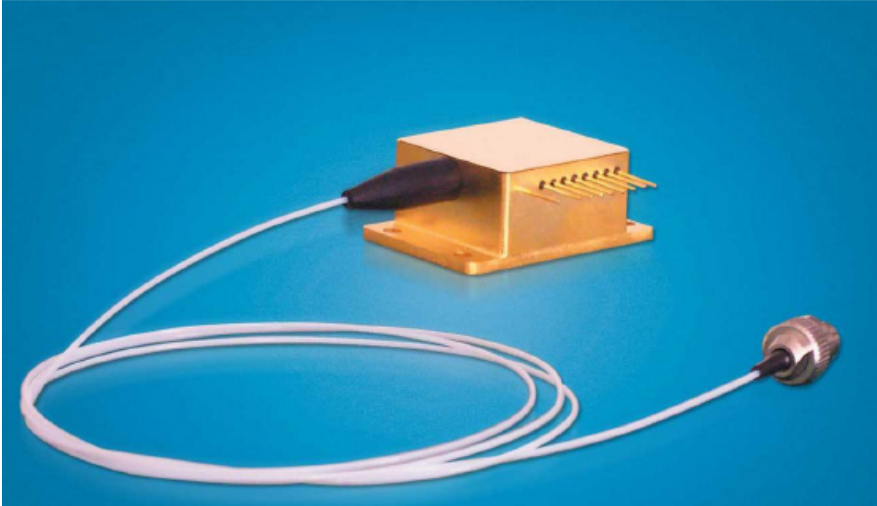


S98S09F-10W

Product Information



Key Features:

- ◆ 10W output power
- ◆ 105 μ m fiber core diameter
- ◆ 0.22NA
- ◆ 976nm wavelength

Applications:

- ◆ Laser pumping
- ◆ Medical use
- ◆ Scientific



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976nm HHL Packaged Diode Laser

Specifications (25°C)		Symbol	Unit	K98S09F-10.00W
Optical data	CW-output power	P_o	W	10
	Center wavelength	λ_c	nm	976
	Tolerance of λ	-	nm	$\pm 3, \pm 10$
	Spectral width (FWHM)	$\Delta\lambda$	nm	<3
	Temperature drift of λ	-	nm/°C	~0.3
Fiber data ⁽¹⁾	Fiber core diameter	W_c	μm	105,200
	Numerical aperture	NA	-	0.22
	Fiber connector	-	-	SMA-905
Electrical data	Operation current	I_{op}	A	12
	Threshold current	I_{th}	A	0.5
	Conversion efficiency	η	%	35~45
	Slope efficiency	η_D	W/A	0.8~1.0
	Operation voltage	V_{op}	V	1.9
	Reverse voltage	V_{re}	V	2
PD data	Current	I_{mo}	mA	0.2~2.00
TEC data	Max. current	I_t	A	6.0
	Max. voltage	V_t	V	9.8
Thermistor data ⁽²⁾	Thermistor	R_t	(K Ω)/ β (25°C)	$10 \pm 5\%/3477$
Others	Operation temperature	T_{op}	°C	10~30
	Storage temperature	T_{st}	°C	-20~+80
	Lifetime	MTTF	h	>10,000
	Dimensions (fiber and connector not included)	-	mm	~44.5×31.8×18.0
	Lead soldering temperature	T_{is}	°C	260(10 sec.)

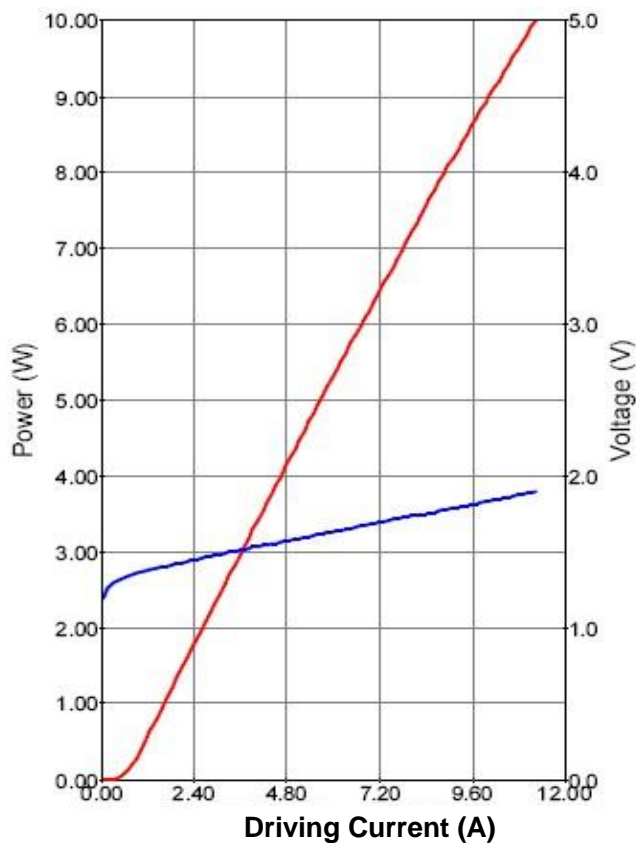
(1) Other fibers available.

(2) $R_t = R_0 \cdot \exp(\beta(1/T - 1/T_0))$, ($T_0 = 25^\circ\text{C} = 298\text{K}$).

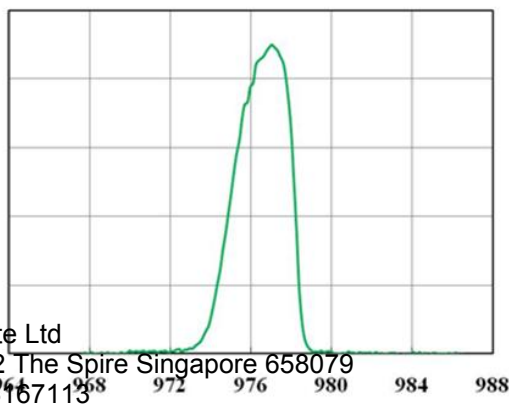
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976nm HHL Packaged Diode Laser

Characteristics



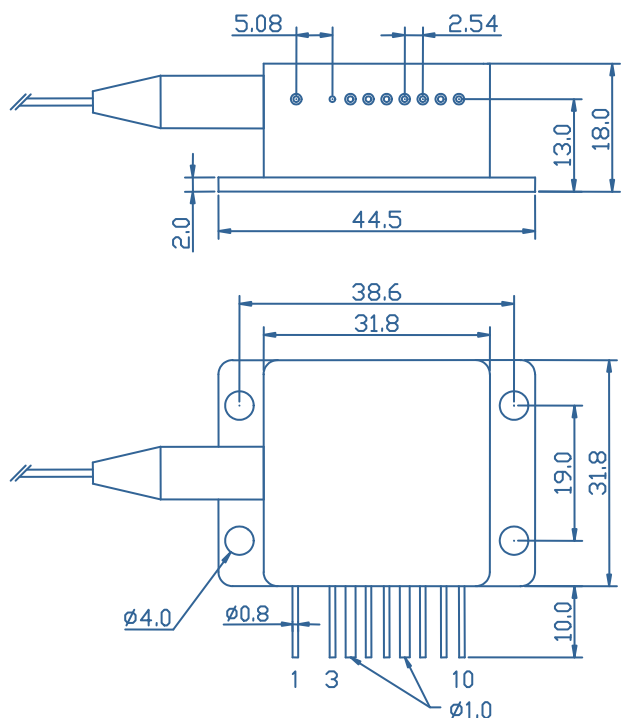
Typ. spectrum (T=25°C)



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976nm HHL Packaged Diode Laser

Package Dimensions (mm)



Pin	Function	Pin	Function
1	TEC (-)	6	Thermistor
2	-	7	LD (-)
3	Case	8	PD (P)
4	LD (+)	9	PD (N)
5	Thermistor	10	TEC (+)

OPERATING NOTES

- Avoid eye exposure to direct or scattered radiation.
- ESD precautions must be taken.
- Please connect pins to wires by solder instead of using socket when operation current is higher than 6A. Soldering point should be close to the root of the pins. Soldering temperature should be lower than 260°C and time shorter than 10 second.
- Use constant current power supply. Avoid surge current.
- Laser diode must be used according to the specifications.
- Laser diode must work with good cooling.
- A minimum bend diameter should be 300 times greater than the fiber diameter.
- Operation temperature is 10°C~ 30°C.
- Storage: -20°C~ +80°C, all pins short-circuit.

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