

## 1030nm DFB Laser Diode Module

### 1. Description:

The BFLD-D1030-50SM-FA series 1030nm laser module utilizes a planar construction with chip on subcarrier. The high power chip is hermetically sealed in a epoxy-free and flux-free 14-pin butterfly package and fitted with a thermistor, thermoelectric cooler, and monitor diode. This module complies described in Telcordia GR-468-CORE requirement.

### 2. Features:

- Multi-Quantum well(MQW) Distributed feedback (DFB) lasers;
- CW or pulsed operation;
- Operating temperature range  $-40^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ ;
- Wavelength/temperature coefficient  $0.01\text{nm}/^{\circ}\text{C}$ ;
- Built-in monitor photodiode, thermo-electric cooler and thermistor;
- Single mode fiber pigtail (Corning HI1060, NA=0.14, MFD=6.2um@1060nm);
- Optional FC/APC connector.

### 3. Applications:

- Spectroscopy;
- Telecom;
- Illumination;
- Sensing.

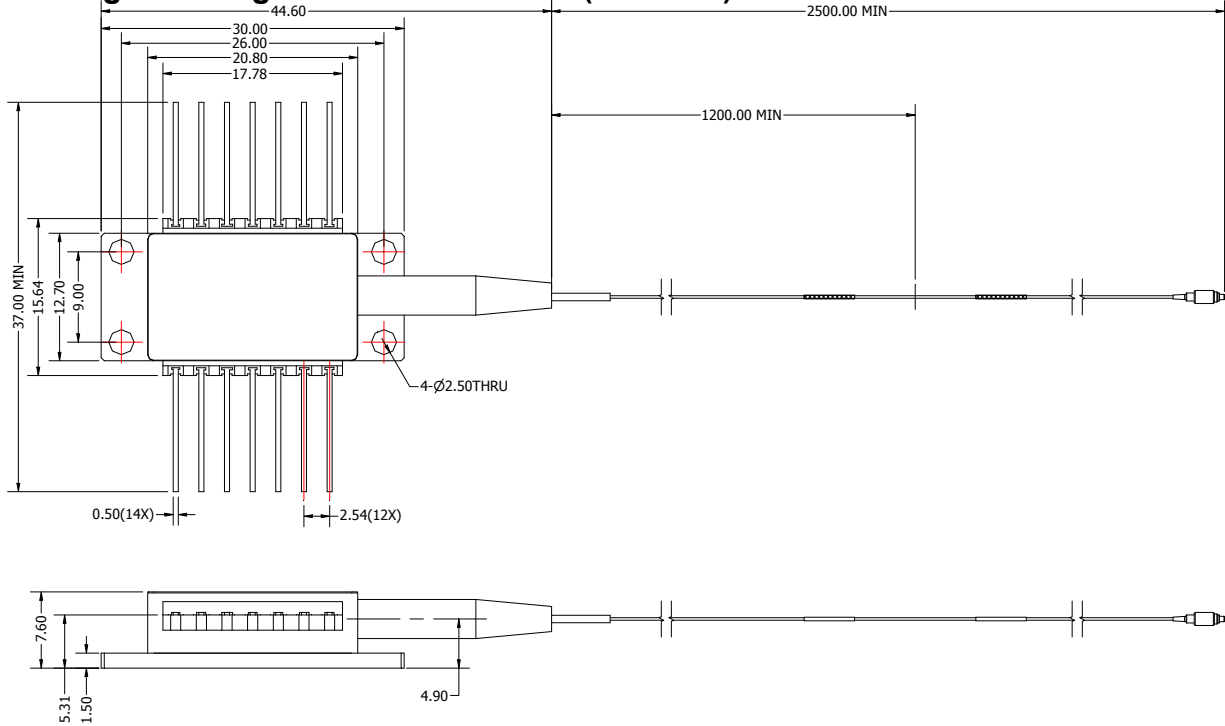
### 4. Electro-Optical Characteristics(25°C laser temperature):

Parameter	Symbol	Min	Typical	Max	Unit
Output power from pigtail	$P_f$	-	50		mW
Range of available wavelengths	$\lambda_c$	1028		1032	nm
Spectral width (FWHM)				3	MHz
Sidemode suppression ratio at $P_f$	SMSR	40	45		dB
Wavelength shift with current			3	5	pm/mA
Wavelength shift with temperature			0.08	0.1	nm/ $^{\circ}\text{C}$
Operating current	$I_{OP}$		200	300	mA
Threshold current	$I_{th}$		30	50	mA
Forward voltage	$V_f$		2	2.3	V
Polarization extinction ratio	PER	15	20		dB
Thermoelectric cooler current	$I_{TEC}$			3	A
Thermoelectric cooler voltage	$V_{TEC}$			4	V
Chip operating temperature range	$T_{OP}$	15	25	40	$^{\circ}\text{C}$
Case operating temperature range	$T_C$	10	25	50	$^{\circ}\text{C}$
Storage temperature	$T_S$	5		80	$^{\circ}\text{C}$

**5. Optical Fiber Specifications:**

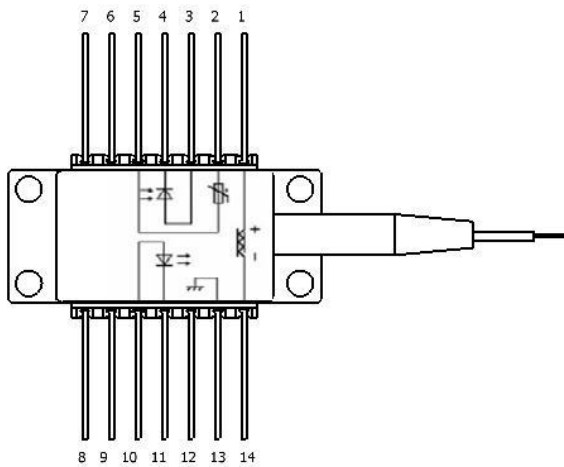
Parameters	Description
Fiber type	Hi1060 fiber or PM fiber
Pigtail type	Bare fiber
Pigtail length	1.5±0.1m
Connector type	Without

**6. Package drawing&PIN-OUT Definition(Unit:mm):**



DIMENSION: MM

GENERAL TOLERANCE: ± 0.1



PIN	DESIGNATIONS	PIN	DESIGNATIONS
1	TEC(+)	14	TEC(-)
2	Thermistor	13	Case Ground
3	PD Anode	12	NC
4	PD Cathode	11	LD Cathode
5	Thermistor	10	LD Anode
6	NC	9	NC
7	NC	8	NC