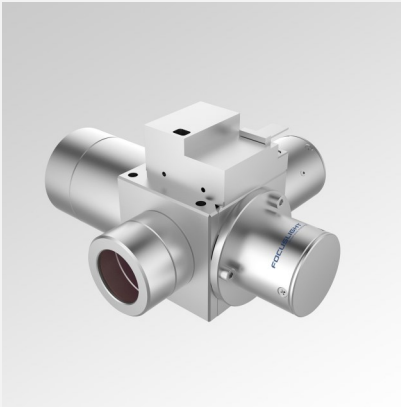


Industrial Laser System for Material Processing

Activation Series - Laser Process Heads



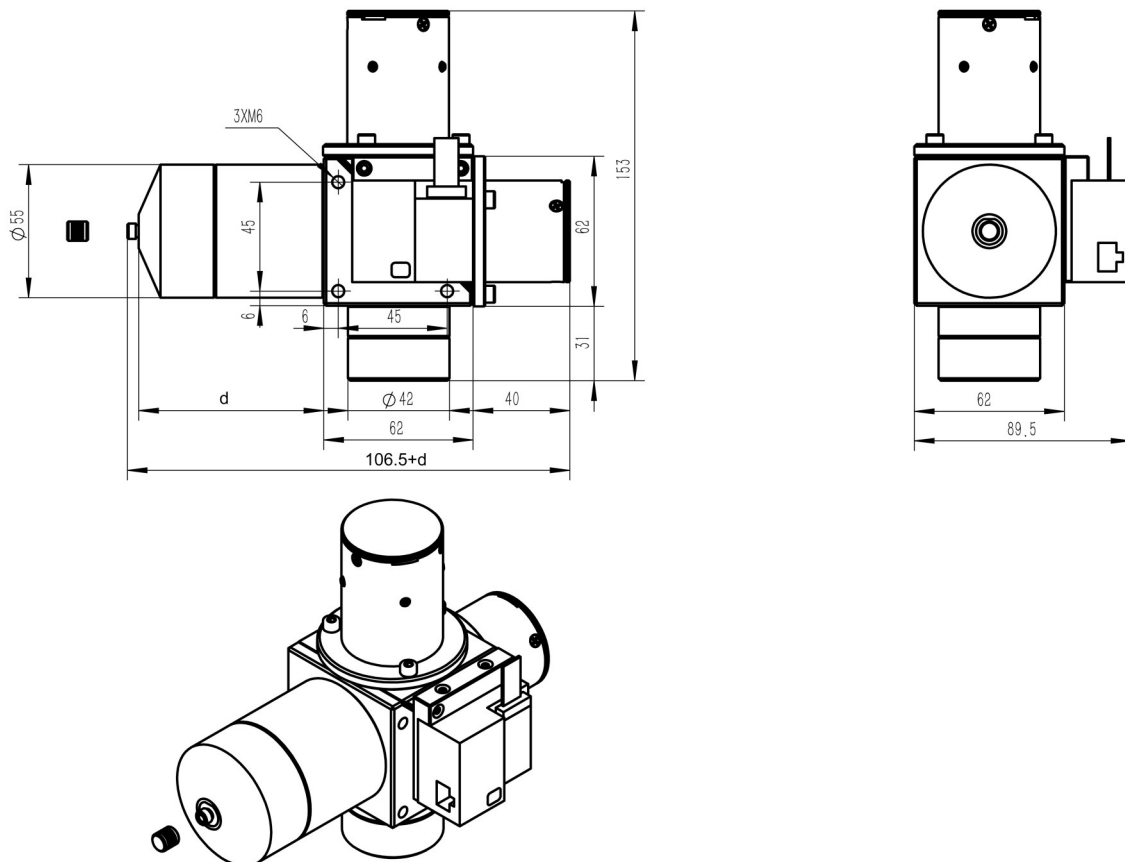
Features

- Optimized beam shaping
- Perfect process tool for welding and soldering
- Safe process data transfer
- Individual software package

Applications

- Material processing
- Laser annealing
- Laser reflow soldering
- Laser bonding
- Plastic welding
- Laser non-contact heating

Product Dimensions (mm)



Remark: The structure drawing is for reference only. Please feel free to contact us for any special requirements.

Product Specifications

Product Code	ACT000040	ACT000041
Part No. ¹	LM-LPH-SMA-LH-10×2-175-PM	LM-LPH-LD80-LH-10×2-175-PM

General Data	Unit	Value	
Housing Material	-	Anodized Aluminum	Anodized Aluminum
Dimensions (length × width × depth)	mm	183 × 153 × 89.5	183 × 153 × 89.5
Mounting Threads (on both sides)	-	3 × M6	3 × M6
Fiber Connector Types	-	SMA905	LD80
Length d (shown in the picture)	mm	76.5	76.5

Optical Data	Unit	Value	
Max. Laser Power (CW)	W	120	500
Wavelength Range	nm	790 - 990	790 - 990
Max. Numerical Aperture	-	0.22	0.22
Max. Fiber Core Diameter	µm	400	400
Transmission Rate	-	90% (typ. 95%)	90% (typ. 95%)
Collimation Focal Length	mm	30	30
Focusing Focal Length	mm	175	175
Working Distance	mm	175 ± 10	175 ± 10
Line Length X-direction TopHat FWHM	mm	12.0 ± 1.0	12.0 ± 1.0
Line Length Y-direction TopHat FWHM	mm	1.6 ± 0.2	1.6 ± 0.2
Uniformity of X-direction (1 - (Imax - Imin) / (Imax + Imin))	-	0.95	0.95

Thermal Data	Unit	Value	
Operating Temperature	°C	5 ~ 40	5 ~ 40
Storage Temperature	°C	15 ~ 50	15 ~ 50
Max. Housing Temperature in Operation	°C	60	60

Pyrometer Control Data	Unit	Value	
Detection Wavelength	nm	1100 - 2100	1100 - 2100
Temperature Measurement Range	°C	120 - 400	120 - 400
Sampling Rate (standard)	kHz	1	1
Calibration Standard Type	-	Black Body	Black Body

Power Monitoring Data	Unit	Value	
Wavelength Range	nm	800 - 1000	800 - 1000
Sampling Rate (standard)	kHz	1	1
Operating Temperature Range	°C	15 - 40	15 - 40
Measurement Accuracy	%	0.2	0.2

Interfaces Data	Unit	Value	
Interface Type	-	Ethernet	Ethernet
Data Cable Type	-	CAT5	CAT5
Socket Type	-	RJ45	RJ45
Communication Protocol of Laser Driver	-	CAN- / Profi - Bus	CAN- / Profi - Bus

Software	Unit	Value	
Process Software	-	4PL Plus	4PL Plus

¹ Part No. = Brand Code - Series - Fiber Connector Type - Beam Type - Beam Size - Focusing Focal Length - Structure Type



Product Specifications

Product Code	ACT000031	ACT000042
Part No. ¹	LM-LPH-SMA-LH-10×2-175	LM-LPH-LD80-LH-10×10-175-PM

General Data	Unit	Value	
Housing Material	-	Anodized Aluminum	Anodized Aluminum
Dimensions (length × width × depth)	mm	143 × 93 × 62	183 × 153 × 89.5
Mounting Threads (on both sides)	-	3 × M6	3 × M6
Fiber Connector Types	-	SMA905	LD80
Length d (shown in the picture)	mm	76.5	76.5

Optical Data	Unit	Value	
Max. Laser Power (CW)	W	120	500
Wavelength Range	nm	790 - 990	790 - 990
Max. Numerical Aperture	-	0.22	0.22
Max. Fiber Core Diameter	μm	400	400
Transmission Rate	-	90% (typ. 95%)	90% (typ. 95%)
Collimation Focal Length	mm	30	30
Focusing Focal Length	mm	175	175
Working Distance	mm	175 ± 10	163 ± 10
Line Length X-direction TopHat FWHM	mm	12.0 ± 1.0	12.0 ± 1.0
Line Length Y-direction TopHat FWHM	mm	1.6 ± 0.2	12.0 ± 1.0
Uniformity of X-direction (1 - (Imax - Imin) / (Imax + Imin))	-	0.95	0.95

Thermal Data	Unit	Value	
Operating Temperature	°C	5 ~ 40	5 ~ 40
Storage Temperature	°C	15 ~ 50	15 ~ 50
Max. Housing Temperature in Operation	°C	60	60

Pyrometer Control Data	Unit	Value	
Detection Wavelength	nm	-	1100 - 2100
Temperature Measurement Range	°C	-	120 - 400
Sampling Rate (standard)	kHz	-	1
Calibration Standard Type	-	-	Black Body

Power Monitoring Data	Unit	Value	
Wavelength Range	nm	-	800 - 1000
Sampling Rate (standard)	kHz	-	1
Operating Temperature Range	°C	-	15 - 40
Measurement Accuracy	%	-	0.2

Interfaces Data	Unit	Value	
Interface Type	-	-	Ethernet
Data Cable Type	-	-	CAT5
Socket Type	-	-	RJ45
Communication Protocol of Laser Driver	-	-	CAN- / Profi - Bus

Software	Unit	Value	
Process Software	-	-	4PL Plus

¹ Part No. = Brand Code - Series - Fiber Connector Type - Beam Type - Beam Size - Focusing Focal Length - Structure Type

