

1550 nm CW LIGHT SOURCE InGaAsP STRAINED MQW-DFB LASER DIODE MODULE

NX8562LB

FEATURES

- WAVELENGTH SELECTABLE FOR ITU-T STANDARDS
- OUTPUT POWER:
Pr = 20 mW MIN
- INTERNAL THERMOELECTRIC COOLER AND ISOLATOR
- HERMETICALLY SEALED 14-PIN BUTTERFLY PACKAGE
- POLARIZATION MAINTAIN FIBER PIGTAIL

DESCRIPTION

The NX8562LB is a 1550 nm laser diode with Polarization Maintain Fiber (PMF). This device is designed as a CW light source and is ideal for transmission systems in which external modulators are used.

ELECTRO-OPTICAL CHARACTERISTICS (TLD = 25°C, Tc = -20 to +65°C)

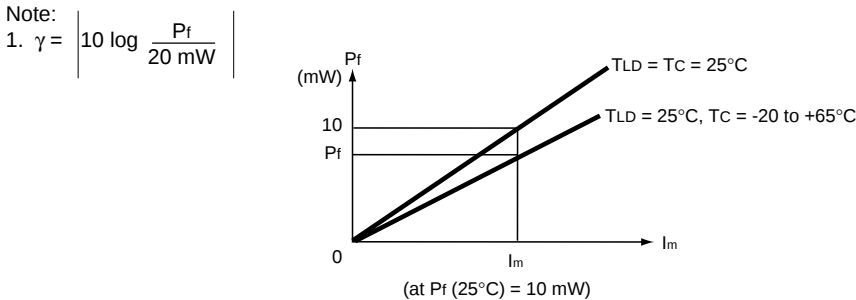
PART NUMBER			NX8562LB		
SYMBOLS	PARAMETERS AND CONDITIONS	UNITS	MIN	TYP	MAX
TSET	Laser Set Temperature	°C	20		35
VF	Forward Voltage, Pr = 20 mW	V	0.9		1.5
Ith	Threshold Current	mA		20	40
Pr	Optical Output Power from Fiber, If = 167 mA, TLD = TSETmW	20			
Pth	Threshold Output Power from Fiber, If = Ith	μW			100
η	Quantum Efficiency	W/A	0.13		
λp	Peak Emission Wavelength ¹ , Pr = 20 mW, CW, TLD = TSET	nm	1540		1561
Δν	Spectral Line Width, Pr = 20 mW, CW, 3 dB down	MHz		1	2
SMSR	Side Mode Suppression Ratio, Pr = 20 mW, CW	dB	30	35	
ηFM	FM Response, Pr = 20 mW	MHz/mA	50	70	
RIN	Relative Intensity Noise, Pr = 20 mW, 20 MHz to 3 GHz	dB/Hz			-150
f _m	Flat Frequency Response, Pr = 20 mW, +/-3 dB	GHz	1.8		
ext	Polarization Extinction Ratio ² , Pr = 20 mW, CW	dB	15	20	

Notes:

1. Wavelength selectable for ITU-T standards.
2. Polarization state of LD is aligned parallel to the slow axis.

ELECTRO-OPTICAL CHARACTERISTICS (Applicable to Monitor PD: TLD = 25°C, Tc = -20 to +65°C)

PART NUMBER			NX8562LB Series		
SYMBOLS	PARAMETERS AND CONDITIONS	UNITS	MIN	TYP	MAX
Im	Monitor Current, Pf = 20 mW, VR = 5 V	μA	100		
ID	Dark Current, VR = 5 V	nA		2	10
γ ¹	Tracking Error, Im = const.	dB			0.5



ELECTRO-OPTICAL CHARACTERISTICS (Applicable to Thermistor and TEC: TLD = 25°C, Tc = -20 to +65°C)

PART NUMBER			NX8562LB Series		
SYMBOLS	PARAMETERS AND CONDITIONS	UNITS	MIN	TYP	MAX
R	Thermistor Resistance	kΩ	9.5	10.0	10.5
B	B Constant	K	3300	3400	3500
Ic	Cooler Current, ΔT = 65 - Tset, Pf = 20 mW	A			1
Vc	Cooler Voltage, ΔT = 65 - Tset, Pf = 20 mW	V			2

ABSOLUTE MAXIMUM RATINGS¹

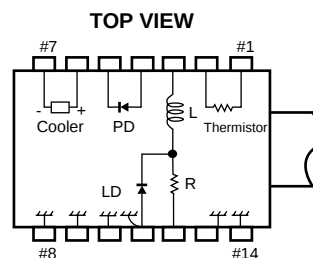
(Tc = 25°C, unless otherwise specified)

SYMBOLS	PARAMETERS	UNITS	RATINGS
IF	Forward Current of LD	mA	300
VR	Reverse Voltage of LD	V	2.0
IF	Forward Current of PD	mA	10
VR	Reverse Voltage of PD	V	20
Tc	Operating Case Temperature	°C	-20 to +65
TSTG	Storage Temperature	°C	-40 to +85
TSLD	Lead Soldering Temperature (10 s)	°C	260

- Note:
- Operation in excess of any one of these parameters may result in permanent damage.

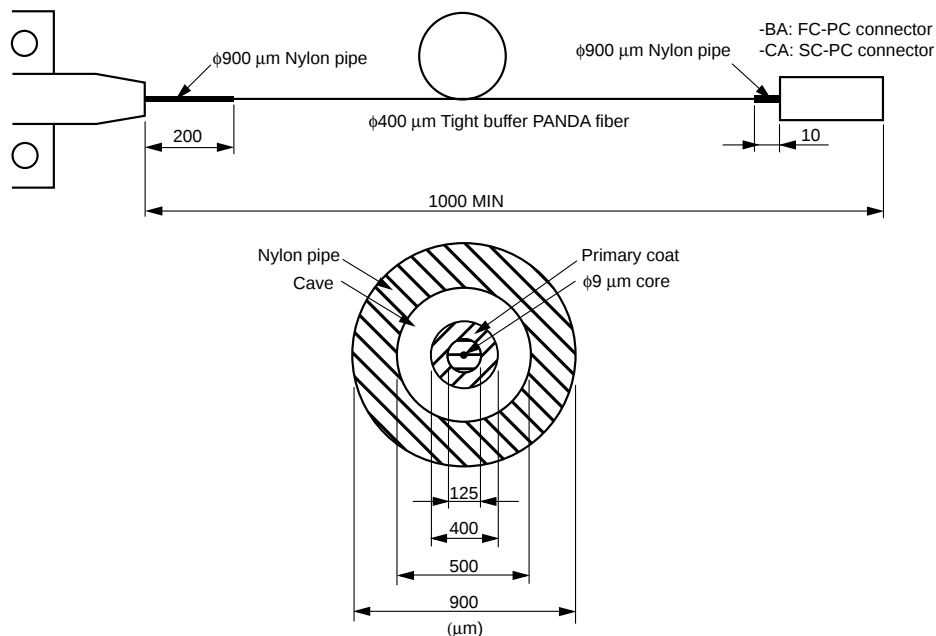
ORDERING INFORMATION

Part Number	Available Connector
NX8562LB	Without Connector
NX8562LB-BA	With FC-PC Connector
NX8562LB-CA	With SC-PC Connector



PIN No.	FUNCTION	PIN No.	FUNCTION
1	THERMISTOR	8	GND
2	THERMISTOR	9	GND
3	BIAS	10	GND
4	PD ANODE	11	GND, LD ANODE
5	PD CATHODE,	12	SIGNAL INPUT
6	COOLER ANODE	13	GND
7	COOLER CATHODE	14	GND

OPTICAL FIBER DIMENSIONS (Units in mm)



11/14/2000