

GL3000PM-S

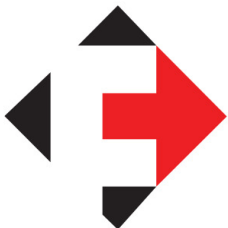
OWNERS MANUAL

Gun Carriage & Small Machine Guidance Laser



Important Safety Instructions

Read all warnings and instructions in this manual. Save these instructions.



MS FOSTER

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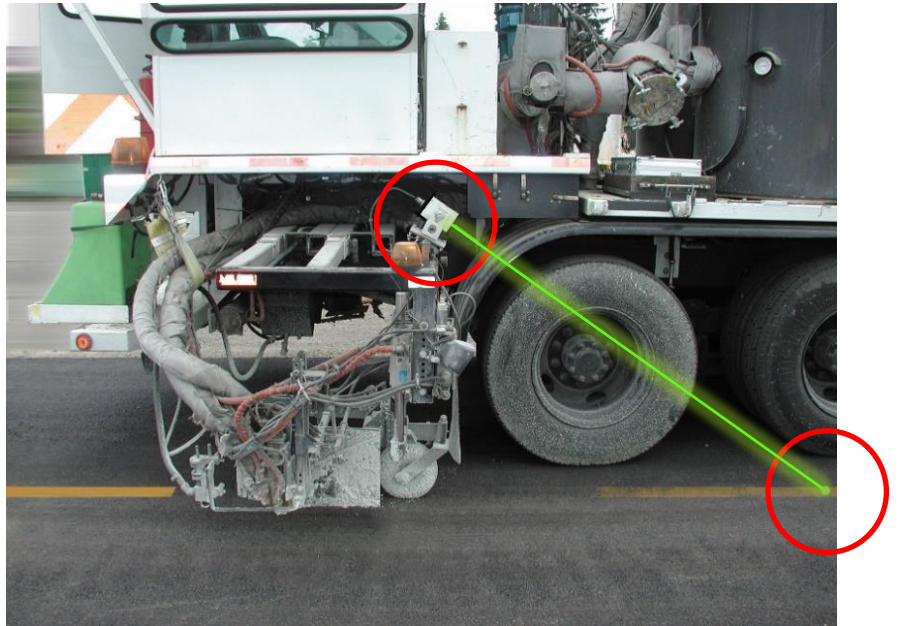
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SYSTEM OVERVIEW

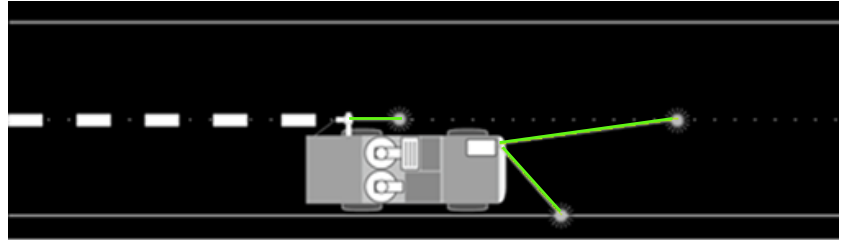
The **GL3000PM-S** laser uses an ultra-high visibility green laser to establish visual line control for your paint striping machine gun carriage, asphalt distributor, road widener, pavement profiler or virtually any application requiring vehicle line control.

The Operator adjusts the laser spot to the desired reference point on the road surface manually at the laser.

The laser spot is impacted directly on the road surface and shows the Operator exactly where the vehicle is relative to “on line.” The laser spot is on the road ahead of the Operator so that the reference is in the driving field of view instead of a T.V. screen or boom pointer.



The **GL3000PM-S** can be used for both gun carriage and or truck guidance.

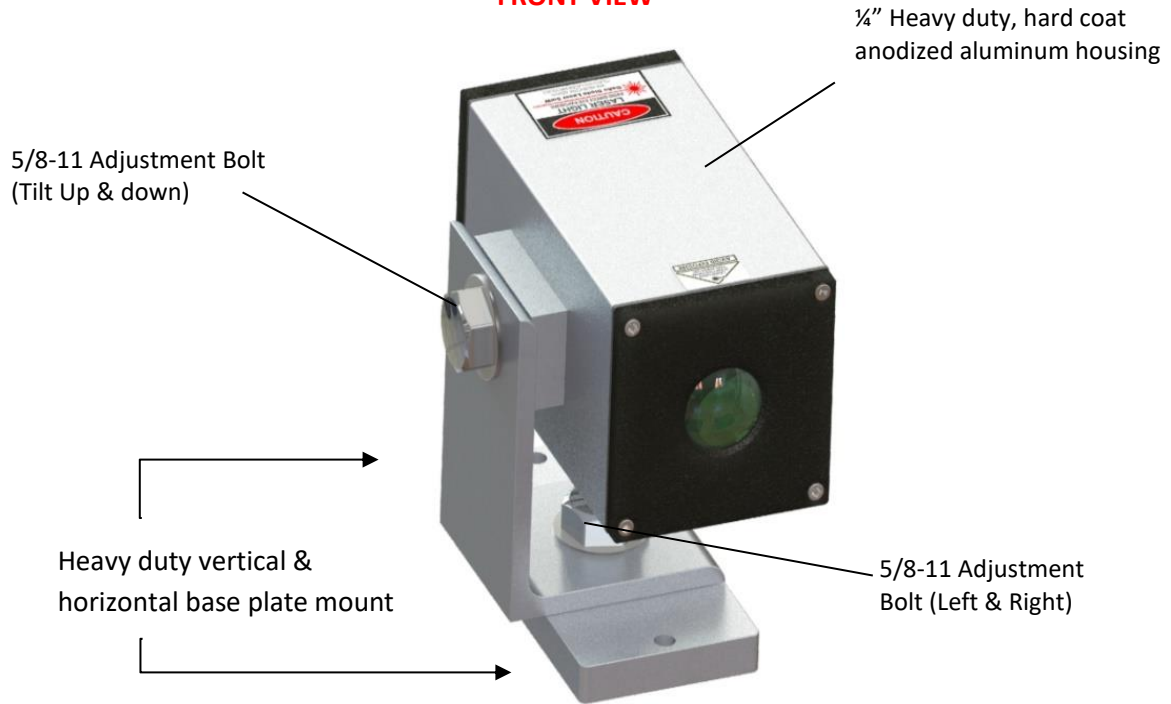


THE ADVANTAGES

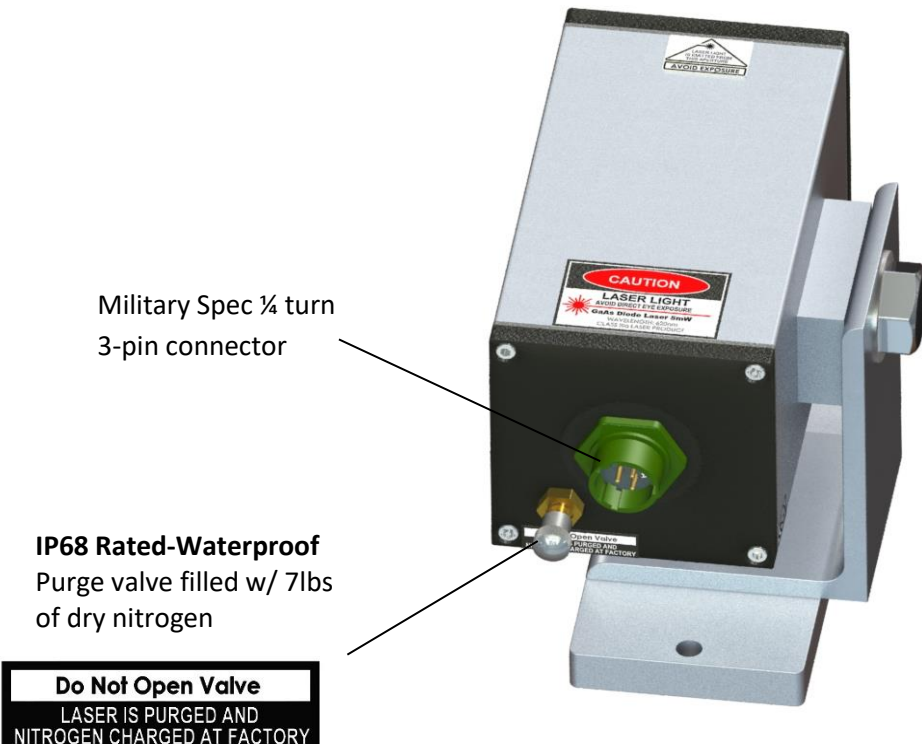
- For truck control, you can set your reference 20 to 30 feet out in front of the vehicle impacting on the road.
- For gun carriage control the laser is used to give the Operator “head’s up” time to move the gun package in and out for easy and precise alignment.
- **Safer!** Paint up to intersections without the worry of injury or damage to people or other vehicles caused by mechanical arm extending out in front of the truck.
- Greatly increases the machine’s maneuverability.
- Much less strain on the Operator. It reduces fatigue and increases skill load.
- **It’s more versatile. It’s easier. It’s faster. It’s safer.**

LASER MECHANICAL FEATURES

FRONT VIEW



REAR VIEW



OPERATOR CONTROLS (GL3000PM-S)

CONTROL BOX

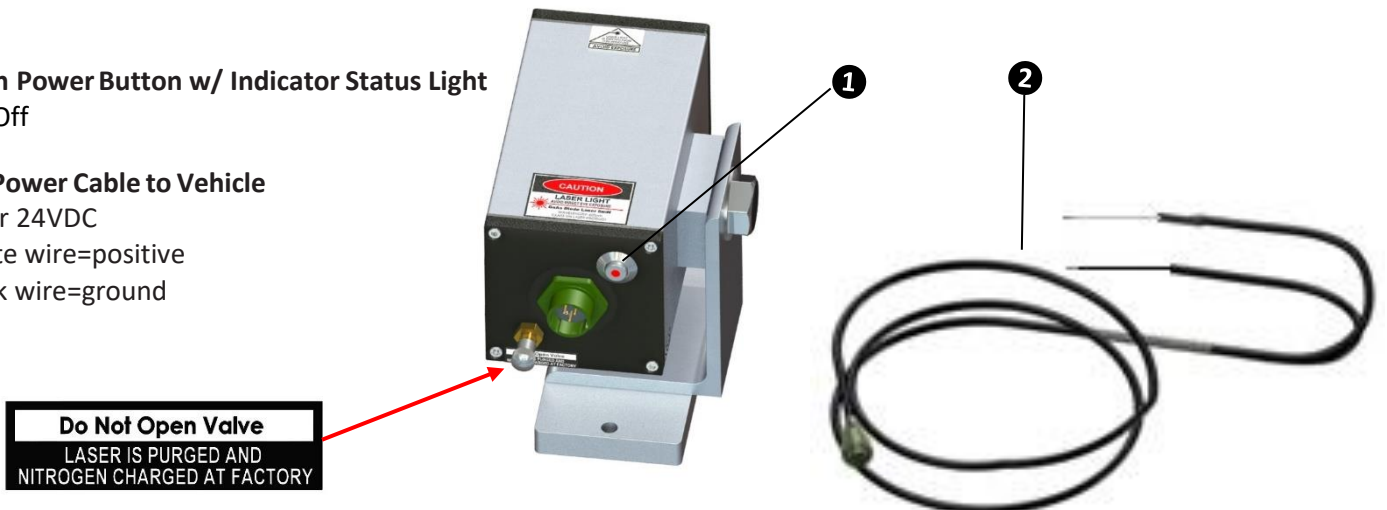
- 1. Main Power Switch**
I=On
O=Off
- 2. Power Indicator Light**
Main System
- 3. Laser Mode Switch**
I=Steady Spot
O=Blinking Spot
- 4. Laser Status Light**
Solid
Blinking
- 5. Power Cable to Vehicle 12 or 24VDC.**
White wire positive
Black wire to ground
- 6. 25' Control Cable**
(In-between laser and control box)



Note: Attach to minimum 10-amp circuit using minimum 16-gauge wire.

OPERATOR CONTROLS (GL3000PMB-S)

- 1. Main Power Button w/ Indicator Status Light**
On/Off
- 2. 15' Power Cable to Vehicle**
12 or 24VDC
White wire=positive
Black wire=ground




INSTALLATION SUGGESTIONS

1. Mount the GL3000PM-S laser to a stable surface at a minimum of 3 feet off the ground. The higher up the laser is mounted, the farther ahead of the vehicle you can aim the laser (See Fig. 1 for details)

**For power; Connect to 12vdc or 24 vdc
(white wire=positive)
(black wire=negative)*

For best daylight visibility of the laser spot use the distance versus height chart (Fig. 1) as the maximum distance away from the laser the spot should be – closer will be brighter, farther away will be dimmer.

2. The laser must be mounted to a stable surface. If the laser base is vibrating on the vehicle, the vibration is magnified at the laser spot and can make it difficult to see. Stability of the laser mount is very important.

WARNING! 

3. Do not mount the laser inside a cab and shoot the laser beam through a windshield. This is an unsafe practice as the laser beam can reflect back off the windshield into the Operator's eyes (A.k.a. Back Scatter)

WARNING! 

4. Do not mount the GL3000PM-S laser unit in a location that allows the laser beam to be directed to hit any shiny or reflective surface on the vehicle such as chrome, side mounted rear-view mirrors or glass surfaces.

USING THE GL3000PM-S LASER

1. Place vehicle at your desired location on the road.
2. Aim the laser spot to the desired reference point on the road; i.e. existing centerline stripe, road edge, etc.

Once you have located the laser spot as your reference, as you are driving the spot will indicate your position relative to “on” center. If you are moving too far to the right, the laser will be to the right of your reference. If you are moving too far to the left, the laser will be to the left of your reference. The laser spot is designed to be used as a reference about 5-15 feet in front of the vehicle. The laser spot reference on the road usually appears the brightest at this distance.

3. The laser spot reference ahead of you is more visible or less visible depending on conditions such as the surface you are driving on and the brightness and location of the sun. One of the worst conditions is driving into low sun on new asphalt. This creates a condition where the surface looks almost white from the glare.

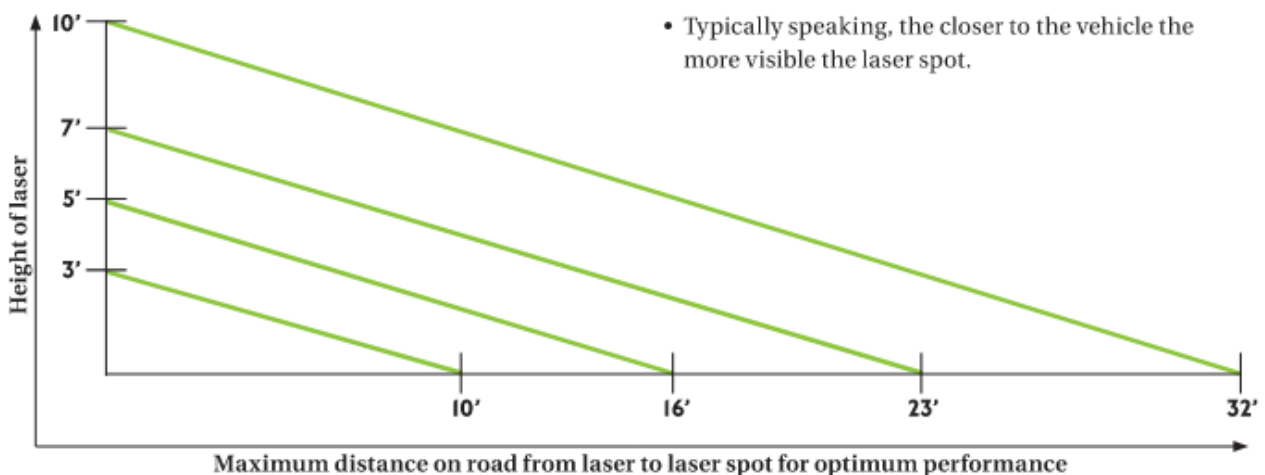


If the laser spot becomes hard to see:

- Bring the laser spot closer to the vehicle
- Wear “laser enhancement” glasses

4. Laser Enhancement Glasses (Part# 3000-0435) block out glare and increase laser spot visibility for the driver in daylight operations.

FIG. 1 VEHICLE HEIGHT TO LASER SPOT ON ROAD CHART



GL3000PM-S PACKAGE

P/N 3001-0001-1S GL3000PM-S Main Housing: IP68 waterproof, purged and dry nitrogen filled. Contains optic plate mounting platform with microprocessor electronics, laser mounting assembly, automatic cooling-heating system and optics.



P/N 3000-0008 Interconnect Control Cable: 25-foot waterproof mil spec in line connector mounted between the laser main housing and the control panel mounted in the cab.



P/N 3001-0007-S Control Panel: Allows the operator to turn the laser on, off, steady mode or blinking mode. Includes; 15 feet of power cable running from the control box for connection to 12-24 vdc vehicle power.



P/N 3001-0080-S Owner Operator's Manual (Not shown)

***Optional:**

P/N 3001-0008-S Dual Function Control Box: Controls two GL3000PM-S lasers simultaneously. Featuring a master On/Off control switch, plus two control buttons, allowing the operator to choose desired modes separately, such as; steady mode, blinking mode or stand-by On/Off mode. Includes; 15 feet of 12-volt DC cable.

P/N 3000-0435 Laser Enhancement Glasses: Cuts down on glare and enhances the visibility of the laser spot for daytime use.



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

Laser Safety



- WARNING: LASER LIGHT, AVOID DIRECT EYE EXPOSURE!

- Eye exposure to Class IIIa 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. compliance. A laser safety kit is supplied with the GL3000PM-S 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.

Laser Certification, Safety and Maintenance (Cont'd)

*** Note: Although all Class IIIa 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 GL3000PM-S 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

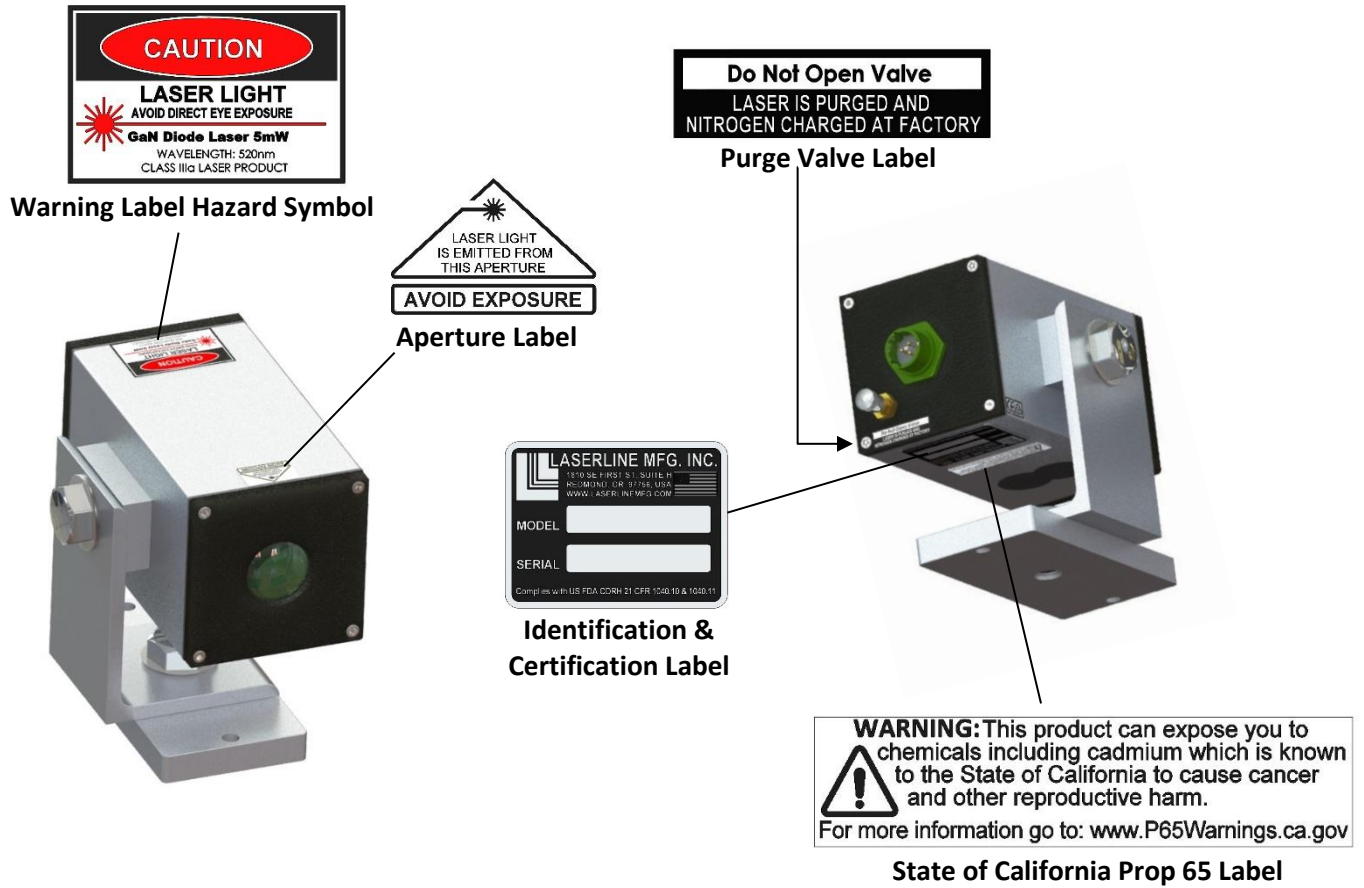
Under no circumstances, attempt to open or disassemble the Laser Housing. Doing so may cause exposure to potentially hazardous levels of laser radiation. No user serviceable parts within. Unit is factory sealed.

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.

GL3000PM-S LABELS

The labels required for this product are:



OSHA REQUIRED (USA ONLY)

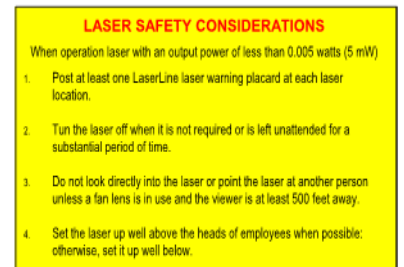
Warning Plaque: To be posted near laser



Operator Card: To be carried by laser operator



Front



Back

GL3000PM-S Specifications

Laser

- Laser Wavelength 515-520nm
- Laser Power: 4.75mW
- U.S.A: 'Class IIIa' in the U.S. under US FDA/CDRH 21 CFR, part I, Subchapter J, sections 1040.10 and 1040.11
- This product is ANSI Z136 compliant and should be operated under the terms of ANSI Z136.1 (Visit www.ANSI.org or www.lia.org for more in-depth information)
- Operational Life: 20,000 hrs. MTBF

Environment

- Operating Temperature: -40°F to 122°F (-40° to 50°C)
- Enclosure Rating: Hermetically sealed, outdoor dust and water rated to IP68 (*Purged and dry nitrogen filled*)
- Vibration compliant per MIL-STD-810F method 5145 and truck assurance level 2, schedule E

Electronic

- Power Source: 12 or 24 vdc
- Power Draw: 0.2A at 12vdc in
- Reverse Polarity and Spike Protected
- Over Temperature Protection Circuit
- Automatic Power Control: (APC) Keeps laser power stabilized through ambient temperature changes

Mechanical

- ¼" thick hard coat anodized aluminum housing
- 5/8-11 bolts for aiming left/right and up/down
- Heavy duty ¼ turn military spec connector
- Dimensions: 5"-5/8 length x 4"-1/4 width x 5"-1/4 height
- Weight: 3.65 lbs.

Warranty: 24 Months Parts and Labor

WARRANTY

This product is guaranteed against defects in materials and workmanship for both parts and labor, under normal working conditions for 2 years 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.



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