

T-Series High Power Laser Diode Module

M808±3-55-F400/22-C1-AP



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 up to 55W
- ◆ 400μm core multimode optical fiber
- ◆ 0.22NA
- ◆ Fiber laser feedback protection

Accessories:

- ◆ Optional aiming beam (650nm)
- ◆ Monitor photo diode
- ◆ Thermistor

Applications:

- ◆ Laser pumping
- ◆ Medical use
- ◆ Material processing

Typical Device Performance (25℃)

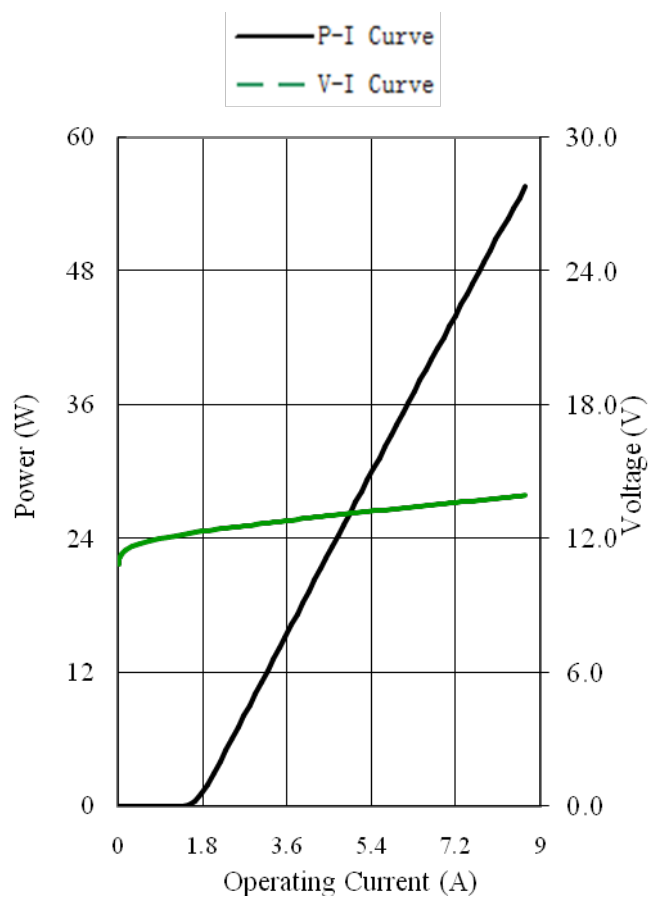
	Symbol	Typical Value	Unit
Optical			
CW Output Power	P_{op}	55	W
Center Wavelength	λ_c	808 ± 3	nm
Spectral Width (90% of Power)	$\Delta\lambda$	<3.0	nm
Wavelength Shift with Temperature	$\Delta\lambda/\Delta T$	0.35	nm / °C
Electrical			
Threshold Current	I_{th}	1.6	A
Operating Current	I_{op}	9.0	A
Operating Voltage	V_{op}	14.0	V
Slope Efficiency	η_{es}	6.1	W / A
Power Conversion Efficiency	η_{ep}	43	%
Aiming Laser			
CW Output Power	P_{pb}	>2	mW
Center Wavelength	λ_{pb}	650 ± 10	nm
Operating Current	I_{pb}	<30	mA
Operating Voltage	V_{pb}	~2.2	V
Fiber*			
Fiber Core Diameter	d_{core}	400	μm
Fiber Cladding Diameter	d_{clad}	440	μm
Fiber Buffer Diameter	d_{buffer}	700	μm
Numerical Aperture	NA	0.22	-
Fiber Length	L_f	1.0	m
Fiber Connector	-	SMA905、FC/PC、-	-

* Customized fiber and connector available.

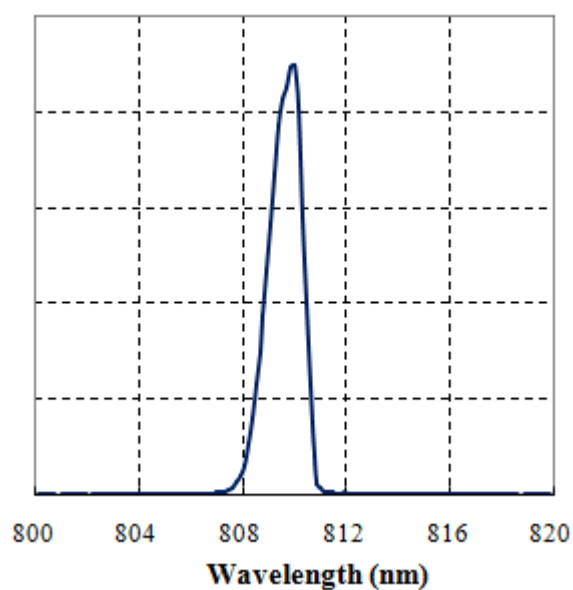
Absolute Ratings

	Min	Max	Unit
Operating Temperature	10	40	°C
Operating Relative Humidity	-	75	%
Storage Temperature	-20	80	°C
Storage Relative Humidity	-	90	%
Lead Soldering Temperature, 10 s max	-	250	°C

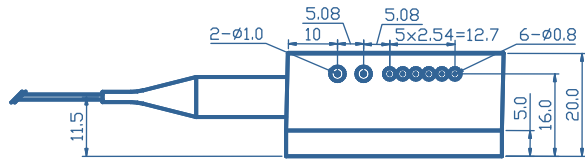
Characteristics of 808nm-55W laser diode module (25°C)



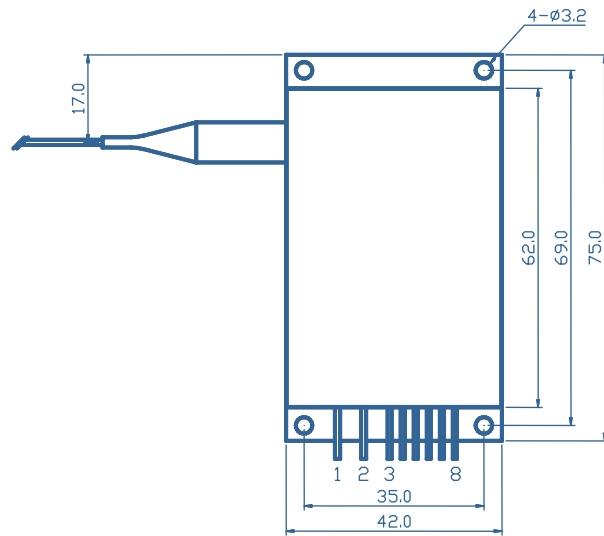
Typical spectrum of 808nm-55W laser diode module (25°C)



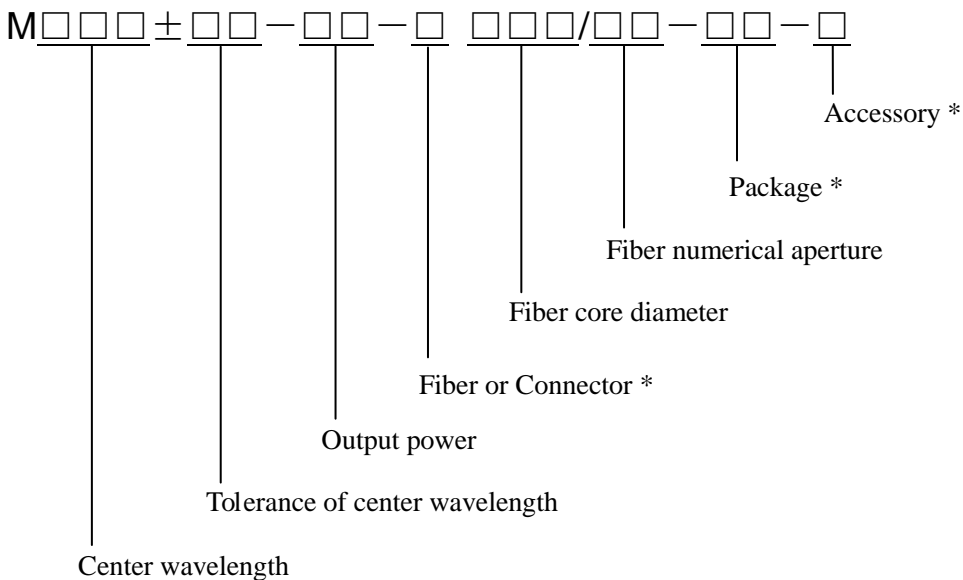
Package Dimensions (mm)



Pin-Out Assignment	
Pin	Function
1	LD (+)
2	LD (-)
3	PD (N)
4	PD (P)
5	Thermistor
6	Thermistor
7	Aiming Beam LD (+5V)
8	Aiming Beam LD (0V)



Type Definition



* Accessory: T – TE cooler, A – Aiming Laser, P – Monitor photo diode, K – Fiber connector Detector

* Package: T1, T2, T3, T4, T4S, T4T, T6, G4, C1,

* Fiber or Connector: F – Fiber Output, D – Detachable Connector

