

450nm, High Stability, High Quality Blue Lasers Module

**Application:**

Industrial areas

**Property:**

Wavelength Range = 450nm

**Introduction:**

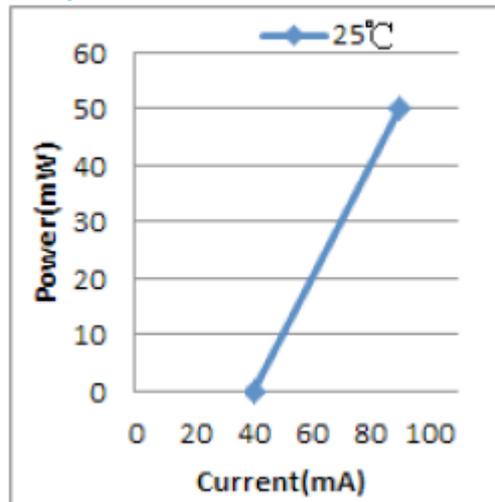
Egismos created high end blue lasers. HB laser module series can be with various output power, from <1mW to 100mW. High MTF, good stability, great beam shape and good heat dissipation are other qualities that might be highly appreciated by our customers.



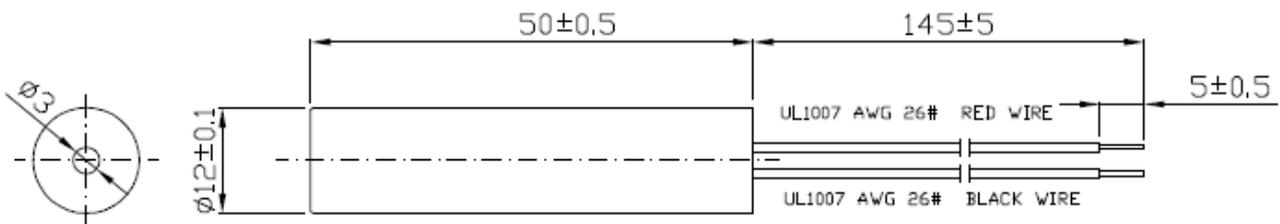
**Specifications:**

Specifications(T=25°C)	Symbol	HB54501D HB54505D HB545010D	HB545020D HB545030D HB545050D
Mode		CW(TTL)	CW(TTL)
Wavelength	$\lambda$	450nm	450nm
Spot		Round, Dot, Line	Round, Dot, Line
Spot Size		<15mm at 10m, min. <10mm at 10m	<15mm at 10m, min. <10mm at 10m
Diameter x Length	$\Phi \times l$	12 x 50 mm	12 x 50 mm
Output Power	Po	1mW ~ 10mW	20mW ~ 50mW
Power Stability		$\leq \pm 10\%$ within operating temperature	$\leq \pm 10\%$ within operating temperature
Divergence Angle	mrad	<1.5mrad, min.<1.0mrad	<1.5mrad, min.<1.0mrad
Boresight	deg	<1 degree	<1 degree
Operating Voltage(DC)	Vo	5.0V, 12V	5.0V, 12V
CW Operating Current	Io	80mA, 120mA max	80mA, 120mA max
Operating Temperature	To	+10 to +70	+10 to +70
Storage Temperature	Ts	-40 °C ~ + 85 °C	-40 °C ~ + 85 °C
Housing Material		Brass/Anodized Aluminum	Brass/Anodized Aluminum
Mean time to failure(MTTF)	hrs	>5,000	>5,000

**Current vs Optical Output Power:**



**Outline Dimensions:**



**Certification:**



**Laser Safety**

The light emitted from these devices has been set in accordance with IEC60825. However, staring into the beam, whether directly or indirectly, must be avoided.

**Class I**

The maximum permissible exposure(MPE) cannot be exceeded, it includes High-power lasers within an enclosure that prevents exposure to the radiation and that cannot be opened without shutting down the laser. For example, a continuous laser at 600nm can emit up to 0.39mW, but for shorter wavelengths, the maximum emission is lower.

**Class II**

"Caution", visible laser light less than 1.0mW. Considered eye safe, normal exposure to this type of beam will not cause permanent damage to the retina.

**Class IIIA**

"Danger", visible laser light between 1.0mW and 5.0mW. Considered eye safe with caution. Focusing of this light into the eye could cause some damage.

**Class IIIB**

"Danger", infrared(IR), and high power visible lasers considered dangerous to the retina if exposed. NB: it is important to note that while complying with the above classifications, unless otherwise stated. Our laser diode products are not certified and are designed solely for use in OEM products. The way in which device is used in the final product may alter its original design classification, and it is the responsibility of the OEM to ensure compliance with the relevant standards.

