Neptec Optical Solutions
48603 Warm Springs Blvd.
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Uniform Line Laser

Description

This uniform line coupled laser including special lens and powell lens is the high-performance laser line generator. Powell lens is the standard uniform line laser solution in the market. Special lens uniform line laser is an exclusive patent, provides better uniform line width and intensity. This special solution has solved bright spots at both ends of the laser line, and improved beam quality. Therefore, the sharpness and resolution of scanning can be improved. Special lens uniform line laser is widely used in machine vision, 3D scanning, and industrial inspection.

Features

- High Signal-to-Noise Ratio
- 405nm to 850nm
- Power up to 500mW
- User Adjustable Focus
- Analog or Digital Modulation
- Power Supply Range: 5 to 24VDC
- EDS Protection, Over-temperature Protection, and Reverse Polarity Protection

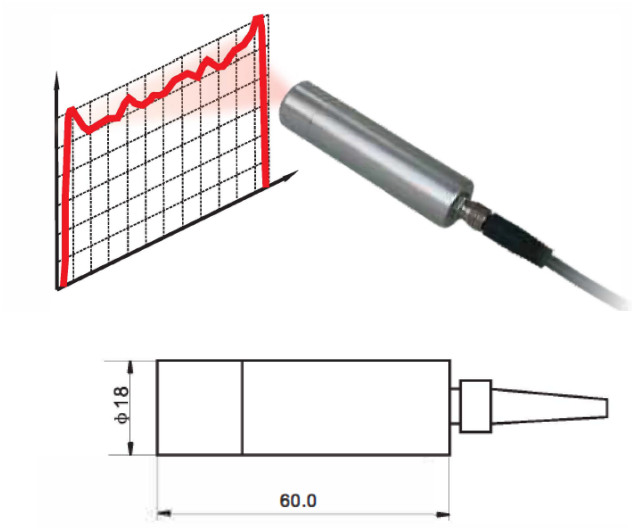
Applications

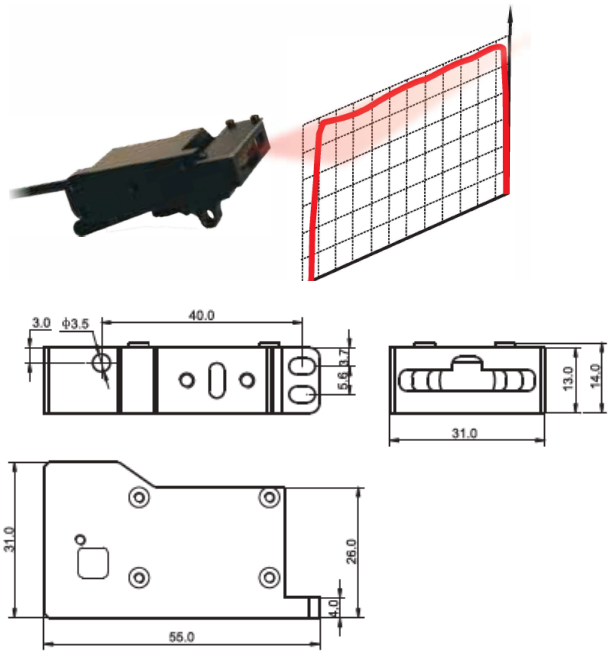
- Machine Vision
- 3D Scanners
- AGV Robot
- LiDAR
- Industrial Inspection
- Biological Instrument
- Logistic Volume Measurements
- Road/Rail Inspection
- Tunnel Profiling
- Infrastructure
- Structured Lighting

Wavelength

- 405nm, 450nm, 488nm, 505nm, 638nm, 685nm, 785nm, 808nm, 830nm, and 850nm.

Mechanical Drawings





Unit: mm

NEPTEC
OPTICAL SOLUTIONS

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Specifications

Parameter	Unit	Powell Lens	Special Lens
Wavelength	nm	405, 450, 488, 505, 638, 685, 785, 808, 830, 850	
Wavelength Tolerance	nm	±5.0	
Output Power	mW	10, 20, 30, 50, 80, 100, 150, 200, 400, 500	
Spatial Mode	/	Single Transverse Mode, Multi Transverse Mode	
Link Thickness at 1/e^2 (Line Width/ Beam Width)	/	10μm@30mm,20μm@50mm, 30μm@80mm, 40μm@100mm, 70μm@200mm, 100μm@300mm	
Fan Angle	°	10, 20, 30, 45, 60, 75	
Straightness	%	≤0.10	≤0.10
Relative Intensity	%	>70	>80
Laser Drive Modes	/	CW, Analog Modulation, Digital Modulation, Computer Control	
Operating Voltage	VDC	5.0, 9.0, 12.0	
Operating Current	mA	<500	
Input Impedance	kΩ	>1	
Beam Angle	mrad	<3.0	
ESD Protection	/	Level 4	
Power Consumption	W	Typ. 5, Max. 13	
Dimensions	mm	Φ18xL60	31x55x14
Operating Temperature	°C	+10 to +40	
Storage Temperature	°C	-20 to +60	
MTBF	hrs	>10000	