

- IP 67
- 9-24 VDC
- Diode Technology
- Digital Modulation
- Point Line Cross

Delta F Series

The lasers of the Delta F series are intended for the meticulous positioning in applications for part processing. This laser series is equipped with green, red and IR wavelengths and laser head sizes Ø25mm. The lasers are housed in a solid enclosure, which is easy to mount and adjust. The laser electronics are available in different versions depending on the requirements. The Delta F series is offered with a digital modulation of up to 5 kHz and a temperature protection against overheating. The enclosure is manufactured from anodized aluminum. This laser series offers optical power in the range: 1mW ~ 200mW with a fixed focus. The power supply voltage of the laser is from 9V DC to 24V DC. The consumption depends on the power of the laser. As standard, a 2.5m long cable is attached to the laser but it can be extended to 5m / 10m / 15m.

OVERVIEW

- Solid industrial enclosure
- Degree of protection: IP67
- Wavelength: 505nm - 808nm
- Power: up to 200mW
- Digital Modulation
- Thin & bright line
- Fixed focus
- Precision optics
- Temperature protection

Applications

- Alignment and positioning
- Process control
- Machine vision
- Measuring systems

SKU / Order code:

Model	Wavelength		Optical Power		Connection		Projection Profile	Projection Optics
DL-F-	XXX	-	XXX	-	XX	-	XX	XX

*Example: DL-F-520-10-P1-B2-PL(60°)

Technical specifications:

Wavelength (nm)	505	515	520				635	638	808
Optical power (mW)	≤35	≤35	≤40	≤50	80	≤100, 120	150	≤100, 170	≤500
Laser class <i>*line lasers</i>	2M	2M	2M	2R	3R	3R	3R	2M, 3R	3B
Technology	Diode	Diode	Diode	Diode	Diode	Diode	Diode	Diode	Diode
Operating temperature	-10° +60°	-10° +60°	-10° +60°	-20° +60°	-20° +60°	-10° +60°	-10° +60°	-10° + 60°	10° +60°
Storage temperature	-40° +85°	-40° +85°	-40° +85°	-40° +85°	-40° +85°	-40° +85°	-40° +85°	-20° +85°	-40° +85°
Electrical specifications:									
Input voltage	9-24V DC	9-24V DC	9-24V DC	9-24V DC	9-24V DC	9-24V DC	9-24V DC	9-24V DC	9-24V DC
Operating current	100mA	80mA	50mA	120mA	150mA	170mA	120mA	80mA	500mA
Protection from high temperature	-	-	-	-	✓	✓	✓	✓	✓

Electrical protection Protection from polarity reversal, Overvoltage protection

Connection ***(P1)** Metal cable gland/fitting
***(P2)** M12, 4-pin connector (angled 90°, straight), cable length: 2.5m, 5m, 10m, 15m
Input voltage polarity Blue color **(-)**, Brown color **(+)**

Optical specifications:

Projection profiles ***(B1)** Point ***(B2)** Line ***(B3)** Cross
Gaussian line ***(CL)** 90° – 110° (gaussian lines profile)
Homogeneous line ***(PL)** homogeneous lines with fan angle - 20°, 30°, 45°, 60°, 90°, 110°
Focus Fixed focus
DOE projection Grid, Crossed lines, Circle (on request)

Electrical variants:

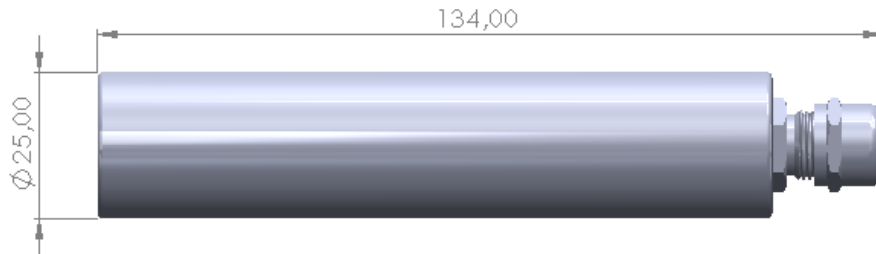
Digital modulation (PWM) 0V - 3,3V/5V/Vin, 5 kHz (upon request)

Mechanical specification:

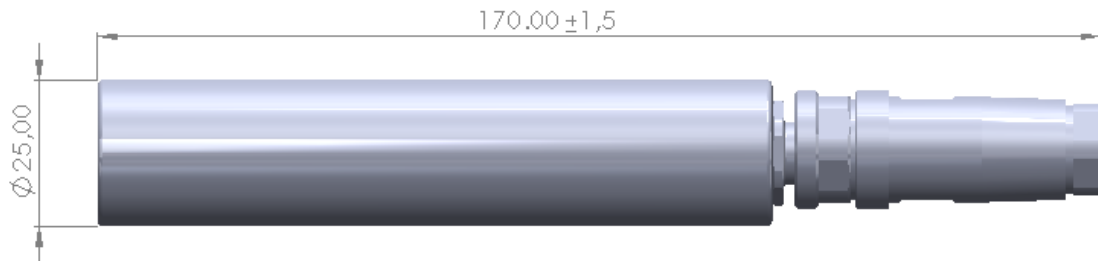
Dimensions (mm.) Laser head diameter: Ø25
Length: 134mm – with ***(P1)** Variant
Weight (g.) 100
Material Anodized Aluminum
Protection rating IP67

Laser Head Drawing

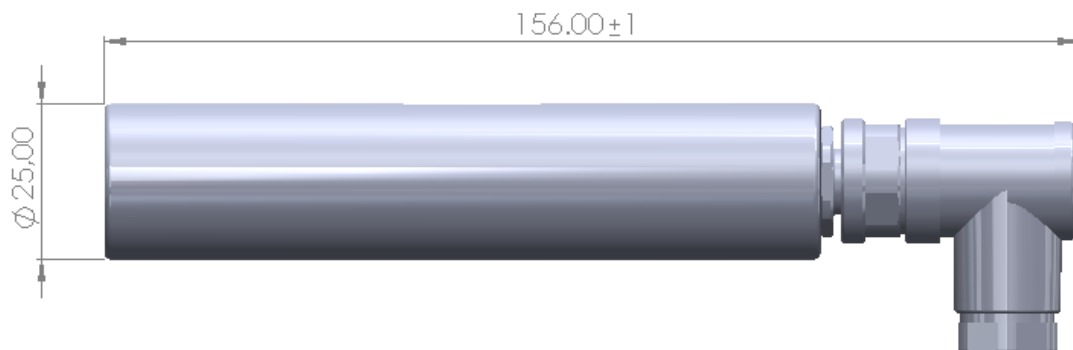
Connection: *(P1) Metal cable gland/fitting



Connection: *(P2-90°) M12, 4-pin industrial connector

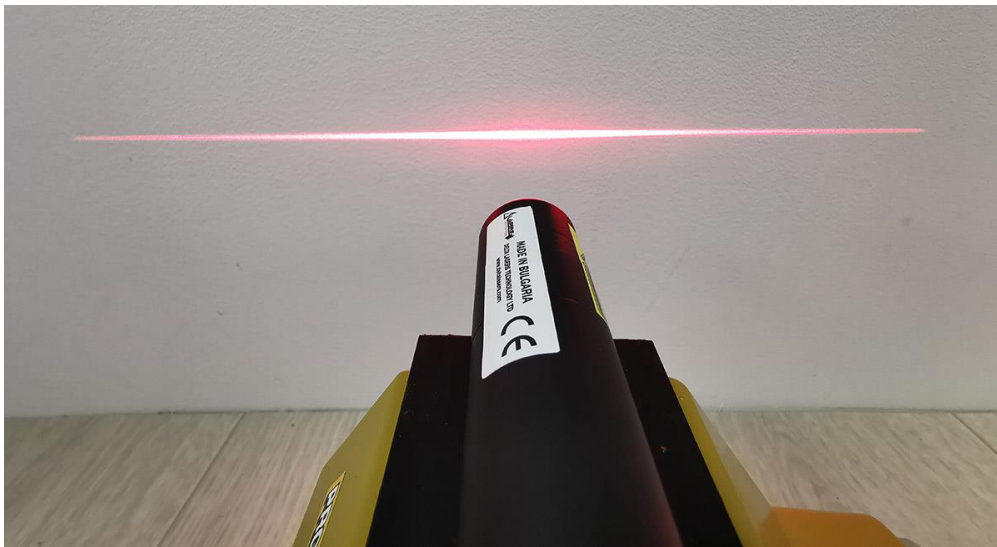
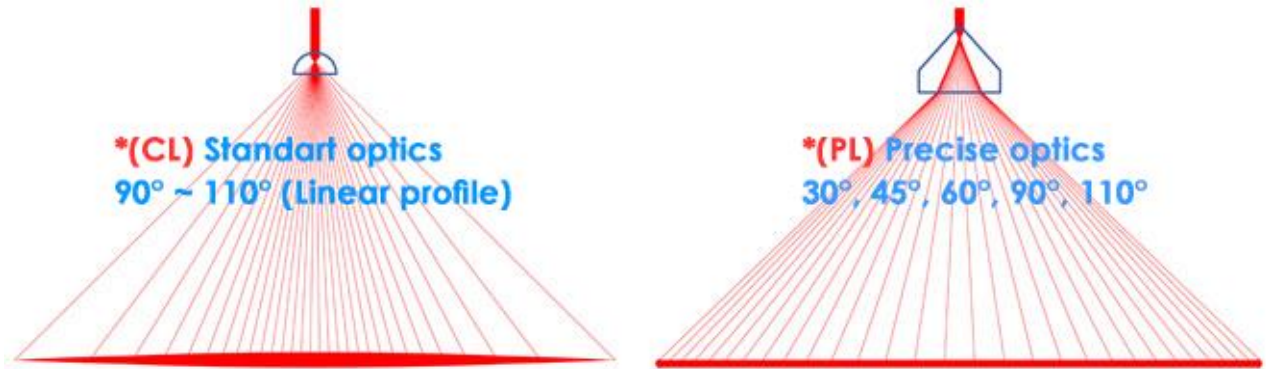


Connection: *(P2-45°) M12, 4-pin industrial connector

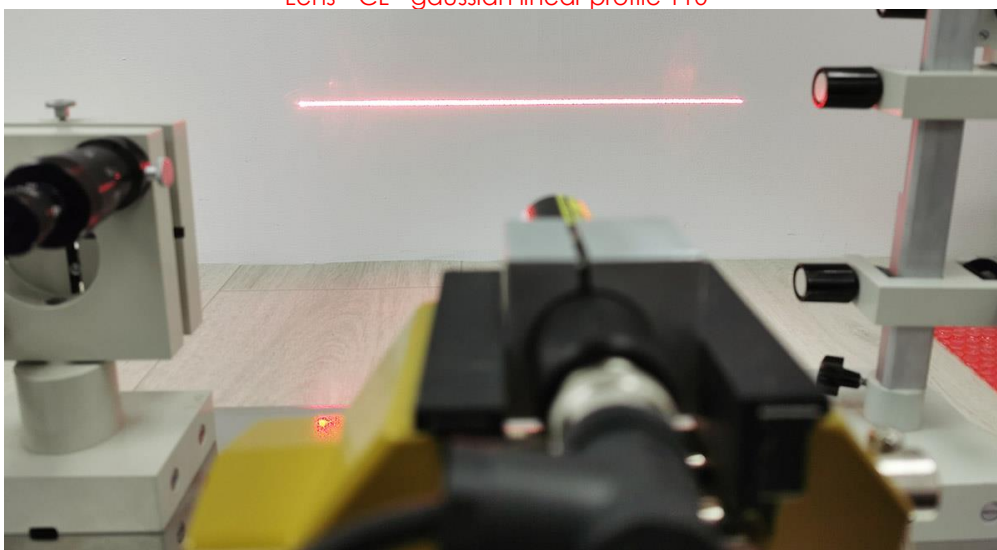


*All size is mm

Optics drawing



Lens * CL - gaussian linear profile 110°



Lens * PL - homogeneous with angle of 45°