

## Solid-State Green Laser Systems 532 nm, 1 to 3 Watts



***Our 85 GHS series diode-pumped solid-state green lasers are designed for use in display, scanning, and metrology applications requiring both high output and rugged construction.*** These hermetically sealed lasers provide up to three watts of power from a compact, air-cooled package. Our new clean-sealed construction means truly low-maintenance, hands off operation, and long-term reliability — even in a harsh or dirty environment.

For system manufactures who value portability and economy, eliminating water cooling, reducing input power by two orders of magnitude, and reducing laser size by a factor of ten\* are significant advantages of 85 GHS systems.

*\*Compared to a typical water-cooled argon-ion laser system*

### Key Attributes

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- Up to 3.0 W at 532 nm
- Clean-sealed for reliability
- Forced-air cooling
- Lightweight and compact
- Automatic power control
- CW or external analog modulation
- RS-232 interface
- Low power consumption
- Universal input power supply
- OEM modules available

## Specifications

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### Beam Characteristics:

Output Power:

85-GHS-201: 1.0 W

85-GHS-301: 2.0 W

85-GHS-305: 2.5 W

85-GHS-309: 3.0 W

Wavelength:  $532.0 \pm 0.5$  nm

Transverse Mode: Multi

Beam Quality:  $M^2 < 5.0$

Polarization: Vertical  $\pm 5^\circ$

Extinction ratio:  $> 100:1$

Warm-up Time from Cold Start:

$< 3$  minutes to specified output power

Beam Pointing Stability

(constant temp.  $\pm 2^\circ$ ):  $< 0.040$  mrad

Beam Pointing Stability with Beam

Expander:  $< 0.010$  mrad

Power Stability ( $22^\circ\text{C} \pm 2^\circ\text{C}$  over 8 hrs):  $\pm 3\%$

Beam Exit Angle:

Horizontal:  $5.7^\circ \pm 1^\circ$

Vertical:  $0^\circ \pm 1^\circ$

Beam Diameter ( $1/e^2$  at waist):  $< 400$   $\mu\text{m}$

Beam Diameter ( $1/e^2$ ) with Beam

Expander:  $< 2$  mm

Beam Divergence (full angle  $1/e^2$ ):  $< 12$  mrad

Beam Divergence with Beam Expander

(full angle  $1/e^2$ ):  $< 2.0$  mrad

### Electrical Specifications:

Electrical Service:

100 to 240 Vac  $\pm 10\%$ , 50 to 60 Hz

Power Requirement: 150 W (typical)

Current Regulation: Yes

Light Regulation: Yes

Power Adjustment Range: 10% to Full Power

Modulated Operation:

Analog Input: 0 to 5 Vdc

Compatible with 30 KHz scan rates

Current Set Resolution: 0.01 A

Current Set Accuracy:  $\pm 0.1$  A

Power Set Resolution: 0.01 W

Power Set Accuracy:  $\pm 5\%$

### Options:

- Beam Expander 58-ASG-001
- OEM module
- Custom beam delivery
- Custom configurations

### Environmental Specifications:

Cooling: Forced air-cooled with heat sink

Operating Temperature:  $+10^\circ\text{C}$  to  $+35^\circ\text{C}$

Storage Temperature:  $-10^\circ\text{C}$  to  $+60^\circ\text{C}$

Relative Humidity, Operating:

0 to 95% noncondensing

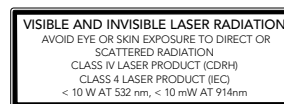
Cable Length: 36 inches (914 mm)

Laser Head Weight: 3.9 kg (8.6 lb)

Power Supply Weight: 3.7 kg (8.1 lb)

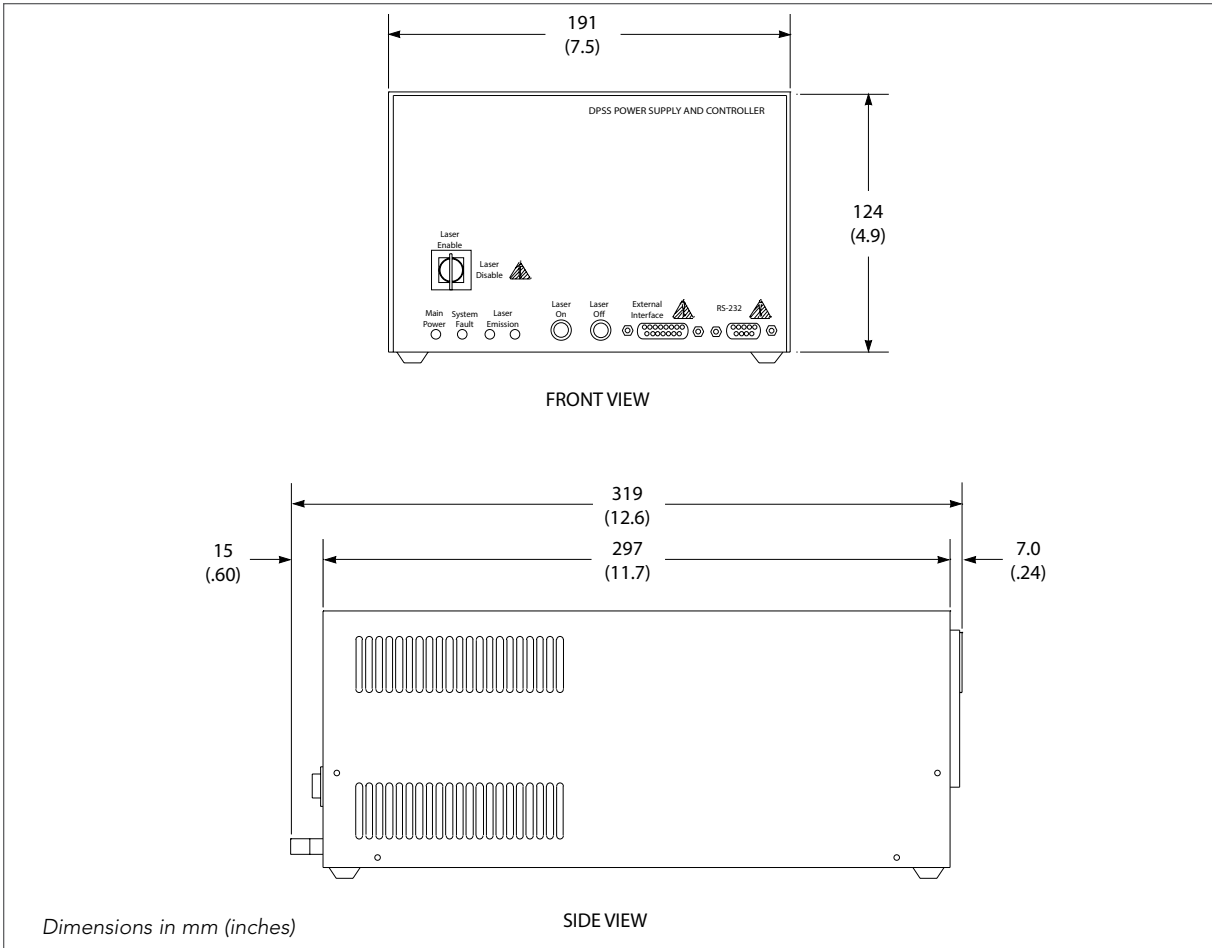
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*Specifications are valid at 100% of specified output power.*



Melles Griot lasers and instruments are designed, tested, and manufactured for compliance with applicable electrical and laser safety standards.

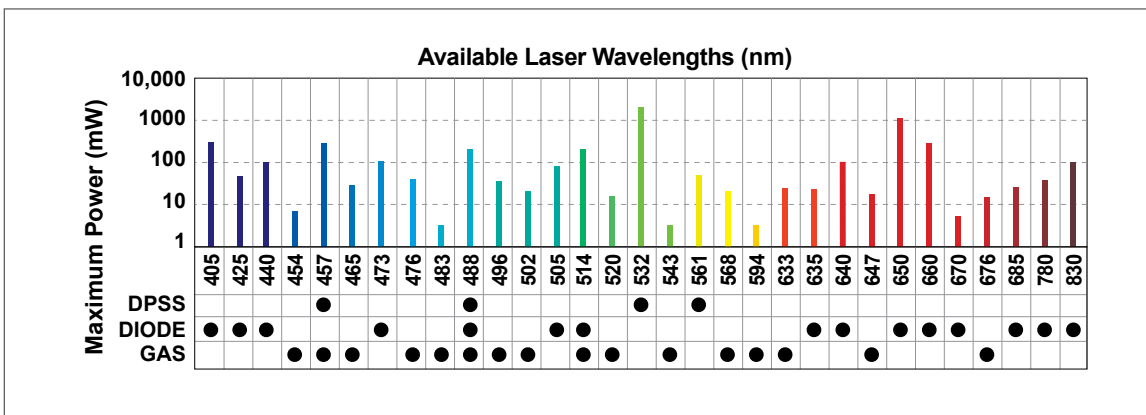
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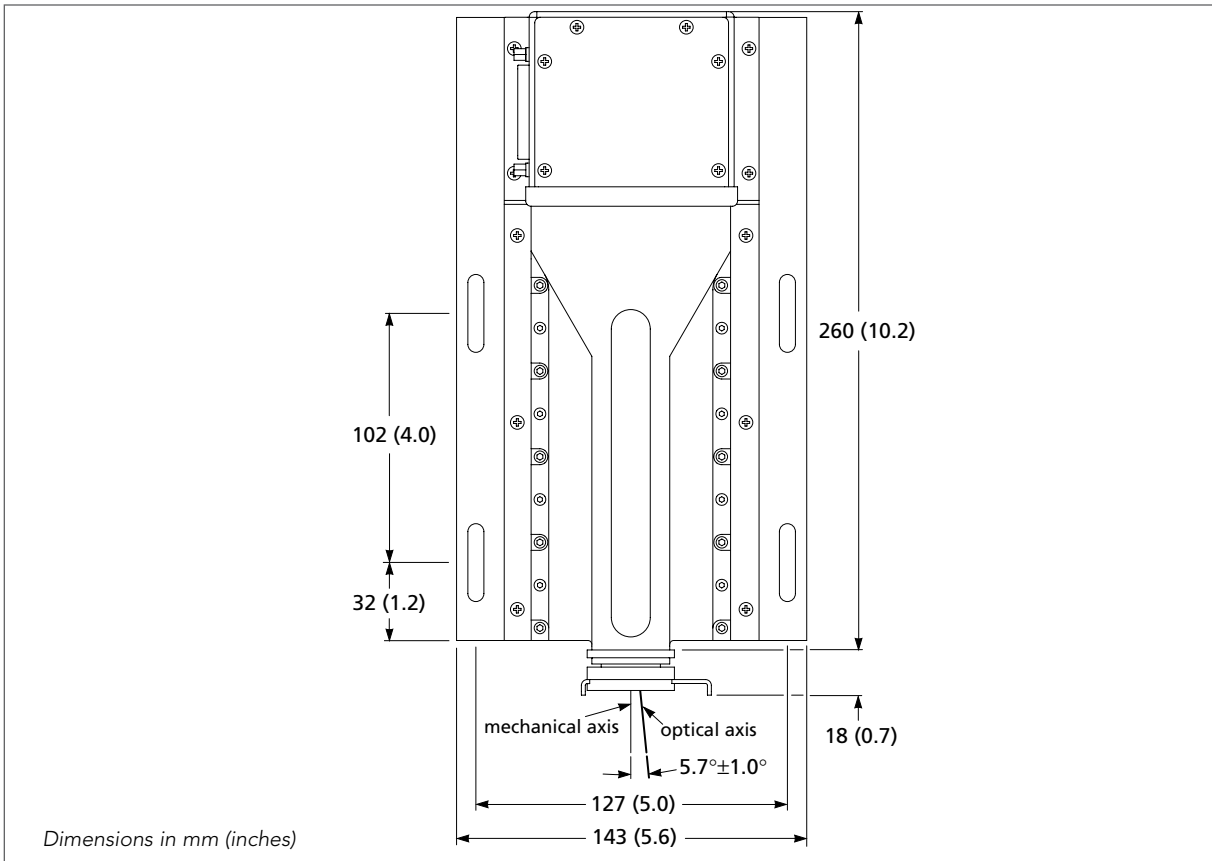
85-GHS series power supply and controller

## Select from more than 27 wavelengths

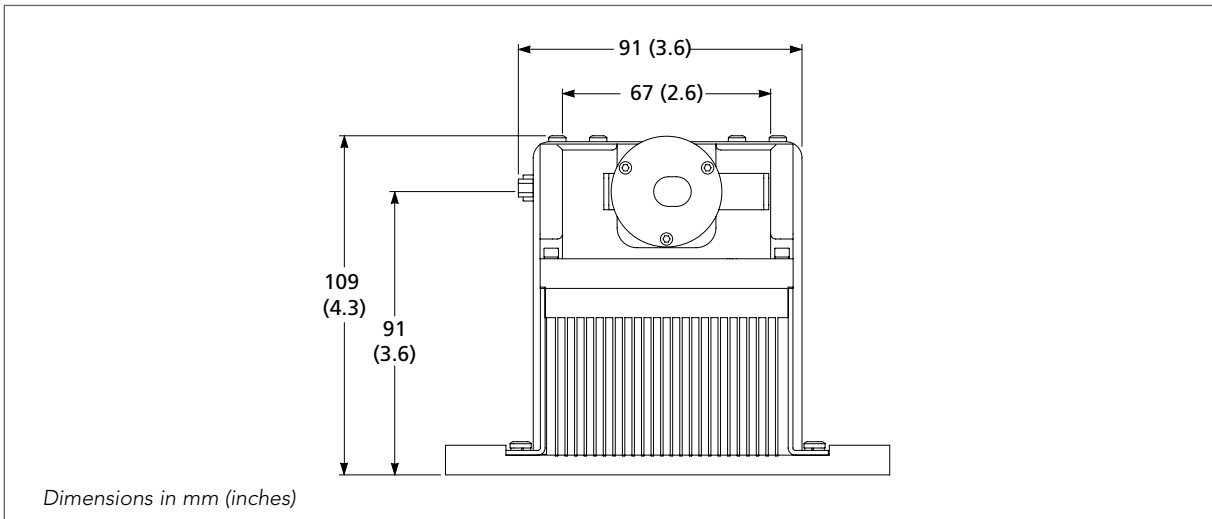
Melles Griot manufactures a comprehensive line of lasers and laser systems for laboratory and OEM applications. Standard products include helium neon lasers, diode-pumped solid-state lasers, argon, mixed gas ion lasers, and semiconductor laser assemblies. Available wavelengths range from 405 nm in the violet to 830 nm in the near infrared, with powers ranging from a few milliwatts to several watts, as shown in the chart below.



Spectral output available from Melles Griot lasers



85-GHS series laser head (top view)



85-GHS series laser head (front view)

## Ready to purchase?

Go to [marketplace.idexop.com/store/dpss-lasers](https://marketplace.idexop.com/store/dpss-lasers)

If you have questions call 1-800-MG-LASER , email [mglasers@idexcorp.com](mailto:mglasers@idexcorp.com)

or go to [mellesgriot.com](https://www.mellesgriot.com)

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