrometer calibration inside the application
- Access rights management with password protection

## Order Code

Order Code	Item (more on request)
50-000471	LCL04-060-915-1C0326-P-W LASCON Controlled Laser, 60W, 915nm, pigtailed , One-Color Pyrometer, SWC
50-000472	LCL04-060-915-1C0326-P-X LASCON Controlled Laser, 60W, 915nm, pigtailed, One-Color Pyrometer
50-000450	LCL04-075-915-1C0326-D-W LASCON Controlled Laser, 75W, 915nm, One-Color Pyrometer, FSMA, SWC
50-000484	LCL04-130-915-1C0326-D-X LASCON Controlled Laser, 130W, 915nm, One-Color Pyrometer, FSMA
50-000483	LCL04-130-915-1C0326-D-W LASCON Controlled Laser, 130W, 915nm, One-Color Pyrometer, FSMA, SWC
50-000834	Pyrometer Optical fiber cable, metal armored, core dia. 200 µm, length 3m
50-000253	Pyrometer Optical fiber cable, metal armored, core dia. 200 µm, length 5m
50-000254	Pyrometer Optical fiber cable, metal armored, core dia. 200 µm, length 10m
50-000661	Pyrometer Optical fiber cable, metal armored, core dia. 400 µm, length 3 m
500-625	Pyrometer Optical fiber cable, metal armored, core dia. 400 µm, length 5 m
500-298	Pyrometer Optical fiber cable, metal armored, core dia. 400 µm, length 10 m

## Dimensions



You are solely responsible for selecting the appropriate product for your application, validating and testing your application, and ensuring your application meets applicable standards, and any other safety, security, or other requirements.  
Data are subject to be changed without notice.

**ultimate laser processing**

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