

# **Industrial Laser System for Material Processing**

# **Activation Series - Laser Process Heads**



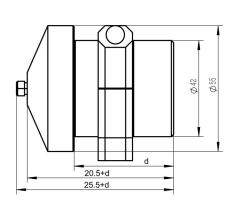
#### **Features**

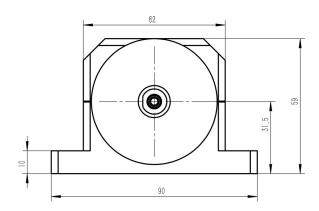
- Optimized beam shaping
- Perfect process tool for welding and soldering
- Safe process data transfer
- · Individual software package

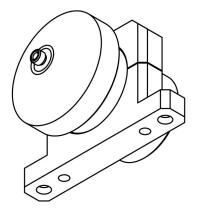
#### **Applications**

- · 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                                     |      | ACT000028            | ACT000033          |
|--|------|----------------------|--------------------|
| Part No. 1                                       |      | LM-LPH-LD80-R-18-200 | LM-LPH-SMA-R-18-75 |
| General Data                                     | Unit | Value                |                    |
| Housing Material                                 | -    | Anodized Aluminum    | Anodized Aluminum  |
| Dimensions (length × width × depth)              | mm   | 90 × 59 × 69         | 90 × 55 × 69       |
| Mounting Threads (on both sides)                 | -    | 2 × M6               | 2 × M6             |
| Fiber Connector Types                            | -    | LD80                 | SMA905             |
| Length d (shown in the picture)                  | mm   | 43.5                 | 43.5               |
| Weight   | g    | 400                  | 400                |
| Optical Data                                     |      |                      |                    |
| Max. Laser Power (CW)                            | W    | 500                  | 120                |
| Wavelength Range                                 | nm   | 790 - 990            | 800 - 1000         |
| Max. Numerical Aperture                          | -    | 0.23                 | 0.23               |
| Max. Fiber Core Diameter                         | μm   | 600                  | 600                |
| Transmission Rate                                | -    | 90% (typ. 95%)       | 90% (typ. 95%)     |
| Collimation Focal Length                         | mm   | 18                   | 18                 |
| Focusing Focal Length                            | mm   | 200                  | 75                 |
| Working Distance                                 | mm   | 180 ± 10             | $55 \pm 5$         |
| Beam Size FWHM with 200µm Fiber                  | μm   | 2300                 | 840                |
| Beam Size (90% PE) with 200µm Fiber <sup>2</sup> | μm   | 3400                 | 1300               |
| Beam Size FWHM with 400 µm Fiber                 | μm   | 4600                 | 1680               |
| Beam Size (90% PE) with 400µm Fiber <sup>2</sup> | μm   | 5600                 | 2100               |
| Max. Divergence with 200 µm Fiber <sup>3</sup>   | mrad | -                    | -                  |
| Max. Divergence with 400µm Fiber <sup>3</sup>    | mrad | -                    | -                  |
| Thermal Data                                     |      |                      |                    |
| Operating Temperature                            | °C   | 5 ~ 40               | 5 ~ 40             |
| Storage Temperature                              | °C   | 15 ~ 50              | 15 ~ 50            |
| Max. Housing Temperature in Operation            | °C   | 60                   | 60                 |

Part No. = Brand Code - Series - Fiber Connector Type - Beam Type - Collimation Focal Length - Focusing Focal Length

<sup>3</sup> FW 1/e<sup>2</sup>



<sup>&</sup>lt;sup>2</sup> PE means power enclosed.



# **Product Specifications**

| Product Code                                     |      | ACT000035             | ACT000039          |
|--|------|-----------------------|--------------------|
| Part No. <sup>1</sup>                            |      | LM-LPH-LD80-R-A35-250 | LM-LPH-LD80-R-18-0 |
| General Data                                     | Unit | Value                 |                    |
| Housing Material                                 | -    | Anodized Aluminum     | Anodized Aluminum  |
| Dimensions (length × width × depth)              | mm   | 90 × 59 × 69          | 55 × 55 × 43       |
| Mounting Threads (on both sides)                 | -    | 2 × M6                | -                  |
| Fiber Connector Types                            | _    | LD80                  | LD80               |
| Length d (shown in the picture)                  | mm   | 43.5                  | 18                 |
| Weight   | g    | 400                   | 220                |
|  |      |                       |                    |
| Optical Data                                     |      |                       |                    |
| Max. Laser Power (CW)                            | W    | 500                   | 500                |
| Wavelength Range                                 | nm   | 790 - 990             | 790 - 990          |
| Max. Numerical Aperture                          | -    | 0.23                  | 0.23               |
| Max. Fiber Core Diameter                         | μm   | 600                   | 600                |
| Transmission Rate                                | -    | 90% (typ. 95%)        | 90% (typ. 95%)     |
| Collimation Focal Length                         | mm   | 35                    | 18                 |
| Focusing Focal Length                            | mm   | 250                   | -                  |
| Working Distance                                 | mm   | 230 ± 10              | -                  |
| Beam Size FWHM with 200µm Fiber                  | μm   | 1430                  | -                  |
| Beam Size (90% PE) with 200µm Fiber <sup>2</sup> | μm   | 1450                  | -                  |
| Beam Size FWHM with 400µm Fiber                  | μm   | 2840                  | -                  |
| Beam Size (90% PE) with 400µm Fiber <sup>2</sup> | μm   | 2700                  | -                  |
| Max. Divergence with 200µm Fiber <sup>3</sup>    | mrad | -                     | 12                 |
| Max. Divergence with 400µm Fiber <sup>3</sup>    | mrad | -                     | 24                 |
| Thermal Data                                     |      |                       |                    |
| Operating Temperature                            | °C   | 5 ~ 40                | 5 ~ 40             |
| Storage Temperature                              | °C   | 15 ~ 50               | 15 ~ 50            |
| Max. Housing Temperature in Operation            | °C   | 60                    | 60                 |

Part No. = Brand Code - Series - Fiber Connector Type - Beam Type - Collimation Focal Length - Focusing Focal Length

<sup>&</sup>lt;sup>3</sup> FW 1/e<sup>2</sup>



<sup>&</sup>lt;sup>2</sup> PE means power enclosed.