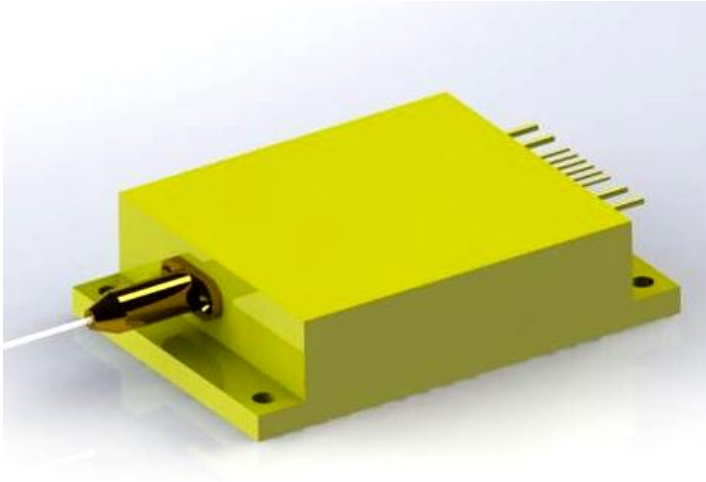


D-Series High Power Laser Diode Module

M976±3-90-F105/22-D1M-P



Han's TianCheng Semiconductor Co.,Ltd., founded in November 2011 in Beijing Development Area, is a subsidiary company of Han's Laser. Han's TianCheng has advanced research, technological infrastructure and experience in the development and production of diode lasers with self-developed technology, especially in fiber coupled laser modules. Han's TianCheng provides high power semiconductor laser products which are widely used in the fields such as material processing, diode-pumped solid-state pumping, fiber laser pumping, laser display, medical application and scientific research

Han's TianCheng dedicates to the development of high brightness fiber coupled diode laser modules with output power from ten to hundreds of watts, and the wavelength from 635nm to 1550nm. We can also provide special wavelength and multi-wavelength products, and other customizing products and OEM services.

Features:

- ◆ High output power of 90W
- ◆ 105 μ m core 0.22NA multimode optical fiber
- ◆ Fiber laser feedback protection

Accessories:

- ◆ Photodiode detector
- ◆ Thermistor

Applications:

- ◆ Fiber laser pumping

Typical Device Performance (25°C)

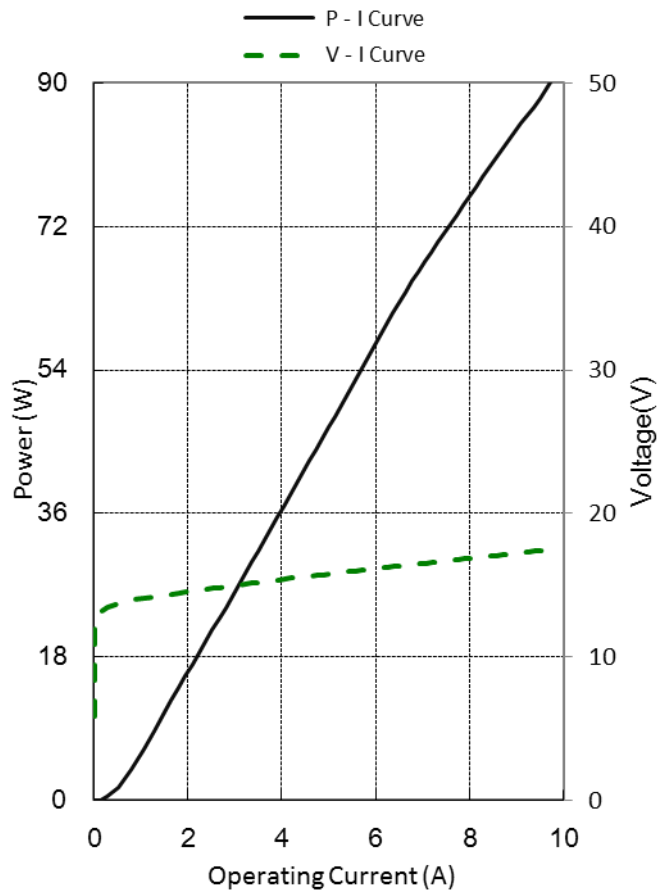
	Symbol	Typical Value	Unit
Optical			
CW Output Power	P_{op}	90	W
Center Wavelength	λ	976±3	nm
Spectral Width (90% of Power)	$\Delta \lambda$	<6.0	nm
Wavelength Shift with Temperature	$\Delta \lambda / \Delta T$	0.3	nm / °C
Feedback Protection (1030-1100nm)	FP	>40	dB
Electrical			
Threshold Current	I_{th}	0.6	A
Operating Current	I_{op}	10.0	A
Operating Voltage	V_{op}	17.6	V
Slope Efficiency	η_{es}	9.6	W / A
Power Conversion Efficiency	η_{ep}	51	%
Fiber*			
Fiber Core Diameter	d_{core}	105	μm
Fiber Cladding Diameter	d_{clad}	125	μm
Fiber Buffer Diameter	d_{buffer}	250	μm
Numerical Aperture	NA	0.22	-
Fiber Length	L_f	1.0	m

* Customized fiber and connector available.

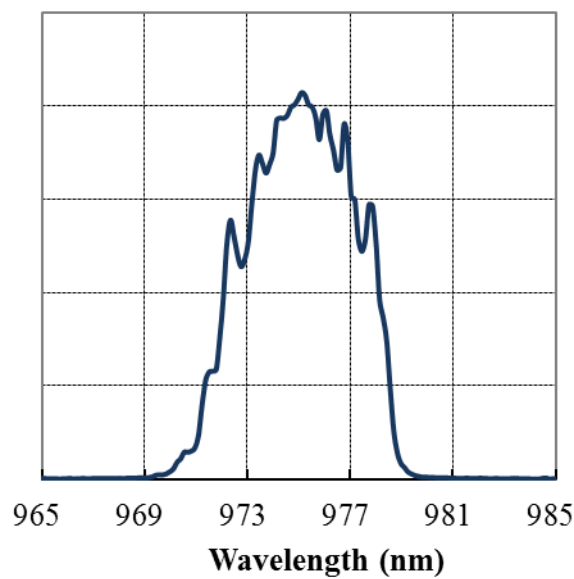
Absolute Ratings

	Min	Max	Unit
Operating Temperature	15	35	°C
Operating Relative Humidity	-	75	%
Storage Temperature	-20	80	°C
Storage Relative Humidity	-	90	%
Lead Soldering Temperature, 10 s max	-	250	°C

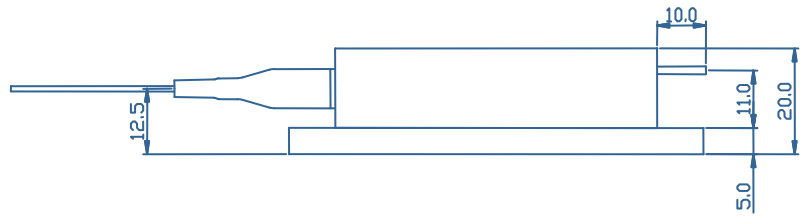
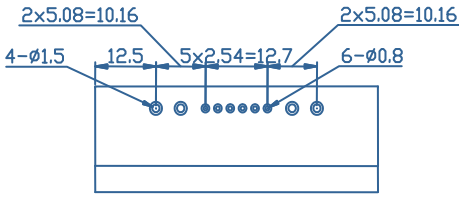
Characteristics of 976nm-90W laser diode module (25°C)



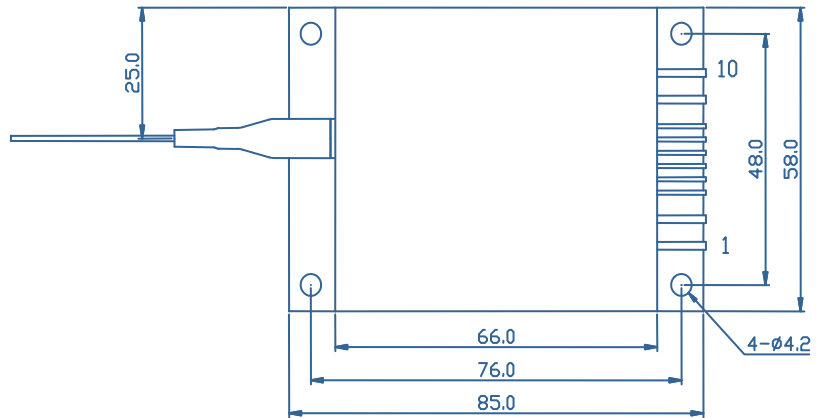
Typical spectrum of 976nm-90W laser diode module (25°C)



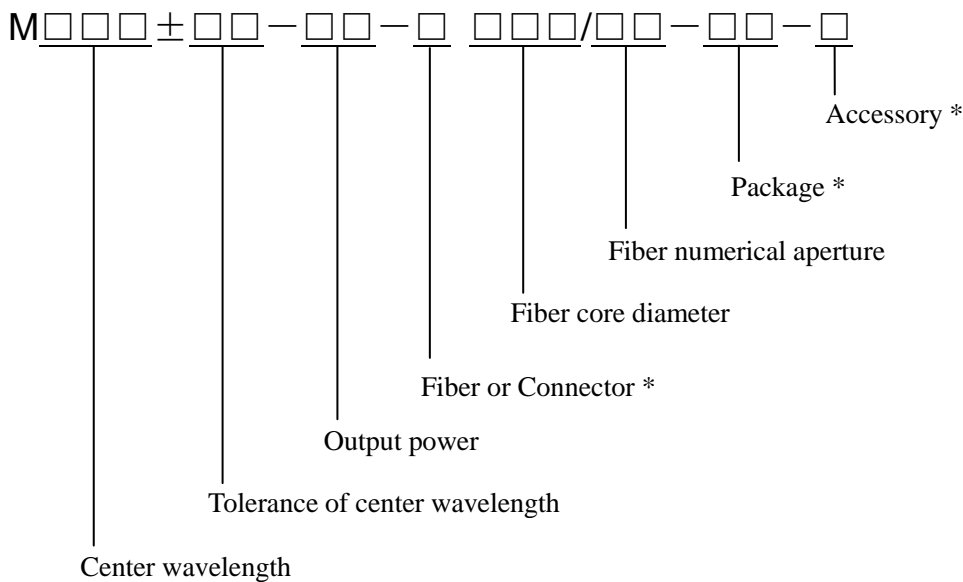
Package Dimensions (mm)



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



Type Definition



* Accessory: T – TE cooler, A – Aiming laser, P – Monitor photodiode, K – Fiber connector detector

* Package: R2, T1, T2, T3, T4, T4S, T4T, T6, G4, C1, CD, D1.....

* Fiber or Connector: F – Fiber output, D – Detachable connector

