

# GLR Series

## CW Green Single-frequency Fiber Lasers



### Applications

- ▶ Pumping Ti:Sapphire, OPOs, Solid State & Dye Lasers
- ▶ Atom Cooling & Trapping
- ▶ Particle Imaging Velocimetry/ Flow Visualization
- ▶ Holography & Interferometry
- ▶ Solar Cell Manufacturing
- ▶ Medical Diagnostics, Therapy & Surgery
- ▶ Manufacturing Inspection & Quality Control
- ▶ Entertainment & Projection



### Features

- ▶ Wavelength 532 nm
- ▶ Output Power up to 100 W
- ▶ Beam Quality  $M^2 < 1.1$
- ▶ Single-frequency  $< 1$  MHz
- ▶ Power Stability 1%
- ▶ Optical Noise 0.2% RMS
- ▶ Linear Polarization  $> 100:1$
- ▶ Compact & Low Cost
- ▶ Telecom Reliability
- ▶ Industrial Performance

**IPG Photonics' GLR Series** is a family of single-mode, single-frequency CW green fiber lasers with output powers up to 100 W. Based on IPG's pioneering highly efficient and reliable fiber laser technologies, GLR lasers feature a super-compact lightweight optical head, connected with a fiber cable to an air-cooled, rack-mounted main laser console. The all fiber construction allows for full range adjustment of output power without any change in power stability and beam mode parameters. The GLR Series green CW lasers are used across a variety of applications from materials processing and medical to scientific and entertainment.

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## CW Green Single-frequency Fiber Lasers

### Optical Characteristics

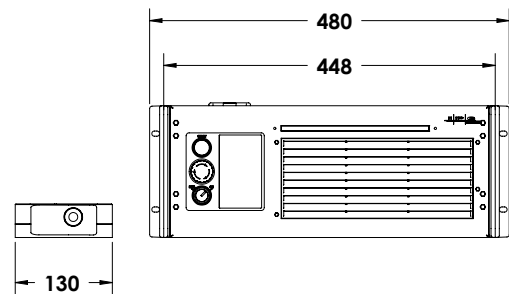
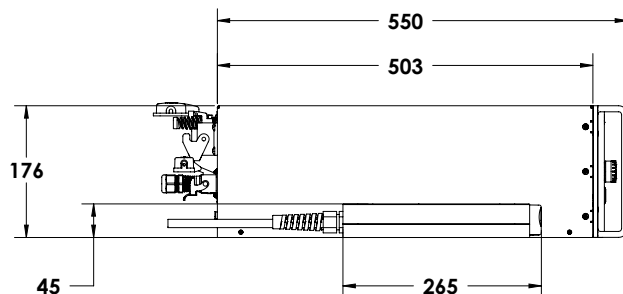
|                                     | GLR-10         | GLR-20  | GLR-30  | GLR-50  | GLR-80 | GLR-100          |
|-------------------------------------|----------------|---------|---------|---------|--------|------------------|
| Wavelength, nm                      | 532            |         |         |         |        |                  |
| Linewidth FWHM, MHz                 | <1             |         |         |         |        |                  |
| Mode of Operation                   | CW             |         |         |         |        |                  |
| Max. Average Power <sup>1</sup> , W | 10             | 20      | 30      | 50      | 80     | 100 <sup>2</sup> |
| Power Tunability, %                 | 5.0-105        | 2.5-105 | 2.3-105 | 2.0-105 |        |                  |
| Power Stability <sup>2</sup> , %    | ± 0.5          |         |         |         |        |                  |
| Optical Noise (<20 MHz), %RMS       | 0.2            |         |         |         |        |                  |
| Polarization                        | Linear, >100:1 |         |         |         |        |                  |
| Beam Quality, M <sup>2</sup>        | <1.1           |         |         |         |        |                  |

<sup>1</sup> Higher output powers are available in GLPN model. Please contact IPG for more information.

<sup>2</sup> Over 8 hours, T= const.

### General Characteristics

|                             |                                |     |     |                 |     |  |
|-----------------------------|--------------------------------|-----|-----|-----------------|-----|--|
| Main Console Dimensions, mm | 448 x 403 x 132                |     |     | 448 x 503 x 176 |     |  |
| Optical Head Dimensions, mm | 130 x 265 x 45                 |     |     |                 |     |  |
| Cooling                     | Air-cooled                     |     |     |                 |     |  |
| Supply Voltage, VAC         | Single-phase 50-60 Hz, 100-240 |     |     |                 |     |  |
| Power Consumption, W        | 120                            | 180 | 240 | 300             | 450 |  |



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