

CR/ G/ B-I Series Line Laser

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The laser is made features of low noise, high straightness, perfect line uniformity and high stability to adapt to various environments.

The user can choose from red, green, blue, violet wavelengths depending on the application and material to be inspected.

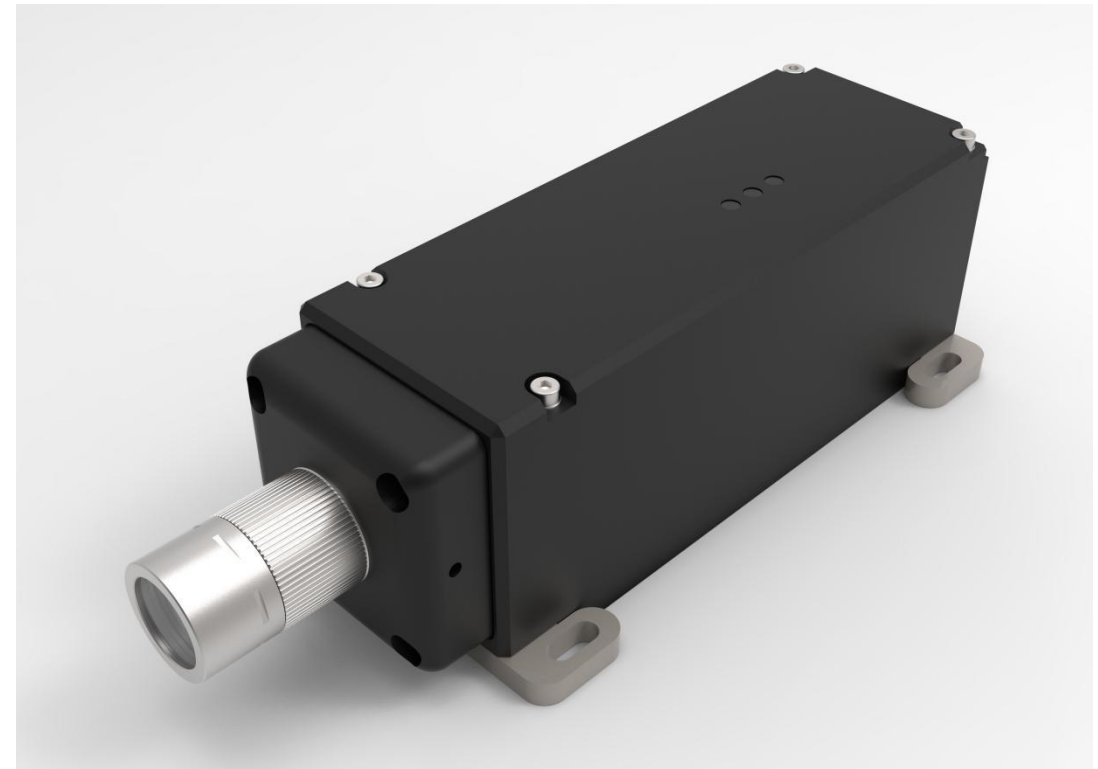
CR/ G/B-I Series Line Laser with its stable performance, high reliability works professionally in road detection, railway detection, tunnel and high-speed rail detection, etc.

APPLICATIONS

- Road detection
- Railway detection
- Tunnel detection
- High-speed rail detection

FEATURES

- Output power up to 1W
- Wavelengths from 405 to 660nm
- Digital-Modulation up to 500kHz
- RMS (20 Hz to 20 MHz) < 0.5 %



SYSTEM SPECIFICATION*

Wavelength	nm	405nm	450nm	520nm	640nm	660nm
Wavelength tolerance	nm (typical)	±5nm	±10nm	±10nm	±5nm	±5nm
Wavelength shift	nm	< 1nm				
Output power (elp)	mW	≤900mW	≤2500mW	≤800mW	≤1000mW	≤1000mW
Output power (slp)	mW	≤800mW	≤2100mW	≤700mW	≤800mW	≤800mW
Spot pattern		Multi-mode				
RMS noise	(20 Hz to 20 MHz)	< 0.5 %				
Peak-to-peak noise	(20 Hz to 20 MHz)	< 1 %				
Alignment	mrad	< 5 mrad				
Direction of the single-line drawing	mrad	< 10 mrad The direction is parallel to the base plate				
Directional stability varying with temperature	μrad / K	< 6 μrad / K				
Beam height from base plate	mm	28.3 mm				
Power stability	(24h)	< 1 %				
Warm-up time	min	< 2 min				

ELECTRICAL SPECIFICATION*

Operation voltage		12-24VDC
Operation current	(Maximum temperature 25°C)	<4A
Protect		Over-temperature protection、anti-reverse connection and transient protection (ESD、impact and surge)
Electrical isolation of the outer casing		High impedance to GND (1MΩ)
Connector		5-pin M8 connector; 8-pin M8 connector (Communication)
Power dissipation		<40W
Communication interface		RS-232

OPTICAL SPECIFICATION*

Line angle	°	5°、10°、20°、30°、45°、60°、75°、90°
Straightness	%	< 0.1 % (typ. 0,05%)
Nonuniformity	% (typ.)	<25%
Range of focus	mm	100mm-1000mm

SOFTWARE

Serial port communication

RS-232

Function (eg) : Status inquiry

Output power control

System configuration

Digital modulation

Digital-Modulation

Maximum frequency	200kHz
Rise time	<2us
Fall time	<350ns
Signal level	VIL_max<+1.1V VIH_min>+2.5V
Operating specification	0-30VDC

Analog Modulation

Maximum bandwidth	<10Hz
Power linearity	<5% (10%-100% of the laser power)
Effective range	0-2VDC
Operating specification	0-30VDC

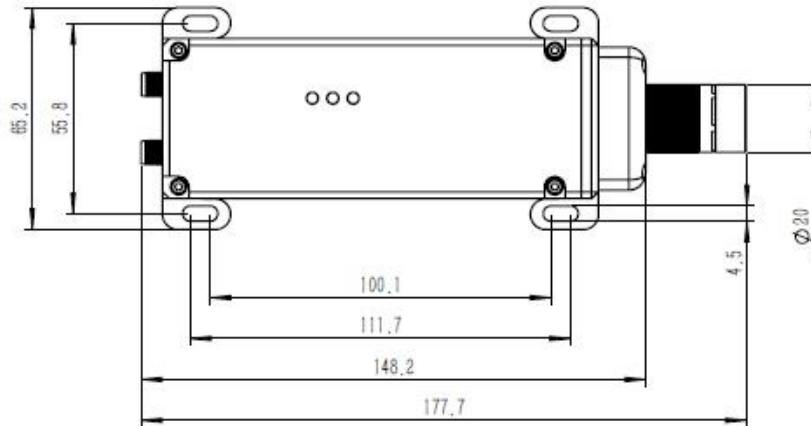
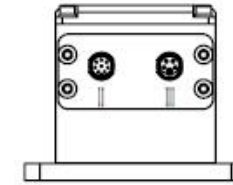
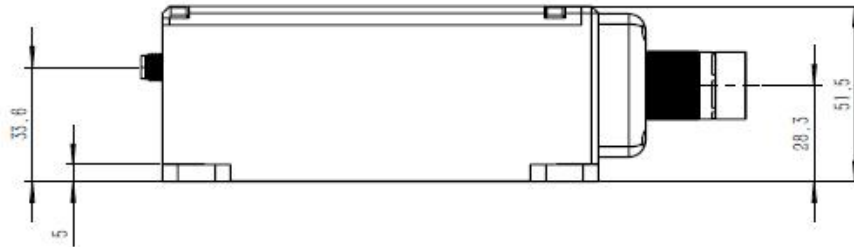
Environmental conditions

Operating temperature	°C	-10°C~+40°C
Storage temperature	°C	-40°C~+85°C
Humidity	%	<90%, No condensation
Heat dissipating capacity	W	Max. 35W

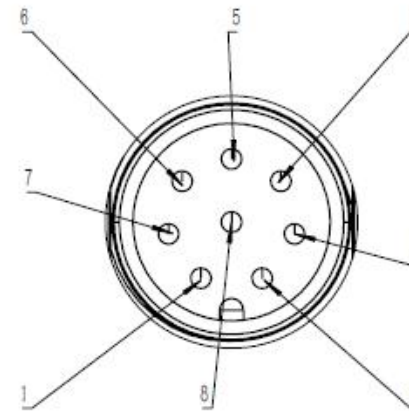
Machinery specification

Weight	kg	0.755kg
Size	mm	177.7×65.2×51.5mm ³
Lens diameter	mm	20mm
Materials		Aluminum Lens: Stainless steel
Protection class		IP67
Install		4×M4 screw

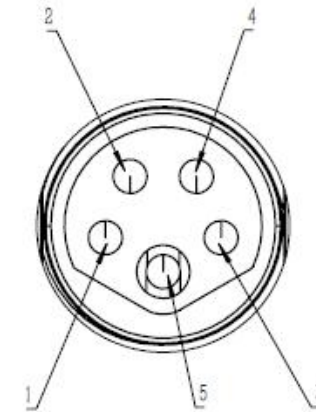
Dimension of Laser



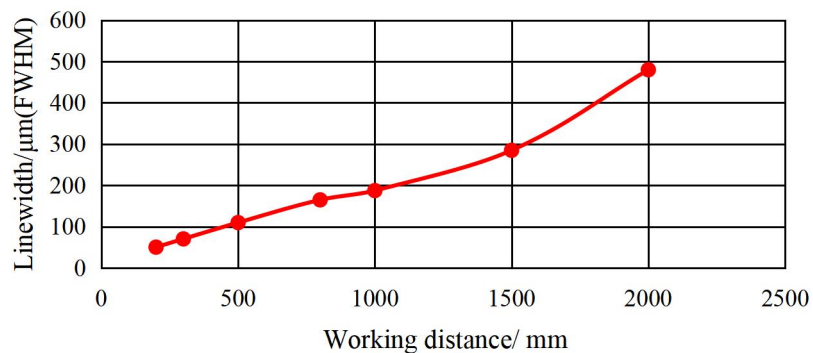
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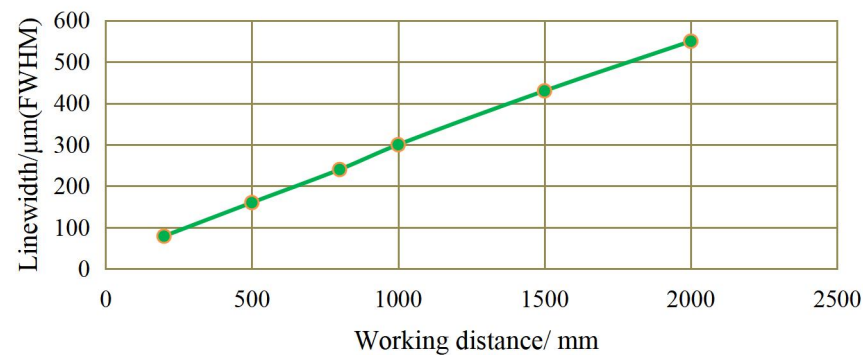
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Red laser linewidth-working distance curve



Green laser linewidth-working distance curve



Blue laser linewidth-working distance curve

