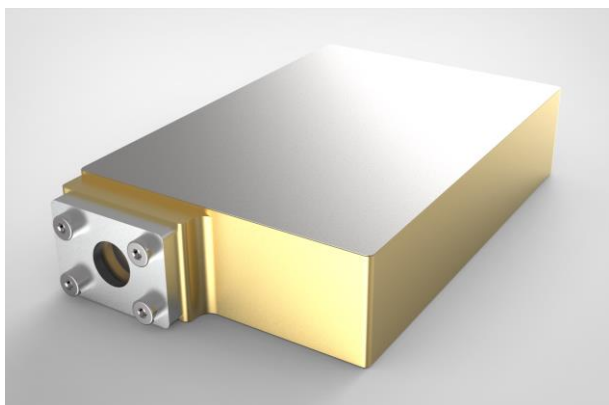


445nm Spatial Light Output Blue Laser K445HS4WN



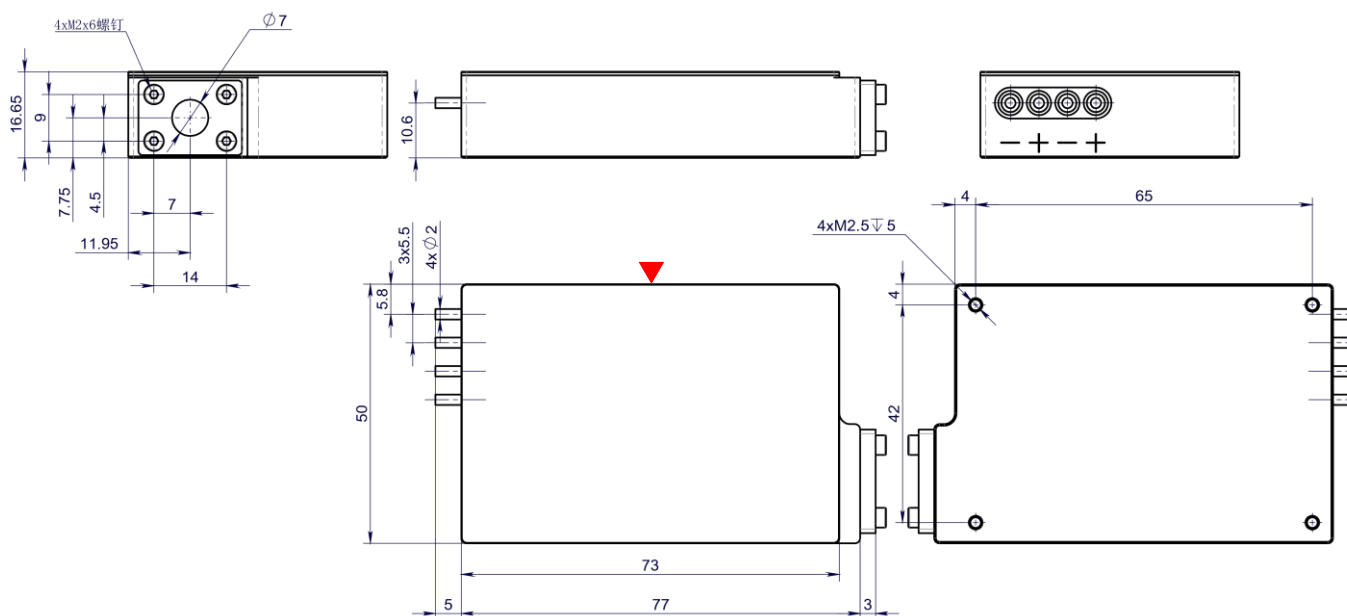
主要特性/ Features:

- ◆ 445nm wavelength
- ◆ 40W output power
- ◆ Spatial light output
- ◆ Polarization Beam Combined

应用领域/ Applications:

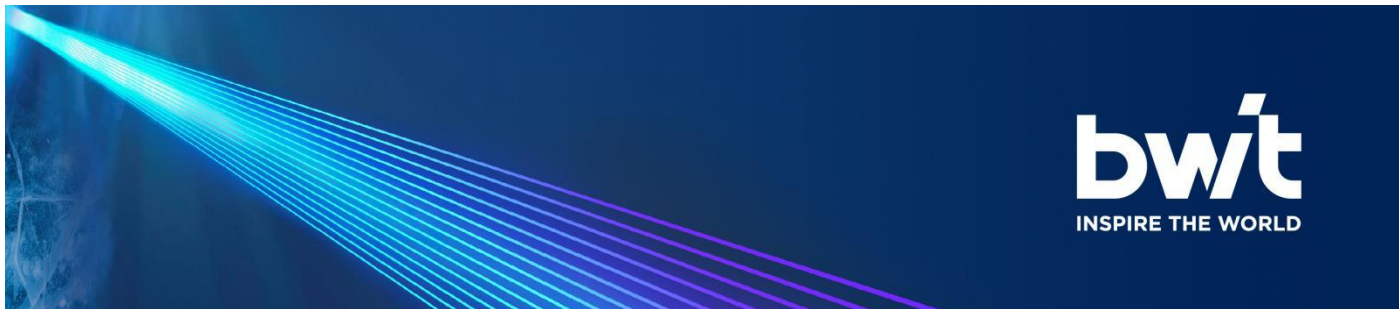
- ◆ Laser engraving
- ◆ Scientific research

尺寸图 (mm) / Package Dimensions (mm)



声明: 北京凯普林光电科技股份有限公司所提供的产品信息是可靠、准确的, 并有权随时对产品的设计和参数进行改进和修改, 恕不另行通知。

Declaration: information and specifications contained herein are deemed to be reliable and accurate. BWT Beijing reserves the right to change, alter or modify the design and specifications of these products at any time without notice.



445nm Spatial Light Output Blue Laser K445HS4WN

规格参数(25°C) Specifications(25°C)	符号 Symbol	单位 Unit	K445HS4WN-40.00W55		
			Minimum	Typical	Maximum
光学参数 (1) /Optical Data (1)					
输出功率 / Output Power	P_{bol}	W	-	40	-
中心波长 / Center Wavelength	λ_c	nm	445±10		
光谱宽度 / Spectral Width (FWHM)	$\Delta\lambda$	nm	-	6	-
温度漂移 / Wavelength Shift with Temperature	$\Delta\lambda/\Delta T$	nm/°C	-	0.1	-
电流漂移 / Wavelength Shift with Current	$\Delta\lambda/\Delta A$	nm/A	-	1	-
聚焦长度 / Focus length	L			55	
焦点光斑 / Spot Size @ Focal plane @0.4A	-	μm	-	-	160
电学参数 (1) /Electrical Data (1)					
电光效率 / Electrical-to-Optical Efficiency	PE	%	-	30	-
工作电流 / Operating Current	I_{bol}	A	-	3.6	3.8
阈值电流 / Threshold Current	I_{th}	A	-	0.35	0.4
工作电压 / Operating Voltage(2 modules)	V_{op}	V	-	17.6*2	20*2
斜率效率 / Slope Efficiency	η	W/A	-	12.3	-
其他参数 / Others					
ESD	V_{esd}	V	-	-	500
存储温度 / Storage Temperature (2)	T_{st}	°C	-20		70
引线焊接温度 / Lead Soldering Temp	T_{ls}	°C	-	-	260
引线焊接时间 / Lead Soldering Time	t	sec	-	-	10
操作温度 / Operating Temperature (3)	T_{op}	°C	15	-	30

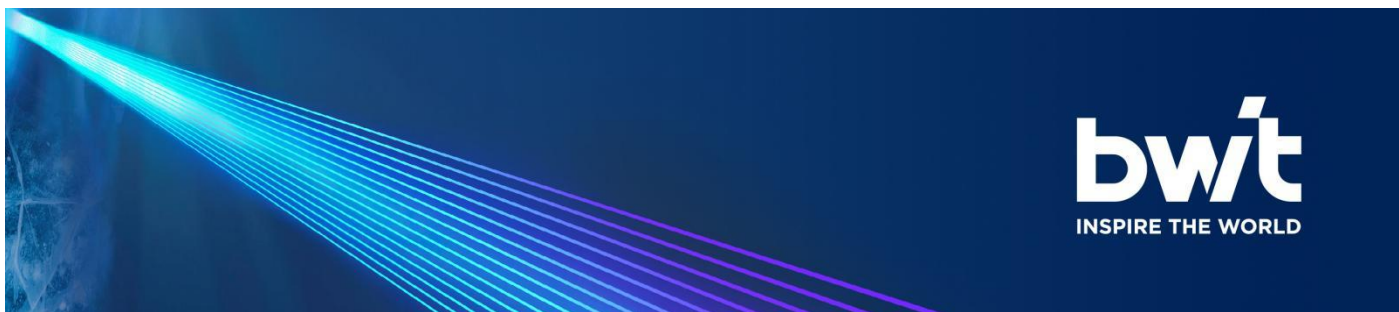
(1) 数据在 25°C冷板条件下测得。Tested at 25°C cold plate temperature.

(2) 操作和储存需要非冷凝环境。A non-condensing environment is required for operation and storage.

(3) 建议壳壁温度≤50°C，不同温度下性能可能有所不同。

The temperature of the housing sidewall should be ≤ 50 °C, but performance may vary.

(4) 超规格使用会导致激光器寿命减少。Reduced lifetime if used above nominal operating conditions.



445nm Spatial Light Output Blue Laser K445HS4WN

规格参数(25°C) Specifications(25°C)	符号 Symbol	单位 Unit	K445HS4WN-40.00W40		
			Minimum	Typical	Maximum
光学参数 (1) /Optical Data (1)					
输出功率 / Output Power	P_{bol}	W	-	40	-
中心波长 / Center Wavelength	λ_c	nm	445±10		
光谱宽度 / Spectral Width (FWHM)	$\Delta\lambda$	nm	-	6	-
温度漂移 / Wavelength Shift with Temperature	$\Delta\lambda/\Delta T$	nm/°C	-	0.1	-
电流漂移 / Wavelength Shift with Current	$\Delta\lambda/\Delta A$	nm/A	-	1	-
聚焦长度 / Focus length	L			40	
焦点光斑 / Spot Size @ Focal plane @0.4A	-	μm	-	-	120
电学参数 (1) /Electrical Data (1)					
电光效率 / Electrical-to-Optical Efficiency	PE	%	-	30	-
工作电流 / Operating Current	I_{bol}	A	-	3.6	3.8
阈值电流 / Threshold Current	I_{th}	A	-	0.35	0.4
工作电压 / Operating Voltage(2 modules)	V_{op}	V	-	17.6*2	20*2
斜率效率 / Slope Efficiency	η	W/A	-	12.3	-
其他参数 / Others					
ESD	V_{esd}	V	-	-	500
存储温度 / Storage Temperature (2)	T_{st}	°C	-20		70
引线焊接温度 / Lead Soldering Temp	T_{ls}	°C	-	-	260
引线焊接时间 / Lead Soldering Time	t	sec	-	-	10
操作温度 / Operating Temperature (3)	T_{op}	°C	15	-	30

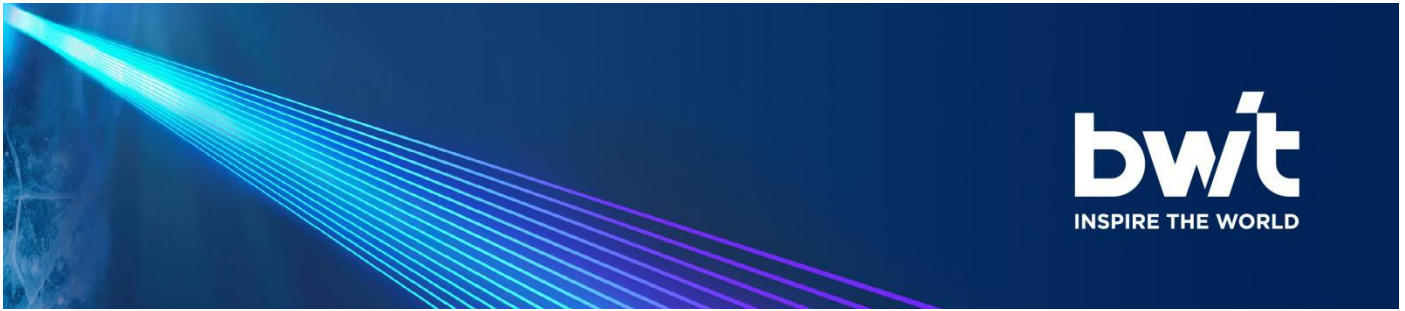
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445nm Spatial Light Output Blue Laser K445HS4WN

使用说明 / OPERATING NOTES

- ◆ 激光器工作时，请遵守 IEC 四级激光标准安全规范，避免激光照射眼睛和皮肤。
 - ◆ 静电击穿是导致半导体激光器失效的重要原因，激光器安装需由经过培训的人员完成，操作时需佩戴防静电手腕带，工作台需接地。在供电连接头与激光器管脚连接之前，不得移除激光器管脚上的防静电保护线。
 - ◆ 引线温度低于 260°C，焊接时间小于 10 秒。
 - ◆ 电流过冲有可能导致激光器损坏，请使用稳定的恒流电源，工作时避免浪涌。
 - ◆ 应在额定电流、额定功率下使用。
 - ◆ 激光器工作时需保证良好散热。
 - ◆ 在激光器出光之前，请确保窗口镜端面清洁。
-
- ◆ Please follow the standard safety procedures for IEC Class 4 lasers, Avoid eye and skin exposure to direct radiation during operation.
 - ◆ ESD precautions must be taken during storage, transportation and operation. Short-circuit is required between pins during storage and transportation.
 - ◆ to the middle of the pins. Soldering temperature should be lower than 260°C and time shorter than 10 second.
 - ◆ The laser may be damaged by excessive drive current, stable power supply should be used to avoid surge current.
 - ◆ The laser should be operated according to the specifications, maximum optical power should not be exceeded.
 - ◆ Laser diode must work with good cooling.
 - ◆ Ensure the end of the window be free of dust and contamination before operation



凯普林光电始创于 2003 年，公司以“让梦想驭光而行”为使命，以成为“全球激光解决方案领跑者”为愿景，以“创变非凡”为价值观，面向全球客户提供半导体、光纤、超快激光产品及解决方案。

公司追求持续创新，坚持自主可控的先进工艺和技术。为此，凯普林以北京总部为核心，先后在江苏、深圳建立了生产及研发中心，在天津投资兴建了智能化、数字化生产基地。为打造高水平技术实力和产品质量，凯普林在 2020 年成立德国子公司，为研发生产和技术创新国际化迈出坚实一步。

BWT, founded in 2003, is committed to the mission of "let the dream drive the light", the vision of becoming the "Global leader in laser solutions", and the value of "Outstanding innovation", providing diode laser, fiber laser, ultra-fast laser products and solutions to global customers.

The company pursues continuous innovation and insists on autonomous and controllable advanced process and technology. With Beijing headquarters as the core, BWT has successively established production and R&D centers in Jiangsu, and Shenzhen, and invested in the construction of an intelligent and digital production base in Tianjin. To build a high level of technical strength and product quality, BWT set up a German subsidiary in 2020, and taking a solid step for the internationalization of R&D, production and technological innovation.