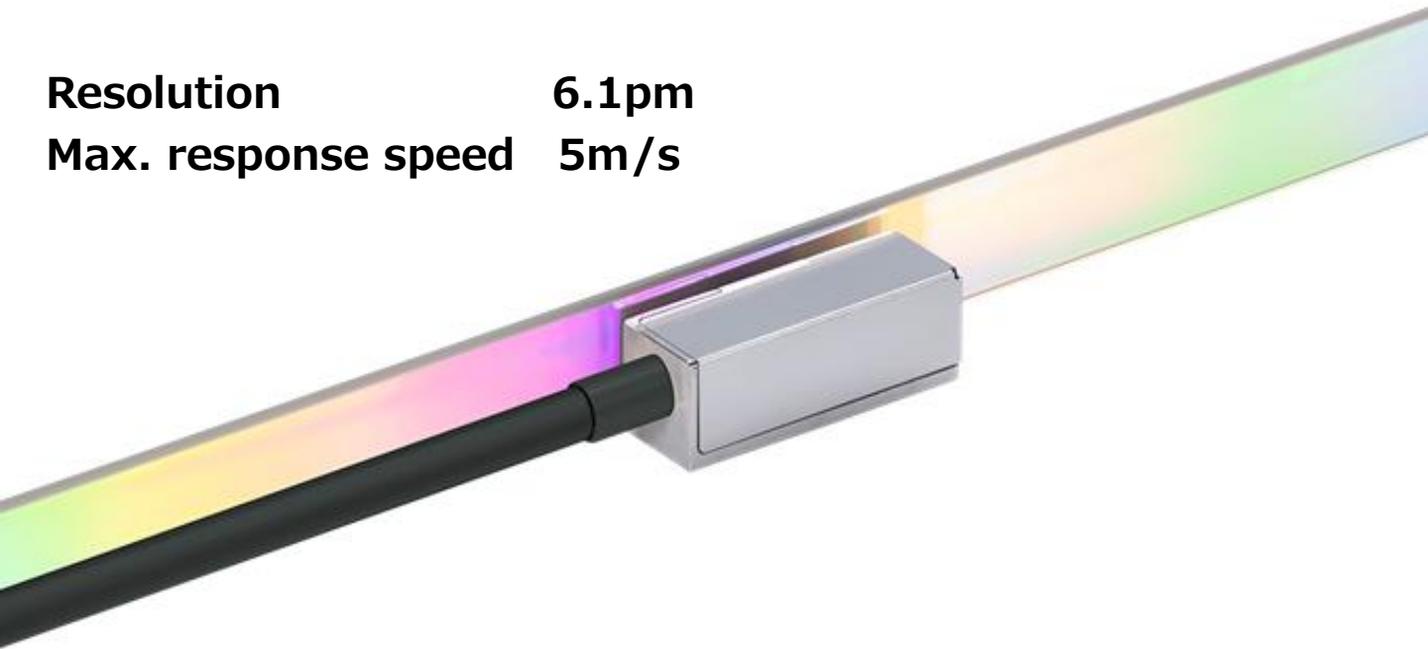


Resolution 6.1pm
Max. response speed 5m/s



Laserscale for motion control with both high resolution and high speed

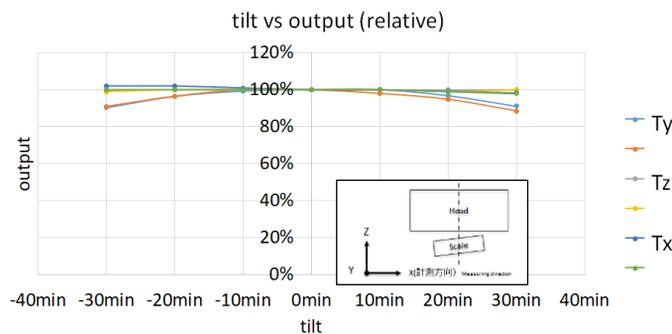
High resolution and high response speed

The BL50H incorporates 1.6μm pitch grating on its scale. Signal wavelength detected through the scanning head is 400nm and up to 6.1pm resolution pitch signal is attained by using the dedicated interpolator.

In addition, its maximum response speed is 5 m/s.

Wide-angular tolerance

Optimized detection optical system in BL50H enables wide-angular tolerance. Thus, the product has flat output characteristics in all the direction of rotation. The angular tolerance is ±30min.



Long-life laser diode

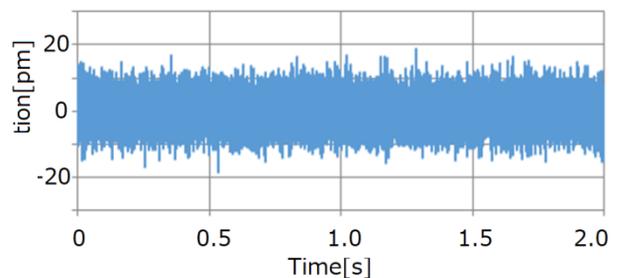
Long-life laser diode (the life is 5 times longer than that of the conventional product) is used on BL50H, the scanning head uses one unit of the laser diode.

A specialized type of laser diode is available, which is operative in temperature of 40 deg. C or more. For detail, please contact our sales office.

BL50H series

Low noise

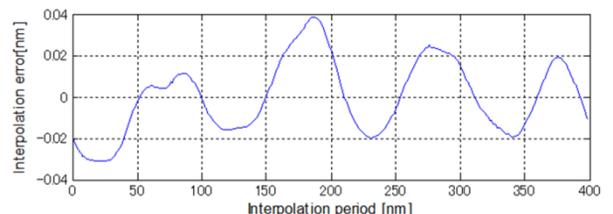
BL50H series provide S/N ratio of 13pm under condition of LPF6KHz.

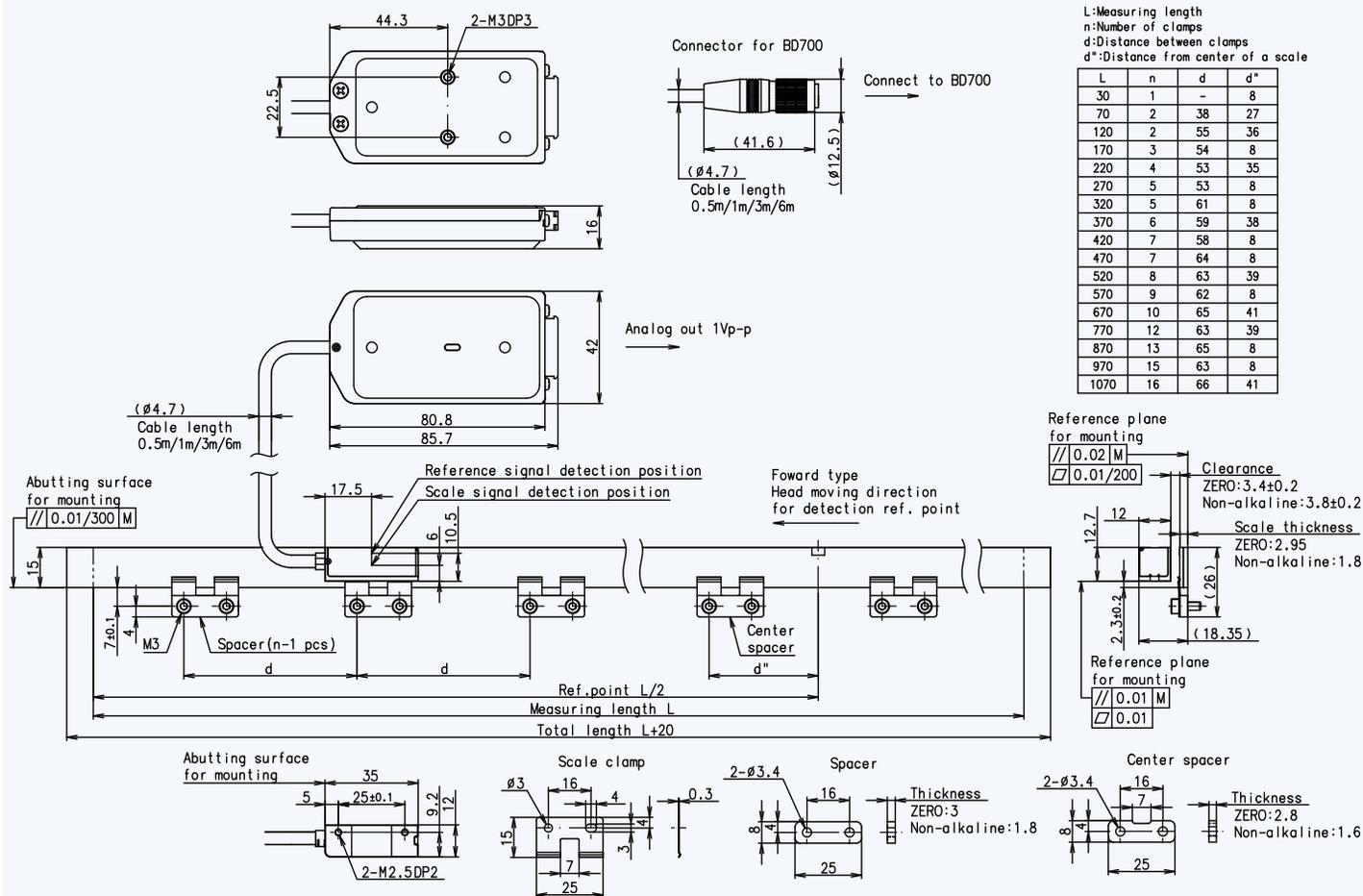


Excellent interpolation accuracy

Excellent interpolation accuracy is achieved on BL50H with the combination of BD700 interpolator.

± 50pm/400nm





Note 1 : The surface roughness of the scale mounting surface is $R_{max}=6.3s$.
 Note 2 : The surface roughness of the detector head mounting surface is $R_{max}=6.3s$.
 Note 3 : "M" refers to the machine guide.

Unit:mm

Specifications

Scale unit		BL50H-SZ * * * * *	BL50H-SA * * * * *
Model name		BL50H-SZ * * * * *	BL50H-SA * * * * *
Scale material		ZERO glass $0.1 \times 10^{-6} / ^\circ C$	Non-alkaline glass $3.7 \times 10^{-6} / ^\circ C$
Measuring length		30 to 1,070mm	
Grating pitch		1.6 μ m	
Reference point position		User definable (within the range of measuring length) or None	
Accuracy (at 20°C)		$\pm 0.5\mu$ m/30 to 120mm, $\pm 1\mu$ m/170 to 270mm, $\pm 3\mu$ m/320 to 670mm ($\pm 1.5\mu$ m with special specification), $\pm 5\mu$ m/770 to 970mm ($\pm 3\mu$ m with special specification), $\pm 5\mu$ m/1,070mm, $\pm 0.2\mu$ m/1,070mm or less (with BD700 compensation)	
Interpolation accuracy		± 50 pm (with interpolator BD700)	

Head unit		BL50H-FSE * * D	BL50H-FSE * * H
Model name		BL50H-FSE * * D	BL50H-FSE * * H
Output signal		Interpolator BD700 connection (*)	Analog 1Vp-p
Signal pitch		400nm	
Maximum resolution		6.1pm	-
Maximum response speed		3m/s (5m/s with special handling)	
Clearance		ZERO glass : 3.4±0.2mm Non-alkaline glass : 3.8±0.2mm	
Angle tolerance		Yaw : ±8.7mrad Pitch : ±8.7mrad Rolling : ±8.7mrad	
Head cable length		0.5m, 1m, 3m, 6m	
Operating temperature		+10 to +40°C (No condensation)	

(*) : Converted to A/B phase, serial interface of various companies, and analog output by BD700 interpolator

● Magnescale reserves the right to change products and specifications without prior notice.

■ Magnescale Co., Ltd.

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BL50H(2)-EA06E
 E.2408.F0300

The contents of this literature are as of Aug. 2024.