GL1000

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PRODUCT OVERVIEW

The GL1000 Laser Guide was designed from the ground up to provide line control for walk behind paint striping or paint removal equipment.

The GL1000 features a rugged die cast aluminum housing. The special 5/8” mounting bracket allows the GL1000 to attach to virtually any walk behind machine in just minutes. The unit can be powered by 12 or 24 volts DC and only draws 0.1 of 1 amp or less allowing you to operate up to 30-40 hours on a small 12 volt 5Ah ATV battery.

The ON/OFF switch on the back of the laser has an internal LED light to indicate if the GL1000 is getting power. Also the power cord has a strain relief built in to reduce cord fatigue failure.

MECHANICAL FEATURES
ACCESSORIES-REPLACEMENT PARTS

Battery Kit:  P/N 3003-0800-2 (U.S.)  
               P/N 3003-0802-2 (INTL)

Consists of: Hard shelled weatherproof battery case w/ mounting hardware, 12VDC 5Ah lead acid battery plus battery A/C wall charger.  (Refer to page 3 for detailed information)

Cables-Adaptors

GRACO LineLazer V “Y” Cable Harness Adaptor. Allows plug and play for GL1000 and GL1700 simultaneously using GRACOs onboard 12v battery.  P/N 3003-1401

Battery Clip Cable Adaptor. Adapts to any 12 or 24 volt battery source.  P/N 3003-1402

GL1000 7ft. Power Cord  
P/N 3003-0008

Reflective Alignment Target  
P/N 3003-0070  
Reflective alignment target with reinforced steel rim and grab handle.

12” Extension w/ 5/8 Collar  
P/N 3003-0027  
Allows you to raise the laser as high as 36” for increased visibility on the alignment target.  
Includes: Allen wrench and built-in holder.
**12V BATTERY KIT**

**Battery Kit:** P/N 3003-0800-2 (U.S.)
P/N 3003-0802-2 (INTL)

**Consists of:** Hard shelled weatherproof battery case w/ mounting hardware, 12VDC 5Ah lead acid battery plus battery A/C wall charger.

- Mounting tabs (2) / Mounting hardware
- Red LED indicator for operation, state of charge and charging status
- ON/OFF power rocker switch
- Built in dual Molex DC output connectors / nominal 12V, 900mA total
- Built in charging port / DC input jack 5.5x2.5mm 15V 560mA
- 12VDC 5Ah sealed lead acid battery operates 1 laser approx. 30-40 hours
- A/C adaptor-charger
- Universal input voltage, meets level VI efficiency standards with multiple regulatory approvals
- International Travel Adaptor kit (included in P/N 3003-0802-2)

**Battery Box Features:**
- Enclosed weather proof plastic box
- Charge control functions built in
- Cell balancing function
- Battery maintaining function
- Current and voltage limited
- Reverse polarity protected
- Short circuit protected
- Thermally protected

**Battery Box Operation:**
(Approx. 30-40 hours run time using one laser and 15-20 using two lasers)

**LED solid** = Fully charged
**LED blinking** = Needs to be charged (You should have 1-2 days of operation remaining)

**Note:** This battery box contains an internal self-resetting fuse. To reset, press rocker switch off, remove/unplug shorted source, wait 1-2 minutes and press rocker switch to on position.

**Battery Box Tips:**
- For best battery life and performance, it is recommended to charge your battery box every day.
- Replace battery with only Duracell model DURA12-5F / 12V 5Ah AGM
**“Y” CABLE INSTALLATION INSTRUCTIONS**

POWERING TWO LASERS FROM FACTORY INSTALLED GRACO LINELAZER V WIRING HARNESS (P/N 3003-1401)

*Note: You may have to remove the GRACO battery box cover to get access to the wiring harness connections. Once you have access, disconnect the GL1700 connector from the GRACO wiring harness connector. (See below for next step)

GRACO wiring harness with on/off rocker switch (P/N 17H718)

12v Battery

LASERLINE GL1700 START-STOP LASER (P/N GL1700)

*GRACO (P/N 17H714)

Insert provided LaserLine “Y” cable adaptor (P/N 3003-1401) to the GRACO wiring harness as shown. Then connect both the GL1000 and GL1700 to either one of the two connectors.

GRACO wiring harness with on/off rocker switch (P/N 17H718)

12v Battery

LASERLINE GL1700 START-STOP LASER (P/N GL1700)

*GRACO (P/N 17H714)

LASERLINE GL1000 GUIDANCE LASER (P/N GL1000)
The GL1000 mounts to any walk behind条 reinforcement using a 5/8” round gun support bracket.

**POSITION 1:** Mount in rear above and in line with sprayer.

**POSITION 2:** Mount in front above and in line with sprayer.

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**Recommended Battery Kit location**

Above picture shown with 12 volt DC battery kit, bolted to machines existing plate using supplied ¼-20 hardware.

*Note: Some machines will require different mounting locations.*

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**Caution:**

Do Not operate the GL1000 laser guide directly from a generator source as doing so can create over voltage to the laser and damage the electronics.
MOUNTING SUGGESTIONS

The GL1000 laser must be mounted so that it is in line with the gun package and projecting forward in line with where you will be painting to. For day use, the height of the laser unit should be 24” to 36” above ground level for optimum performance. This provides better reflectivity off the target for day use. Recommended height for night use is 12”-24” which provides a longer reference line on the ground.

The “Line” is created by a special lens that elongates the laser spot to a vertical fan or plane of light. The fan expands the beam at about 50 feet per 100 linear feet. The fan allows you to easily stay aimed at your far point as it compensates for the up and down movement of the machine caused by uneven surfaces.

For night use, position the laser housing so that you are picking up the line near to your striper (starting point) and still seeing your “line” at your far point. (Where you are striping to)

For optimum “line” use, set the GL1000 from one to two feet above ground level. This will allow you the most effective use of the fan and give you the longest line.
CALIBRATING THE LINE TO YOUR MACHINE
(Same procedure for front or rear mounted laser - Also applies to auto layout)

1. Find an existing long straight line such as a curb edge, existing striped line or asphalt concrete seam. (Or snap approx. a 100-200 ft. chalk line for a reference line) Mark halfway point and set the alignment target at far point.

*Note: A 200 ft. reference line is recommended if striping in excess of 400 feet.

2. At your starting point, make sure your striper frame is true to your reference line by pushing the machine about 10 feet while keeping the spray nozzle over or parallel with the line. Next, make sure laser is level, then adjust the laser left-right until you are centered in the alignment target at your far point.

3. Plunge laser downward and swing spray gun left or right until it is in line with the laser. Adjust laser back to upward position.

4. Position spray nozzle directly over reference line and maneuver machine left-right until laser is centered in alignment target and the spray nozzle is centered over line.

5. Walk towards alignment target while keeping the laser centered in the alignment target. Look only at the target NOT the nozzle. STOP at halfway point and check the position of the spray nozzle relative to the line.

6. In this case the spray nozzle is to the left of the reference line by 1 ½ inches. Adjust laser using fine-line adjustment screws 1 ½” to the left of the center line. (Same distance to the same side on the alignment target)

7. Go back to your starting point. Get centered in the alignment target with the spray nozzle over your line. Walk to the halfway point keeping the laser centered on the target as in step 5. If laser is centered in the target and the spray nozzle is directly over reference line then you are calibrated! If not, take out the error as in step 6 and repeat step 7.

*NOTE: The calibration procedure may take 1-3 attempts until properly aligned averaging approx. 3-7 minutes. Calibration only has to be performed periodically.
USING THE LASER LINE

You need two points:

A. **Starting point** to position your gun over
B. **Ending point** to stripe to.
   1. For day operation the 3003-0070 reflection alignment target is used at your far point to stripe to.
   2. For night work the target is *optional* since you can see the line to your far point to stripe to. However, it is useful for longer runs as a visual tool to determine the end of the run.

Place your machine set up over your starting point and lined up with your far point. (Reflective Alignment Target)

Start striping by keeping the laser line lined up with your far point (Reflective Alignment Target) as you move forward.

*NOTE: What seems like a large correction at your far point is actually a very small correction at the machine.*

You are staying on line by looking out ahead to your far point and NOT by looking down at a string line or chalk line.

Since the laser line is laser-straight, your painted lines will be just that – *Laser Straight*.

- **NO** more string lines blowing in the wind
- **NO** more string line crew
DAY USE

Using the GL1000 fan line during the day requires the use of the 3003-0070 reflective alignment target to be placed at your far point. In daylight you will not see the green line along the surface as you do at night, but you will see the line on the “target” at your far end up to several hundred feet away. You will need a starting point to position your spray gun over and a far point to set your reflective alignment target at.

Line up on your first point and adjust the machine so that the green line is centered on your alignment target. Stripe to the far point keeping the green laser line on target center. The alignment target must be moved to the far point of each new line so you can line up on it. Using the GL1000 with line in conjunction with the 3003-0070 reflection alignment target eliminates at least one man if not two from the operation, and it’s faster plus gives you straighter lines.

1. Set reflective alignment target over far point (Up to 700 feet)
2. Position spray nozzle w/ laser over near point
3. Slightly loosen vertical adjustment knob and rotate GL1000 up or down until the laser stripe on the far target is the brightest. Lock vertical adjustment knob.
4. Start striping while keeping laser in center of alignment target
NIGHT USE

The GL1000 creates a visible virtual string line that is aimed from just in front of your gun carriage to your far point up to several hundred feet away.

The line is bright green and visible on the surface. Since it is a laser line it is perfectly straight at all times in all conditions.

Since the green laser line is visible along its entire length, it allows you to line up on two points and stripe a perfectly laser true line without using a string line crew and the expense associated with it. Your job goes much faster and your lines will be laser straight.

- Visible on the ground
- Just connect the dots - The laser is your string line
- Optional: Use reflective alignment target for long distance lines and hit your marks flawlessly

- Makes restripe work laser straight!
- Just connect the dots.
- Turns new layout jobs into restripe jobs, because there is a constant reference line on the ground.
Laser Product Certification

This laser product qualifies as ‘Class IIIa’ in the U.S. under US FDA/CDRH 21 CFR, part I, Subchapter J, sections 1040.10 and 1040.11

This product qualifies internationally (outside the US) as ‘Class 3R’ under:
- ‘EN/IEC 60825-1 2014 edition 3’ (E.U.), C
- ‘BS EN 60825-1:2014’ (UK)
- ‘AS/NZS 60825-1:2011’ (Australia/New Zealand)
- & other countries, including: Japan, Korea, China, Singapore, Israel, South Africa, and more

*Note: In the United States as a Class IIIa, the special wide angle lens may be swung away to provide a laser spot if desired. Turn the laser “OFF” loosen upper right socket screw on front of laser (See page 2) and swing fan lens out of the way.

Laser Safety

- **WARNING:** LASER LIGHT, AVOID DIRECT EYE EXPOSURE!

- *Eye exposure to Class IIIa / 3R levels of laser light can potentially present an eye (retinal) injury hazard, including spot blindness or other retinal injury**.

The maximum power output of this laser is less than 5mW for U.S. OSHA compliance. A laser safety kit is supplied with the GL1000 laser. The kit contains operator qualification cards and a sign that should be posted near the laser whenever it is in use. Observe the following operating rules:

- **NEVER** look directly into a laser beam or point the beam into the eyes of others, even at long distances.
- **NEVER** shine the laser at mirror like surfaces which can cause specular reflections of the beam.
- **ALWAYS** set the laser at a height and angle that prevents the beam from shining into people’s eyes.
- **IMMEDIATELY** terminate laser emissions if personnel, animals or reflective objects approach the beam.
- **ALWAYS** turn off laser when unattended.
- **DO NOT** remove any warning labels from the laser.
- **ONLY** properly trained laser operators are to use this product.
- **NEVER** allow beams to be aimed toward traffic, vehicles, or heavy equipment. Even when not damaging at long distances, the high brightness of lasers can distract or disrupt vehicle operations.
- **NEVER** point a laser at an aircraft or law enforcement personnel. This is considered a felony in most locations, with the possibility of jail time, heavy fines or both.
- **DO NOT** disassemble laser product, return to factory for all service procedures.
** Note: Although all Class IIIa / 3R lasers should be respected as potentially hazardous and operated to avoid eye exposure to the beam or a direct specular reflection, as these are considered a theoretical eye hazard, in actuality confirmed rates of retinal eye injuries from visible CW (non-pulsed) lasers are exceedingly low and essentially non-existent after 50 years of global laser use.

** Maintenance

The GL1000 requires no maintenance other than periodically cleaning the laser output lens. Use a soft cloth with Windex or alcohol.

*NOTE: Laser must be turned OFF when cleaning the lens, so as not to create unwanted laser refraction.

** Warning

Under no circumstances, attempt to open or disassemble the Laser Housing. Doing so may cause exposure to potentially hazardous levels of laser radiation. No user serviceable parts within. Unit is factory sealed.

** Caution:

- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

- The use of optical instruments with this product will increase eye hazard.

Do Not operate the GL1000 laser guide directly from a generator source as doing so can create over voltage to the laser and damage the electronics.
LABELS
The labels required for this product are:

WARNING: This product can expose you to chemicals including cadmium which is known to the State of California to cause cancer and other reproductive harm. For more information go to: www.P65Warnings.ca.gov

OSHA REQUIRED
(USA ONLY)

**Warning Plaque:** To be posted near laser

**Operator Card:** To be carried by laser operator
GL1000 Specifications
“Built To Work Where You Work”

Laser
- Laser Wavelength 510-532nm
- Laser Power: 4.75mW (Nominal)
- International: ‘Class 3R’ under:
  - ‘EN/IEC 60825-1 2014 edition 3’ (E.U.),
  - ‘BS EN 60825-1:2014’ (UK)
  - ‘AS/NZS 60825-1:2011’ (Australia/New Zealand)
  - & other countries, including: Japan, Korea, China, Singapore, Israel, South Africa, and more.
- U.S.A OSHA compliant: Meets all Federal and International standards
- Operational Life: 20,000 hrs. MTBF

Environment
- Operating Temperature: -40°F to 122°F (-40° to 50°C) (Nominal)
- Enclosure Rating: Outdoor dust and water rated to IP65
- Vibration compliant per MIL-STD-810F method 5145 and truck assurance level 2, schedule E

Electronic
- Power Source: 12 or 24 volt DC
- Power Draw: 0.1 of 1 amp at 12vdc, 0.05 of 1 amp at 24vdc (Nominal)
- Reverse Polarity and Spike Protected
- Over Temperature Protection Circuit
- Automatic Power Control: (APC) Keeps laser power stabilized through ambient temperature changes

Mechanical
- Special wide angle line generating fan lens
- Rugged die cast aluminum housing
- Built in level vial to assure laser plane (line) is plumb
- Universal clamp with built-in fine line adjust
- Built in adjust knob for aiming left/right – up/down and swivel for adjusting fan (line) beam
- Waterproof ON/OFF button with built in power indicator light
- Heavy duty power cord with strain relief
- Dimensions: 6”length x 2.5”width x 2.5”height
  (15.24cm) (6.35cm) (6.35cm)
- Weight: 2.30 lbs.
This product is guaranteed against defects in materials and workmanship for both parts and labor, under normal working conditions for one year from the date of purchase, except as noted herein. LaserLine Mfg., Inc. liability under this warranty is limited to repairing or replacing any product returned to an authorized service center for that purpose. Any evidence of attempts to repair this unit by other than factory authorized personnel automatically voids the warranty. LaserLine Mfg., Inc. does not take liability for any damages caused by non-accuracy of this product. Before using the product always check for accuracy per the enclosed instructions in this manual.

Factory Service Center
LaserLine MFG., INC.
1810 S.E. First Street, Suite H
Redmond, OR 97756
(P) 541-548-0882
(F) 541-548-0892
(Email) laserline@laserline.net

For all Warranty: Call Order Processing for RMA # at 541-548-0882. The Unit will be repaired and returned by prepaid freight.

All Non-Warranty Repairs:
Send to: LaserLine MFG., INC. at above address

Out of Warranty Repairs: 1 Year on replacement parts, 90 days on labor.
GL1700
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LASER CERTIFICATION, SAFETY AND MAINTENANCE ⑤ ⑥

LASER LABELS ⑦

GL1700 SPECIFICATIONS ⑧

WARRANTY ⑨
The GL1700 Laser Guide was designed from the ground up to provide precise start-stop location control for walk behind paint striping equipment.

- OSHA Compliant
- Compact and Durable
- Faster
- More Precise
- Easy to Use!

**GL1700 FEATURES**

- Adjustment knob for Up-Down tilt or Left to Right
- Detachable quick-release
- Rugged clear hard coat anodized housing
- 7 foot power cord
- Powered by 12 or 24 volts DC and only draws 0.1 of 1 amp at 12vdc / 0.05 amp at 24vdc
- 5/8” mounting bracket allows the GL1700 to attach to virtually any walk behind machine in just minutes
- Tightening knob w/ swing adjustment
- Replaceable paint spray shield (Protects laser output optics from paint overspray damage)

**PRODUCT OVERVIEW**

**ELECTRONIC FEATURES**

- **Automatic Power Control (APC)** keeps laser power stabilized through ambient temperature changes.
- Over temperature protection circuit with automatic soft shutdown to protect electronics and laser module from overheating.
- Reverse polarity protection; protects the GL1700 in case the power leads are connected backwards.
- Input power stabilization-protects against power spikes.
- Universal voltage input-automatically operates GL1700 on 12 volts DC (11-25 volts DC)
- Ultra-low power consumption: 0.1 of 1 amp at 12 vdc / 0.05 amp at 24vdc

**GL1700 FEATURES**

- Power stabilized through ambient temperature changes.
- Over temperature protection.
- Reverse polarity protection.
- Input power stabilization.
- Universal voltage input.
- Ultra-low power consumption.

**PRODUCT OVERVIEW**

- OSHA Compliant
- Compact and Durable
- Faster
- More Precise
- Easy to Use!
 OPERATING INSTRUCTIONS AND MOUNTING OPTIONS

The GL1700 features a ¾” mounting bracket with quick disconnect allowing it to attach to virtually any walk behind machine in just minutes. Connect the power cord to a 12 or 24 Volt DC battery source and mount the laser to your desired location. Next, adjust the spot so it is directly under and in-line with the spray nozzle. Start striping!

When the laser is no longer needed or the job is complete, power off the laser by pressing the ON/OFF power button on the optional LaserLine 12v battery kit or by disconnecting the power cord from the 12 or 24 volt battery source.

Tip: Mount the GL1700 laser to the horizontal 5/8” bar and properly align it. Now, anytime you need to swing the spray gun left or right, the laser spot follows it.

*Note: If mounted to the vertical 5/8” bar, this will not apply as you will have to re-align the laser.

Scan QR code for Calibration Video!

Features: Detachable quick release with 360 degree rotation.
Battery Kit: P/N 3003-0800-2 (U.S.)
P/N 3003-0802-2 (INTL)

Consists of: Hard shelled weatherproof battery case w/ mounting hardware,
12VDC 5Ah lead acid battery plus battery A/C wall charger.

Battery Box Operation:
(Approx. 30-40 hours run time using one laser and 15-20 using two lasers)

LED solid = Fully charged
LED blinking = Needs to be charged (You should have 1-2 days of operation remaining)

Note: This battery box contains an internal self-resetting fuse. To reset, press rocker switch off, remove/unplug shorted source, wait 1-2 minutes and press rocker switch to on position.

Battery Box Features:
- Enclosed weather proof plastic box
- Charge control functions built in
- Cell balancing function
- Battery maintaining function
- Current and voltage limited
- Reverse polarity protected
- Short circuit protected
- Thermally protected

Battery Box Tips:
- For best battery life and performance, it is recommended to charge your battery box every day.
- Replace battery with only Duracell model DURA12-5F / 12V 5Ah AGM
“Y” CABLE INSTALLATION INSTRUCTIONS
POWERING TWO LASERS FROM FACTORY INSTALLED GRACO LINELAZER V WIRING HARNESS (P/N 3003-1401)

*Note: You may have to remove the GRACO battery box cover to get access to the wiring harness connections. Once you have access, disconnect the GL1700 connector from the GRACO wiring harness connector. (See below for next step)

GRACO wiring harness with on/off rocker switch (P/N 17H718)

LASERLINE GL1700 START-STOP LASER (P/N GL1700)

*GRACO (P/N 17H714)

12v Battery

Insert provided LaserLine “Y” cable adaptor (P/N 3003-1401) to the GRACO wiring harness as shown. Then connect both the GL1000 and GL1700 to either one of the two connectors.

GRACO wiring harness with on/off rocker switch (P/N 17H718)

LASERLINE GL1700 START-STOP LASER (P/N GL1700)

*GRACO (P/N 17H714)

12v Battery

LASERLINE GL1000 GUIDANCE LASER (P/N GL1000)
Laser Certification, Safety and Maintenance

Laser Product Certification

This laser product qualifies as ‘Class IIIa’ in the U.S. under US FDA/CDRH 21 CFR, part I, Subchapter J, sections 1040.10 and 1040.11

This product qualifies internationally (outside the US) as ‘Class 3R’ under:
- ‘EN/IEC 60825-1 2014 edition 3’ (E.U.), ◆◆
- ‘BS EN 60825-1:2014’ (UK)
- ‘AS/NZS 60825-1:2011’ (Australia/New Zealand)
- & other countries, including: Japan, Korea, China, Singapore, Israel, South Africa, and more

Laser Safety

The maximum power output of this laser is less than 5mW for U.S. OSHA compliance. A laser safety kit is supplied with the GL1700 laser. The kit contains operator qualification cards and a sign that should be posted near the laser whenever it is in use.

WARNING: LASER LIGHT, AVOID DIRECT EYE EXPOSURE!

- Eye exposure to Class IIIa / 3R levels of laser light can potentially present an eye (retinal) injury hazard, including spot blindness or other retinal injury**.

Observe the following operating rules:

- **NEVER** look directly into a laser beam or point the beam into the eyes of others, even at long distances.

- **NEVER** shine the laser at mirror like surfaces which can cause specular reflections of the beam.

- **ALWAYS** set the laser at a height and angle that prevents the beam from shining into people’s eyes.

- **IMMEDIATELY** terminate laser emissions if personnel, animals or reflective objects approach the beam.

- **ALWAYS** turn off laser when unattended.

- **DO NOT** remove any warning labels from the laser.

- **ONLY** properly trained laser operators are to use this product.

- **NEVER** allow beams to be aimed toward traffic, vehicles, or heavy equipment. Even when not damaging at long distances, the high brightness of lasers can distract or disrupt vehicle operations.

- **NEVER** point a laser at an aircraft or law enforcement personnel. This is considered a felony in most locations, with the possibility of jail time, heavy fines or both.

- **DO NOT** disassemble laser product, return to factory for all service procedures.
** Note: Although all Class IIIa / 3R lasers should be respected as potentially hazardous and operated to avoid eye exposure to the beam or a direct specular reflection, as these are considered a theoretical eye hazard. In actuality, after 50 years of global laser use, confirmed rates of retinal eye injuries from visible CW (non-pulsed) lasers are exceedingly low and essentially non-existent

** Laser Maintenance

The GL1700 requires no maintenance other than periodically cleaning the laser output lens. Use a soft cloth with Windex or alcohol.

** Warning: **

*Laser must be turned OFF when cleaning the lens, so as not to create unwanted laser refraction.*

** Warning: **

Under no circumstances, attempt to open or disassemble the Laser Housing. Doing so may cause exposure to potentially hazardous levels of laser radiation. No user serviceable parts within. Unit is factory sealed.

** Caution: **

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

** Warning: Fire and Explosion Hazard **

Do not connect GL1700 directly to a generator source as it can create over voltage and damage to the electronics. Connecting directly to a generator source can also create a short or sparking under certain conditions. Connect GL1700 only to a dedicated 12 or 24 volt DC battery source.
LABELS

The labels required for this product are:

**Avdor Exposure**

- Aperture Label
- Laser Aperture
- Identification and Certification Label

**Explanatory and Warning Label-Hazard Symbol**

**State of California Prop 65 Label**

**European Conformity Logo and Regulatory Compliance Mark Logo**

(Not-Shown)

**Warning Plaque:** To be posted near laser

**Operator Card:** To be carried by laser operator

**OSHA REQUIRED**

(USA ONLY)

Front Back
Laser
- Laser Wavelength 510-532nm (Nominal)
- < 2mrad
- Laser Power: 4.75mW
- This laser product qualifies as ‘Class IIIa’ in the U.S. under US FDA/CDRH 21 CFR, part I, Subchapter J, sections 1040.10 and 1040.11
- This product qualifies internationally (outside the US) as ‘Class 3R’ under:
  - ‘EN/IEC 60825-1 2014 edition 3’ (E.U.),
  - ‘BS EN 60825-1:2014’ (UK)
  - ‘AS/NZS 60825-1:2011’ (Australia/New Zealand)
  - & other countries, including: Japan, Korea, China, Singapore, Israel, South Africa, and more.
- U.S.A OSHA compliant: Meets all Federal and International standards
- Calculated Operating Life: 15,000 hrs. MTBF

Environment
- Operating Temperature: -40°F to 122°F (-40° to 50°C) (Nominal)
- Enclosure Rating: Outdoor dust and water rated to IP65
- Vibration compliant per MIL-STD-810F method 5145 and truck assurance level 2, schedule E

Electronic
- Power Source: 12 or 24 volt DC (11-25 volts DC) **Note: Do not connect directly to a generator AC source, only connect to a dedicated 12 or 24v DC battery**
- Power Draw: 0.1 of 1 amp at 12vdc / 0.05 amp at 24vdc (Nominal)
- Reverse Polarity and Spike Protected
- Over Temperature Protection Circuit
- Automatic Power Control: (APC) Keeps laser power stabilized through ambient temperature changes

Mechanical
- Aluminum housing with clear hard coat anodize
- UV stabilized glass filled lexan end caps
- Universal clamp with built-in adjustments for aiming laser
- Heavy duty 7 foot power cord
- Replaceable paint overspray optics shield
- Laser Dimensions: 3 ½” length x 2.0”width x 1”height
- Laser and Mount: 3 ½” length x 3.0”width x 3 ¾ “height
- Weight: 1 lb.
This product is guaranteed against defects in materials and workmanship for both parts and labor, under normal working conditions for 1 year from the date of purchase, except as noted herein. LaserLine Mfg., Inc. liability under this warranty is limited to repairing or replacing any product returned to an authorized service center for that purpose. Any evidence of attempts to repair this unit by other than factory authorized personnel automatically voids the warranty. LaserLine Mfg., Inc. does not take liability for any damages caused by non-accuracy of this product. Before using the product always check for accuracy per the enclosed instructions in this manual.

Factory Service Center
LaserLine MFG., INC.
1810 S.E. First Street, Suite H
Redmond, OR 97756
(P) 541-548-0882
(F) 541-548-0892
(Email) laserline@laserline.net

For all Warranty: Call Order Processing for RMA # at 541-548-0882. The Unit will be repaired and returned by prepaid freight.

All Non-Warranty Repairs:
Send to: LaserLine MFG., INC. at above address

Out of Warranty Repairs: 1 Year on replacement parts, 90 days on labor.