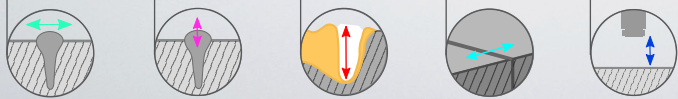
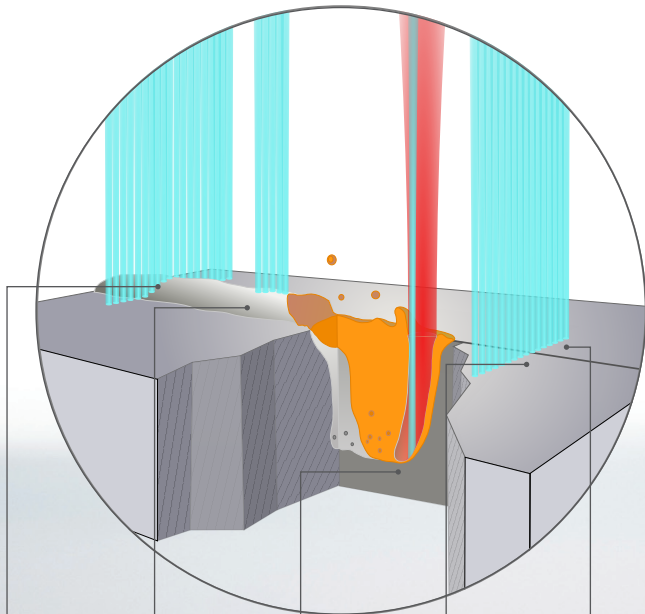


# LDD-700

## In-line Scanning Weld Monitor



### Transverse Profile

Measures the finished weld bead transverse profile.

### Finished Weld Surface

Measured just behind the melt pool captures the height of the finished weld bead.

### Keyhole Depth

Measured inside the keyhole during the weld to determine actual weld penetration depth in real time.

### Seam Profile

A sweep ahead of the process looks for joint position on the workpiece.

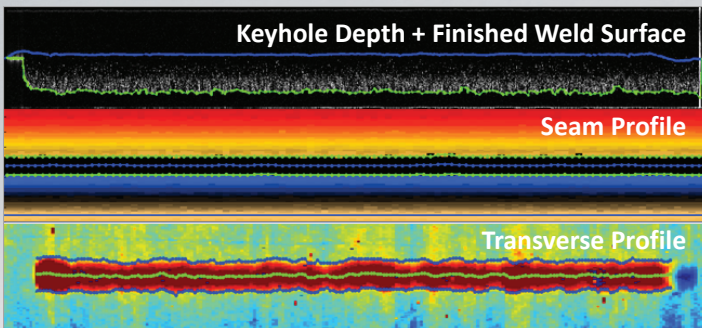
### Workpiece Height

Measures the distance between the material surface and the welding optics.



**IPG Photonics** introduces the in-line weld monitor for remote scan welding applications. Paired with our IPG OmniWELD Scanning software the LDD-700 offers five monitoring modes: keyhole depth, seam profile, workpiece height, finished weld surface height and bead profile—all from a single instrument. Active steering of the ICI beam allows OmniWELD to seek out defects immediately before, during, and after the welding process. These capabilities are available in a single presentation of the part with little to no additional cycle time or fixturing required.

The optimal combination of measurement types, locations, and PASS/FAIL criteria for each weld process can be easily configured in software, simplifying replication on multiple systems.

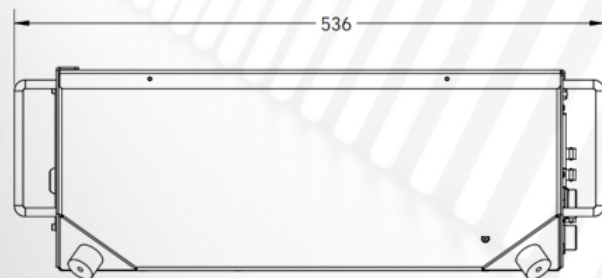
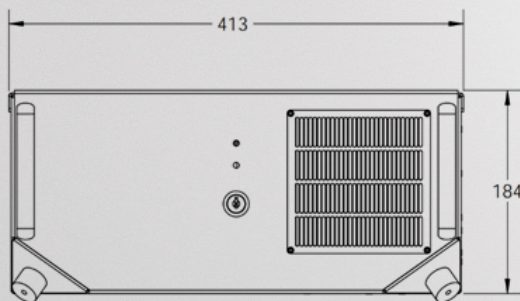


# LDD-700

## In-line Scanning Weld Monitor

Optical Characteristics	
Imaging Wavelength, nm	800-900
Power, mW	<20
Measurement Frequency, kHz	250
Axial Resolution, $\mu\text{m}$	<20
Axial Field of View, mm	6, 9, 12
Welding Process Area, mm	Up to 40 (Application Dependent)

General Characteristics	
Control Unit Dimensions, (W $\times$ D $\times$ H), mm	413 $\times$ 586 $\times$ 184
Head Interface Dimensions (W $\times$ D $\times$ H), mm	128 $\times$ 74 $\times$ 89
Optics Module Dimensions (W $\times$ D $\times$ H), mm	330 $\times$ 111 $\times$ 136
Head Interface Compatibility	FLW-D30, D50, D30 Wobble, D50 Wobble, 2D High-Power Scanner and Mid-Power Scanner
Cooling	Air-cooled
Supply Voltage, V	100 to 250
Power Consumption, W	<500 typ.
Real Time Control Outputs	-10 to 10 V analogue, TCP/IP, Fieldbus
Communication Protocols	Devicenet, TCP/IP, Ethernet/IP, Hardwire IO



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MAX. AVERAGE OUTPUT POWER: 40 mW  
WAVELENGTH RANGE: 800-900 nm

DANGER - INVISIBLE LASER  
RADIATION AVOID EYE OR SKIN  
EXPOSURE TO DIRECT OR  
SCATTERED RADIATION  
CLASS 3B LASER PRODUCT

IEC 60825-1:2014