

445 nm 60 W Fiber Coupled Blue Diode Laser

K445HB0FA-60.00W V01



Features:

- 445nm wavelength
- 60W output power
- 50μm fiber core diameter
- 0.22NA

Applications:

- Laser engraving
- Scientific research

Specifications (25°C)		Symbol	Unit	K445HB0FA-60.00W V01		
				Minimum	Typical	Maximum
Optical Data ⁽¹⁾	Output Power@3.8A	Pbol	W	58	60	-
	Center Wavelength	λ_c	nm	445±20		
	Spectral Width (FWHM)	$\Delta\lambda$	nm	-	6	-
	Wavelength Shift with Temperature	$\Delta\lambda/\Delta T$	nm/°C	-	0.1	-
	Wavelength Shift with Current	$\Delta\lambda/\Delta A$	nm/A	-	1.3	-
	95% Power NA	-	-	-	0.14	-
Electrical Data ⁽¹⁾	Electrical-to-Optical Efficiency	PE	%	-	30	-
	Operating Current	Ibol	A	-	2.8	3.8
	Threshold Current	Ith	A	-	0.3	-
	Operating Voltage	Vop	V	-	33.5*2	40*2
	Slope Efficiency	η	W/A	-	24	-
Fiber Data	Core Diameter	Dcore	μm	-	50	-
	Numeric Aperture	NA	-	-	0.22	-
	Fiber Length	Lf	m	3.3	3.5	3.7
	Fiber Loose Tube Diameter	Dtube	mm	3		
	Minimum Bending Radius	-	mm	50		
	Fiber Termination	-	-	SMA905		
Aiming Beam Data	Aiming Beam Wavelength	λ_{aiming}	nm	-	638	-
	Aiming Beam Power	Paiming	mW	-	2	-
	Aiming Beam Voltage	Vaiming	V	-	2.1	-
	Aiming Beam Current	Iaiming	mA	-	180	-
	Thermistor Data					
	Thermistor Data	Rt	(KΩ)/β(25°C)	-	10±3%/3450	-
Others	ESD	Vesd	V	-	-	500
	Storage Temperature ⁽²⁾	Tst	°C	-20		70
	Lead Soldering Temp	Tls	°C	-	-	260
	Lead Soldering Time	t	sec	-	-	10
	Operating Case Temperature ⁽³⁾	Top	°C	15	-	35

(1) Tested at 25°C cold plate temperature.

(2) A non-condensing environment is required for operation and storage.

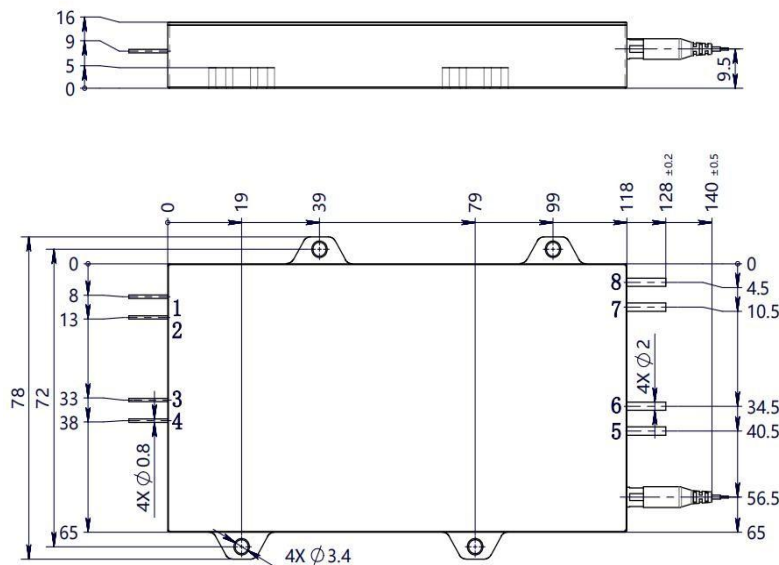
(3) The temperature of the housing sidewall should be ≤ 50 °C, but performance may vary.

(4) Reduced lifetime if used above nominal operating conditions.

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Package Dimensions (mm)



Pin	Function
1	Thermistor*
2	Thermistor*
3	Aiming(+)*
4	Aiming(-)*
5	1(+)/LD1 (+)
6	1(-)/LD1 (-)
7	2(+)/LD2 (+)
8	2(-)/LD2 (-)

OPERATING NOTES

- 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