

PRODUCT INFORMATION SHEET

1650 nm Wide Band Super luminescent LED

➤ Features

- Ex-fiber output power of >8mW (optional 15mw)
- Typical 3dB bandwidth of 60nm
- Typical spectral modulation of 0.2dB
- 14-pin DIL or BTF package
- Single mode fiber

➤ Applications

- Fiber Optic Gyroscope
- Optical Test Instrument
- Fiber Optic Sensors
- Fiber Optic Communications
- Optical Coherence Tomography
- Biomedical Imaging Device
- Clinical Healing Equipment

➤ Absolute Maximum Ratings

Parameter	Symbol	Condition	Min	Max	Unit
Reverse voltage	V_R			2	V
Forward current	I_F			400	mA
Forward voltage	V_F	I_{op}		2.5	V
Case temperature	T_c	I_{op}	-40	65	° C
SLED temperature ¹	T_{SLED}	I_{op}	0	70	° C
Thermoelectric cooler voltage	V_{TEC}			3	V
Thermoelectric cooler current	I_{TEC}			1.8	A
Storage temperature	T_{stg}	Unbiased	-40	85	° C
Storage humidity			5	85	%RH
Electro static discharge (ESD)	V_{ESD}	Human body model		500	V
Lead soldering temperature	S_{temp}			260	° C
Lead soldering time	S_{time}			10	sec

➤ Specifications (TSLED = 25 °C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Operating current	I_{op}				350	mA
Forward voltage	V_F	I_{op}			2	V
Power in SMF	P_o	I_{op}	8			mW
Central wavelength	λ	I_{op}	1635	1650	1665	nm
Bandwidth	B_{FWHM}	I_{op}	55	60		nm
Spectrum modulation	R	I_{op}		0.2	0.4	dB

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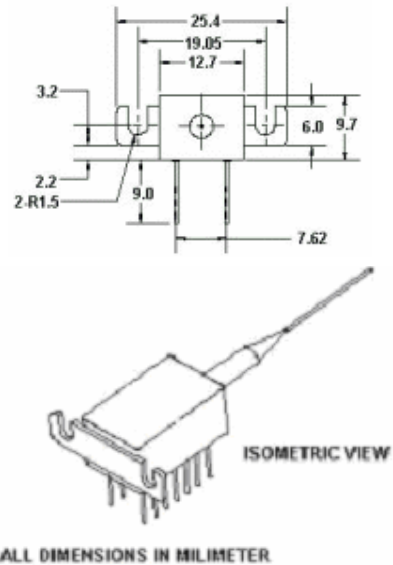
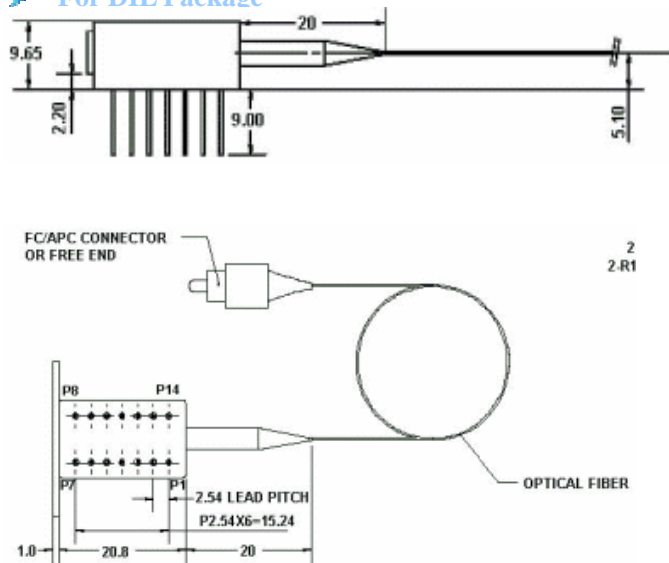
Thermistor resistance	R_{therm}	$T = 25\text{ }^{\circ}\text{C}$	9.5	10	10.5	$\text{k}\Omega$
Thermoelectric cooler voltage	V_{TEC}	I_{op}			2.5	V
Thermoelectric cooler current	I_{TEC}	I_{op}			1.1	A

1 T_{SLED} is monitored by internal thermistor with external pin out.

► Package

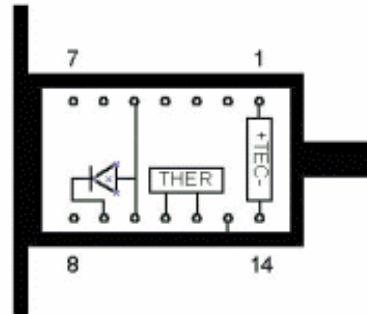
Part	Description
Package type	DIL or BTF
Fiber:	SMF-28
MFD	10 μm
Cladding diameter	125 μm
Coating diameter	245 μm
Jacket	900 μm loose tube
Fiber pigtail length	1m
Fiber bending radius	>40mm
Fiber Connector	FC/APC
Dimensions	See figure

► For DIL Package

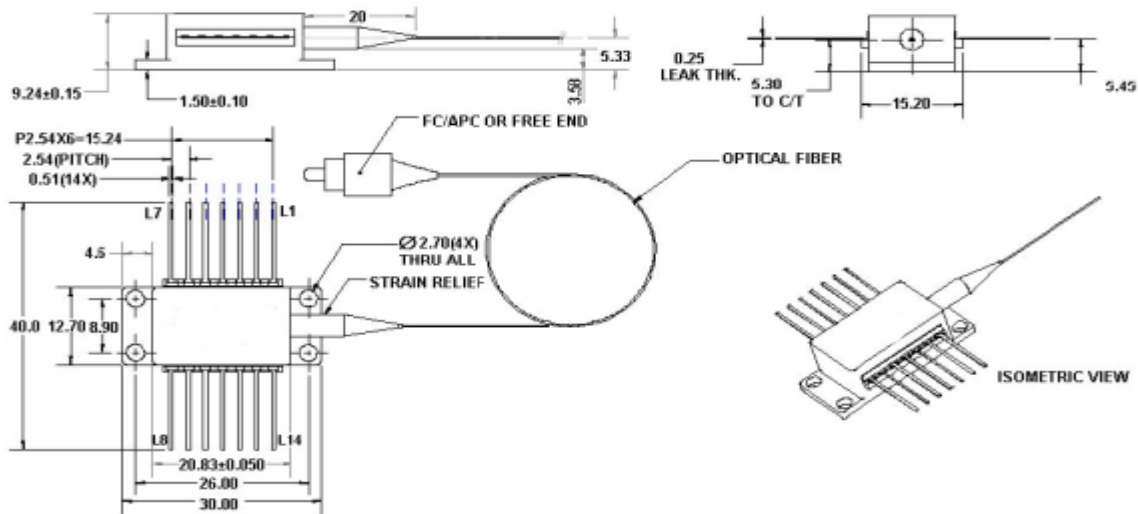


PRODUCT INFORMATION SHEET

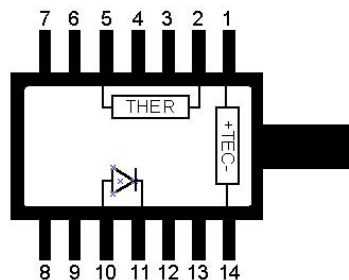
Pin Assignment	
1	TEC+
2	--
3	--
4	--
5	SLED ANODE +
6	--
7	--
8	--
9	SLED CATHODE -
10	SLED ANODE +
11	THERMISTOR
12	THERMISTOR
13	CASE
14	TEC -



► For BTF Package



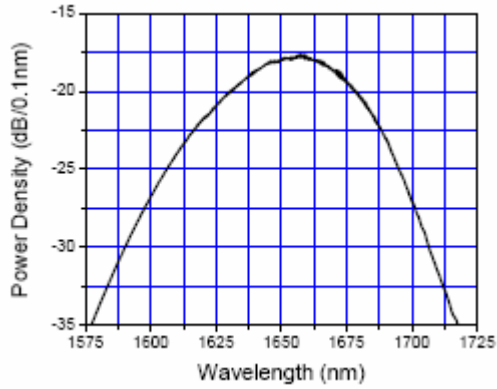
Pin Assignment	
1	TEC+
2	THERMISTOR
3	--
4	--
5	THERMISTOR
6	--
7	--
8	--
9	--
10	SLED ANODE +
11	SLED CATHODE -
12	--
13	CASE
14	TEC -



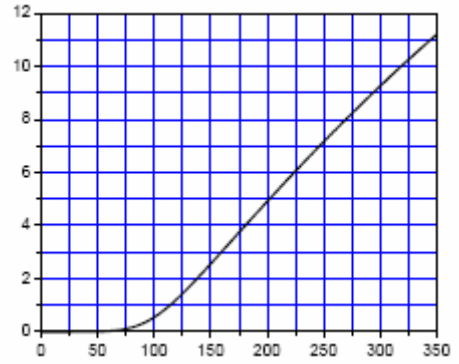
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Typical Performance Characteristics

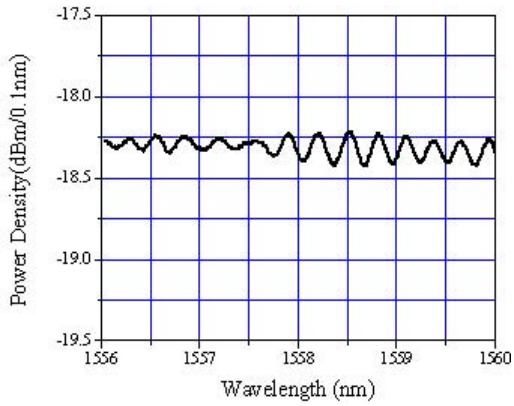
Operating condition: $T_{\text{SLED}} = 25\text{ }^{\circ}\text{C}$



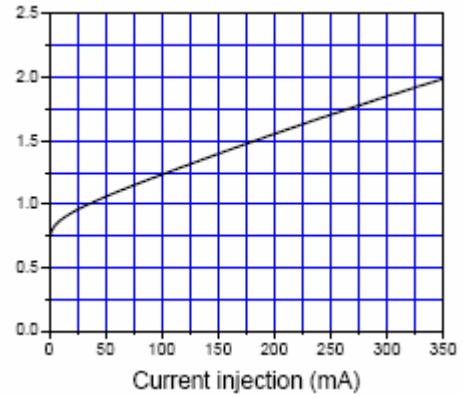
Spontaneous Emission Spectrum



P-I Curve



Spectrum Modulation



I-V Curve