840nm 10mW Superluminescence Diode

1. Description:

The single-mode fiber-optic superluminescent light emitting diode (SLED) module used in high reliability OCT applications, frequency up to 1.5GHz.

2. Features:

- High output power;
- 14PIN BTF Package;
- 3dB bandwidth of >35nm;
- Operating Temperature-45~+70℃;
- SM fiber or PM fiber pigtail.

3. Applications:

- Fiber optic gyroscopes;
- Clinical healing equipment;
- Biomedical imaging device;
- Optical coherence topography.

4. Absolute Maximum Ratings:

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse voltage	V_{CC}	-	-	2.0	V
Forward current	I_C	-	-	250	mA
Thermoelectric cooler voltage	V	-	-	3.2	V
Thermoelectric cooler current	I	-	-	1.2	A
Storage humidity	-	5	-	85	%RH
Lead solder temperature	-	-	-	260	℃
Lead solder time	-	-	-	10	S
Tensile strength of pigtail	-	1	-	-	kgf
Fiber bend radius	-	30	-	-	mm
Operating case temperature	T_C	-45	-	70	℃
Storage temperature	T_S	-55	-	85	℃

5. Electro-Optical Characteristics(25℃ laser temperature):

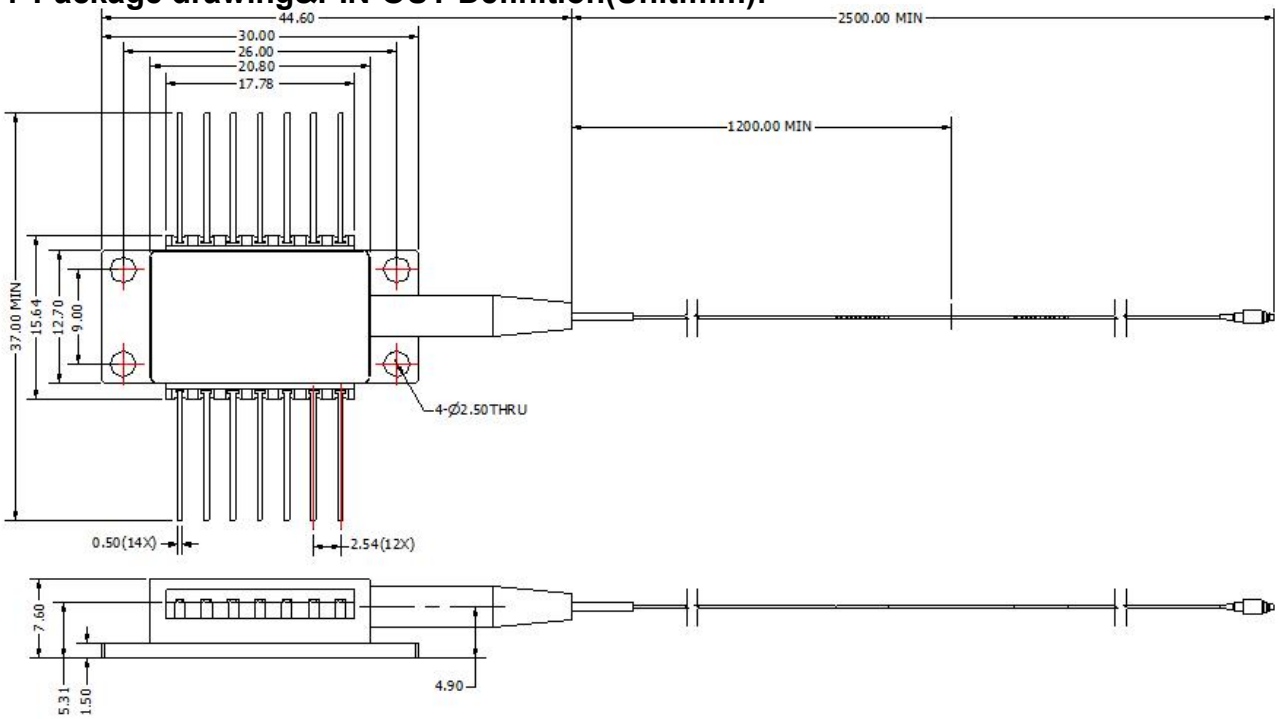
Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Operating current	I_{TH}	-	180	220	mA	CW
Power in fiber	P	10.0	-	-	mW	CW, I_{TH} =180mA
3dB bandwidth	Δλ	30	35		nm	CW
Center length	λ_C	820	840	860	nm	CW
Spectrum modulation	-	-	0.1	0.2	dB	-

Extinction	ER	-	16	-	dB	CW
TEC current	I_C	-	-	2	A	T_C=-45~+70℃
TEC voltage	V_C	-	-	3.5	V	T_C=-45~+70℃
Thermistor resistance	R_{th}	9.5	10	10.5	KΩ	T_C= 25℃
Thermistor B constant	B	-	3950	-	K	-

6. Fiber Pigtail Specifications:

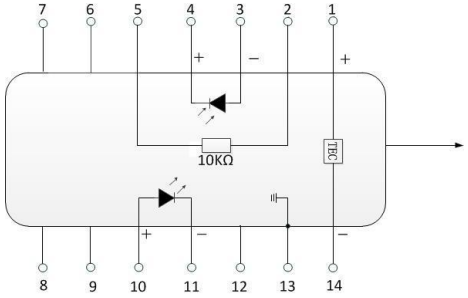
Part	Description
SM Fibre	SM 5/125 Corning HI780 or equivalent
Pigtail type	900μm loose tube
Optical connector	FC/APC
Fibre Pigtail Length	1m
SM Fibre	SM 5/125 Corning HI780 or equivalent

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



DIMENSION: MM

GENERAL TOLERANCE: ±0.1



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