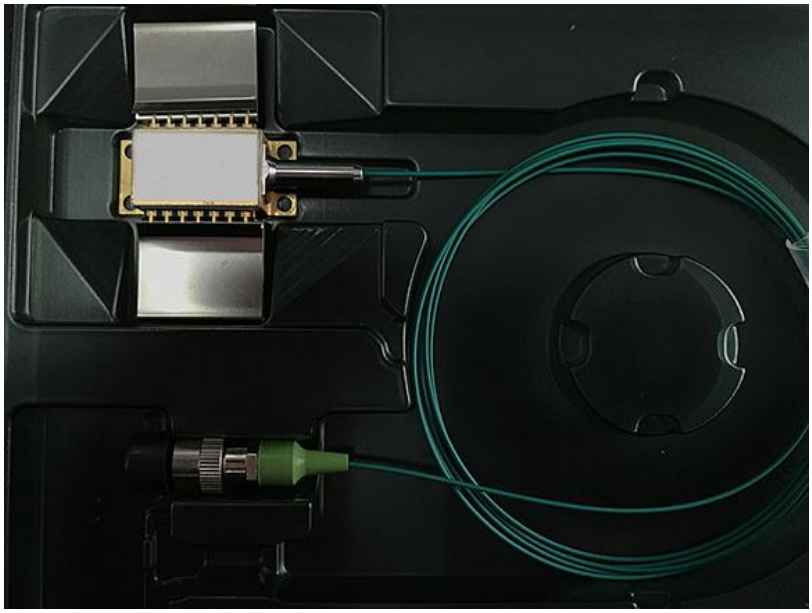
1064nm 30mW PM DFB laser diode



Product Description

The high-power single-mode DFB lasers offer a wavelength range from 1020 nm to 1180 nm. All models come in a standard 14-pin butterfly module package with polarization-maintaining fiber (PMF) and built-in optical isolator. They feature excellent spectral stability and can operate under various driving conditions from continuous wave to short pulses (picosecond, nanosecond), making them ideal as seed lasers for fiber lasers in applications such as material processing. Gain-switching operation in high-speed models can generate optical pulses of 50 ps or 15 ps to further enhance fiber laser processing performance. We also provide a variety of

driver boards, including 50 ps, 15 ps, nanosecond, DFB-SOA, CW, and others. We believe our products can help you optimize your fiber laser designs.

Product features

Dual-mode output; high spectral purity; fast switching capability; industrial-grade reliability; low-power design

Part Number

MP-DFB-1064-30-A81-14BF-PA

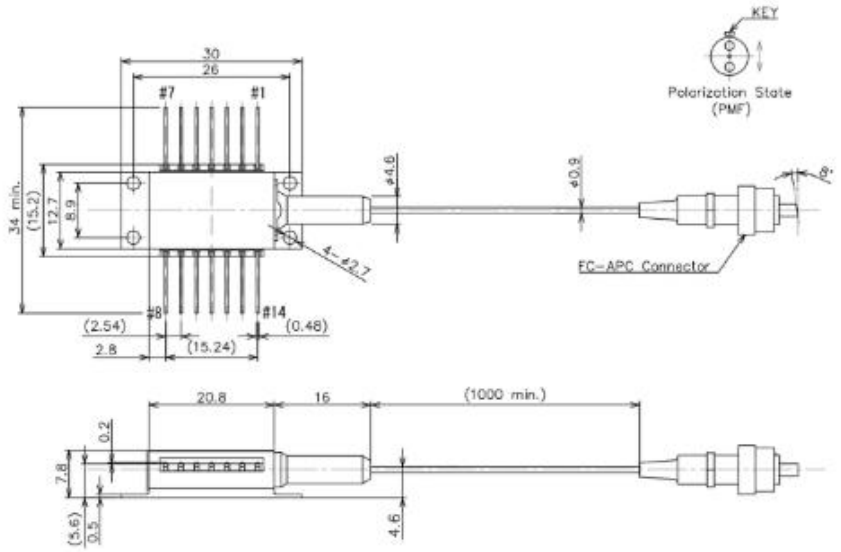
Application area

Laser ranging | Optical coherence tomography | Distributed temperature sensing | Communication systems | Optical trapping research

Core parameters

Central Wavelength	Output Power
1064nm	30mW

Dimension Drawing



General Parameters

Optical and Electrical Characteristics (TLD = 25 °C)

Performance Parameter	Symbol	Test Condition	MIN	TYP	MAX	Unit
Peak Wavelength	λp	CW, Pf = 30 mW	1059*	1064	1069*	nm
Temperature Coefficient	dλp/dT	CW	–	0.08	–	nm/K
Current Coefficient	dλp/dI	CW	–	0.008	–	nm/mA
Threshold Current	Ith	CW	–	15	25	mA

CW Output Power	Pf	CW	30	–	–	mW
Pulse Peak Power	Pf_peak	5 ns / 100 kHz	–	100	–	mW
Operating Current	Iop	CW, Pf = 30 mW	–	110	160	mA
Operating Voltage	Vop	CW, Pf = 30 mW	–	1.5	1.8	V
Pulse Peak Current	Iop_peak	Pf_peak = 100 mW	–	320	–	mA
Pulse Width	tpw	Pulse	0.05**	–	100	ns
Duty Cycle	D.C.	Pulse	–	–	2	%
Side Mode Suppression Ratio	SMSR	CW, Pf = 30 mW4 ns / 1 MHz, Pf_peak = 50 mW	3030	5040	–	dB
Polarization Extinction Ratio	PER	CW, Pf = 30 mW	15	20	–	dB
Monitor PD Current	Im	CW, Pf = 30 mW	50	200	800	μA

Thermistor Resistance	Rth	TLD = 25 ℃, B = 3900 K	9.5	10	10.5	kΩ

*Peak wavelength selectivity of ±1 nm available.

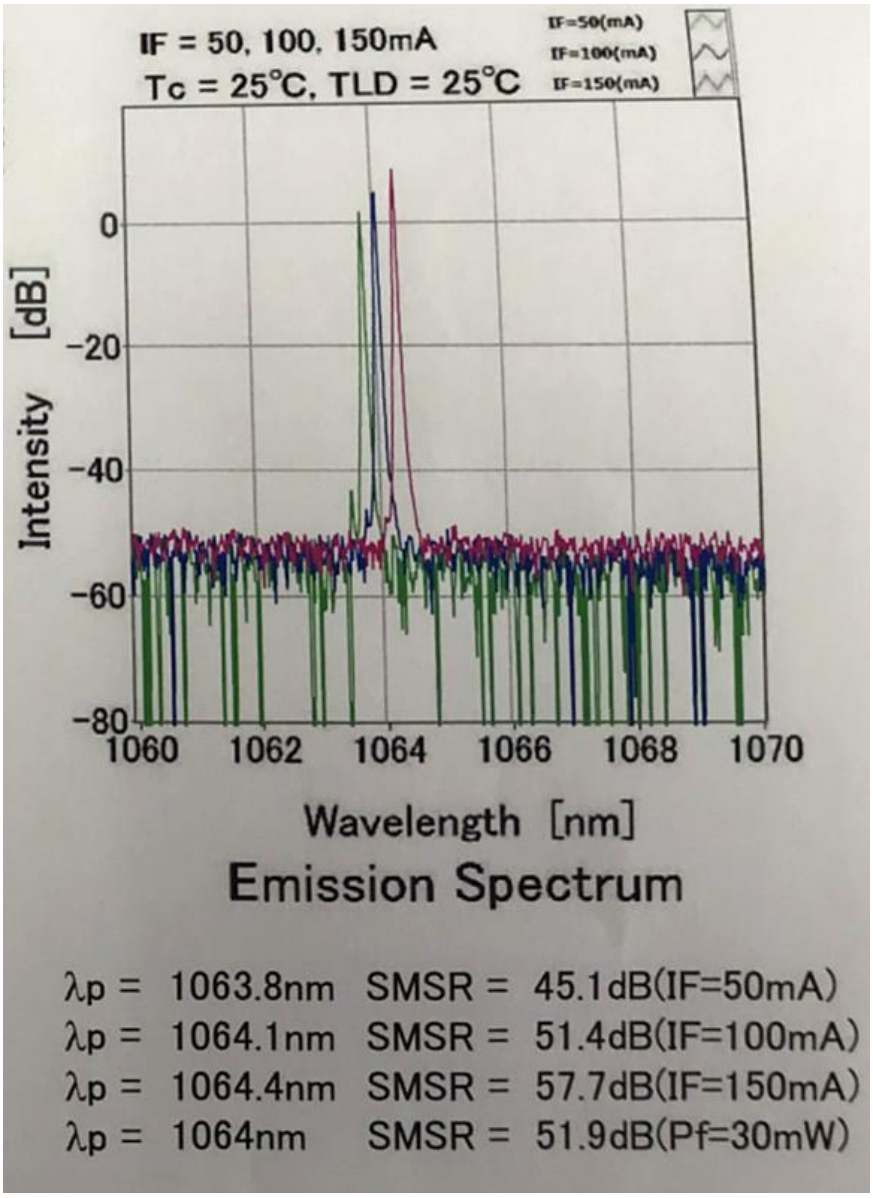
** Pulse width of 0.05 ns achievable under gain-switching operation.

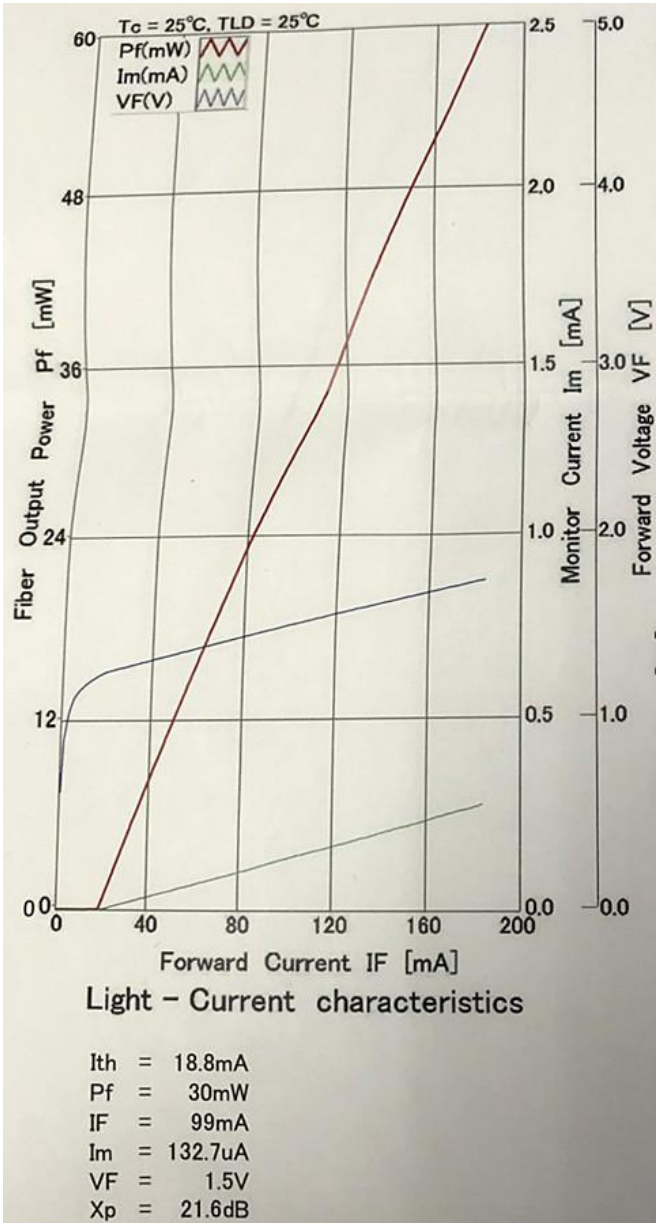
Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Optical Output Power (CW)	Pf	50	mW
LD Forward Current (CW)	IF	250	mA
Peak Power (Pulse 10 ns / 1 MHz)	Pf_pulse	150	mW
LD Peak Current (10 ns / 1 MHz)	IF_pulse	600	mA
LD Reverse Voltage	VRLD	2	V
TEC Drive Current	ITEC	2	A
TEC Drive Voltage	VTEC	4.3	V
Operating Temperature	Tc	0 ~ 60	℃
Storage Temperature	Tstg	-40 ~ 85	℃
Lead Soldering Temperature (5 s)	Tsld	230	℃

Product Features

Spectrum Test Plot & P-I-V Curve

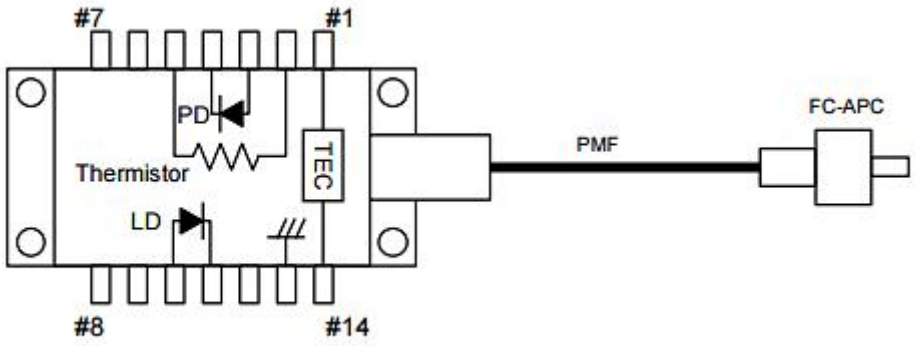




Pin Definition

PIN	Description	PIN	Description
1	TEC (+)	8	NC
2	Thermistor	9	NC

3	PD Anode	10	Laser Anode
4	PD Cathode	11	Laser Cathode
5	Thermistor	12	NC
6	NC	13	Case Ground
7	NC	14	TEC (-)



Ordering Information

Fiber Type	Fiber Diameter	Connector Type
Polarization Maintaining Fiber	900 μm	FC / APC
	250 μm	Ferrule