

# FLBK60

## Modular Processing Head to Fit Laser Output to Application Requirement

The FLBK60 is a flexible, modular, fiber laser processing head which is application optimized to deliver superior results in high precision micro welding and cutting for medical device manufacturing, electronic component production, and tool making. It is available with a wide range of collimation and focusing optics that enable spot size to be precisely matched to application requirements. There are numerous additional accessories, including vision modules, a process monitoring interface, quick release couplings and more. The high optical performance of the FLBK60 enables use with fiber lasers of up to 2 kW with no water cooling.

### Advantages

- Robust mechanical and optical design for 24/7 production
- Excellent optical interface for TTL process monitoring and vision systems
- Slim and light weight medium laser power range processing head
- Wear- and heat resistant hard metal cutting nozzles

### Applications

- Micro or fine welding of delicate metal combinations
- High precision 3D cutting of metals, ceramics, or hard and brittle materials
- Automated manufacturing systems for laser material processing

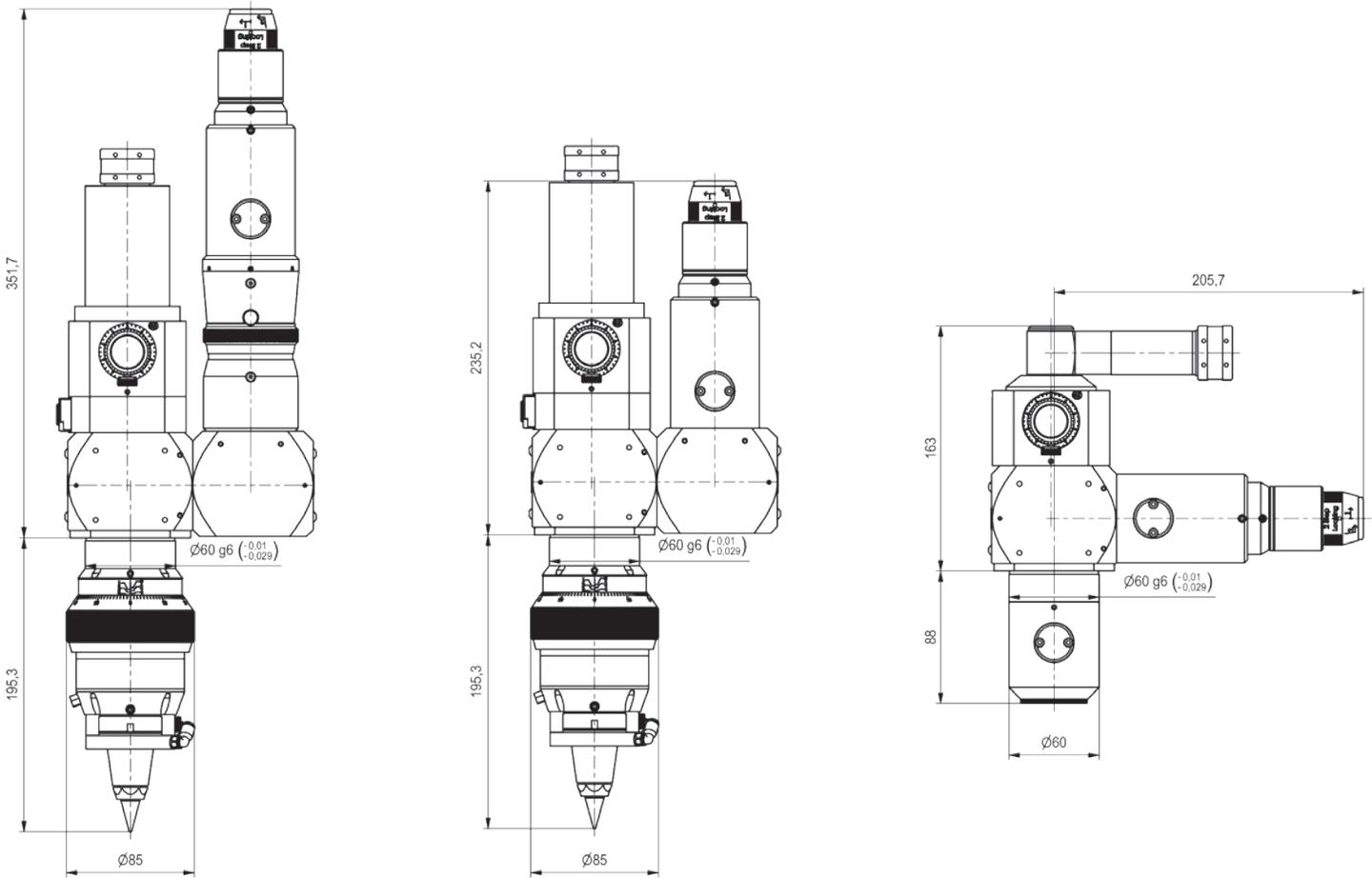


## SPECIFICATIONS

SPECIFICATIONS	FLBK60							
Wavelength (nm)	1055 to 1070							
Max. Average Power (kW)	2							
Laser Interface	QB, QCS or LL97 fiber connector							
Collimator focal length (mm)	50	67	80	100	150	200	50 to 150 adjustable	80 to 240 adjustable
Max. Collimator NA	0.25	0.19	0.16	0.13	0.09	0.06	0.11	0.07
Max. Free Aperture (mm)	Ø 28							
Weight (kg)	5 to 7							
<b>Focusing</b>								
Focal Length Welding (mm)	50, 100, 150, 200 (fix)							
Focal Length Cutting Modules (mm)	100 or 150 (±4 mm fine focus adjustment)							
Accuracy of Adjustment (mm)	0.05							
<b>Viewing</b>								
Focus Range (mm)	±10							
Camera Connection	C-mount standard for customized viewing solution e.g. vision system							
Camera	Standard: 2/3" (2MP) high speed b/w camera at min. 150 fps (USB3)							
<b>Assist Gas Supply</b>								
Connection	Push-in fitting, Ø 6 mm							
Max. Pressure for Cutting Module (bar)	18							
Max. Pressure for Welding Nozzle	4							
<b>Approved Laser Systems</b>								
Coherent Medium Range Laser Systems	StarFiber Series (SF100/200, SF400/600, SF150P/300P) Powerline FL Series HighLight FL (FL1000/1500, FL1000CSM/FL1500CSM) SLS200 CL Series (CL 8, CL8 LOP, CL16, CL16 LOP, CL60, CL60HP)							
<b>Modular Options for FLBK60</b>								
Coaxial IR light illumination with band pass filter for camera								
10 m drag chain suitable supply cables – for automatization and robot integration								
TTL process monitoring interface for optical sensors and pyrometer								
1" (5MP) High speed b/w camera for up to 900 fps (USB3) or 1/3" (1.2MP) color or b/w camera (USB2.0)								
½" CCD analog camera with cross hair module (BNC)								
Quick release coupling for focussing modules addresses flexible manufacturing structures								
Interface for Cutting/drilling focus module BAK4-F50								
Interface for welding focus module BAK4-F300								
Z-adjustment for welding modules ±5 mm								
Coaxial welding nozzle (up to 4bar)								
Manual swiveling module ± 90°								
Motorized swiveling module ± 100°								

## MECHANICAL SPECIFICATIONS

### FLBK60



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all FLBK60 Laser Processing Heads. For full details of this warranty coverage, please refer to the Service section at [www.Coherent.com](http://www.Coherent.com) or contact your local Sales or Service Representative.

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