

NEC

InGaAsP STRAINED
MQW-DC-PBH PULSED LASER DIODE
MODULE FOR 1550 nm OTDR APPLICATION

NDL7562P

FEATURES	DESCRIPTION
HIGH OUTPUT POWER: Pf = 80 mW at IFP = 400 mA¹ LONG WAVELENGTH: λc = 1550 nm INTERNAL THERMOELECTRIC COOLER HERMETICALLY SEALED 14 PIN DUAL-IN-LINE PACKAGE SINGLE MODE FIBER PIGTAIL Note: 1. Pulse Conditions: Pulse width (PW) = 10ms, Duty = 1%	The NDL7562P Series is a 1550 nm developed strained Multiple Quantum Well (st-MQW) structure pulse laser diode DIP module with single mode fiber and internal thermoelectric cooler. It is designed for light sources of optical measurement equipment (OTDR). This device is also available with FC-PC.

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

PART NUMBER			NDL7562P		
SYMBOLS	PARAMETERS AND CONDITIONS	UNITS	MIN	TYP	MAX
VFP	Forward Voltage, IFP = 400 mA, PW = 10 μs, Duty = 1%	V		2.5	4.0
Pf	Optical Output Power from Fiber, IFP = 400 mA, PW = 10 μs, Duty = 1%	mW	70	80	
ITH	Threshold Current	mA		40	50
λC	RMS Center Wavelength, IFP = 400 mA, PW = 10 μs, Duty = 1%	nm	1530	1550	1570
σ	RMS Spectral Width, IFP = 400 mA, PW = 10 μs, Duty = 1%	nm		5.0	10.0
tr	Rise Time, 10-90%	ns			1.0
tf	Fall Time, 90-10%	ns			1.0

ELECTRO-OPTICAL CHARACTERISTICS
APPLICABLE TO THERMISTOR AND TEC: (TLD = 25°C, Tc = -20 to +65°C, unless otherwise specified)

PART NUMBER			NDL7562P		
SYMBOLS	PARAMETERS AND CONDITIONS	UNITS	MIN	TYP	MAX
R ¹	Thermistor Resistance, TLD = 25°C	kΩ	9.5	10.0	10.5
Ic	Cooler Current, ΔT = 40 K	A		0.6	1.0
Vc	Cooler Voltage, ΔT = 40 K	V		1.1	1.5
ΔT ²	Cooling Capacity, Ic = 1.0 A	K	40		

Notes:
1. B Constant: 3400 ± 100 K
2. ΔT = | Tc - TLD |.

ABSOLUTE MAXIMUM RATINGS¹

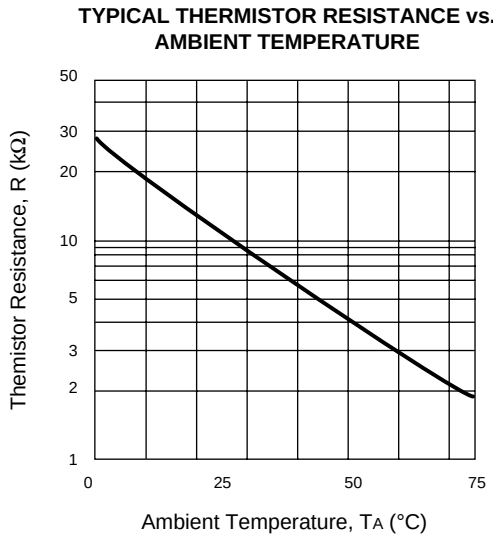
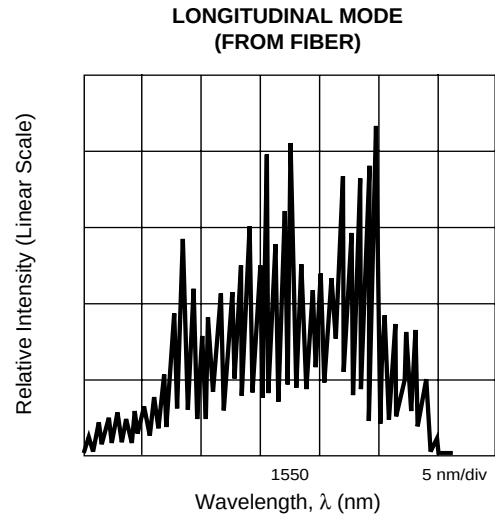
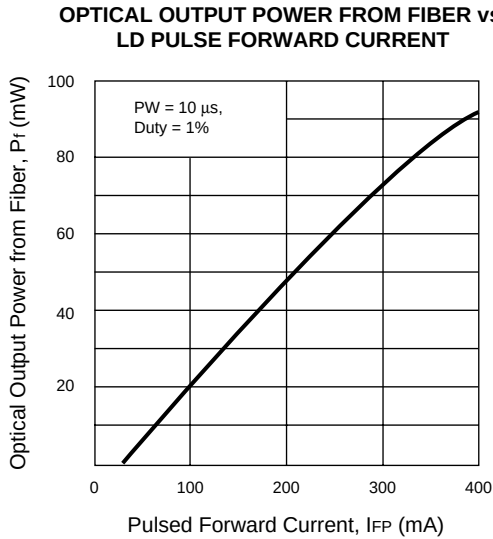
(T_c = 25°C, unless otherwise specified)

SYMBOLS	PARAMETERS	UNITS	RATINGS
I _{FP}	Pulsed Forward Current ²	mA	600
V _R	Reverse Voltage	V	2.0
I _c	Cooler Current	A	1.3
V _c	Cooler Voltage	V	3.5
T _c	Operating Case Temperature	°C	-20 to +65
T _{STG}	Storage Temperature	°C	-40 to +70
T _{SLD}	Lead Soldering Temperature (10 sec)	°C	260

Notes:

- 1. Operation in excess of any one of these parameters may result in permanent damage.
- 2. Pulse Condition: Pulse Width (PW) = 10 μs, Duty = 1 %.

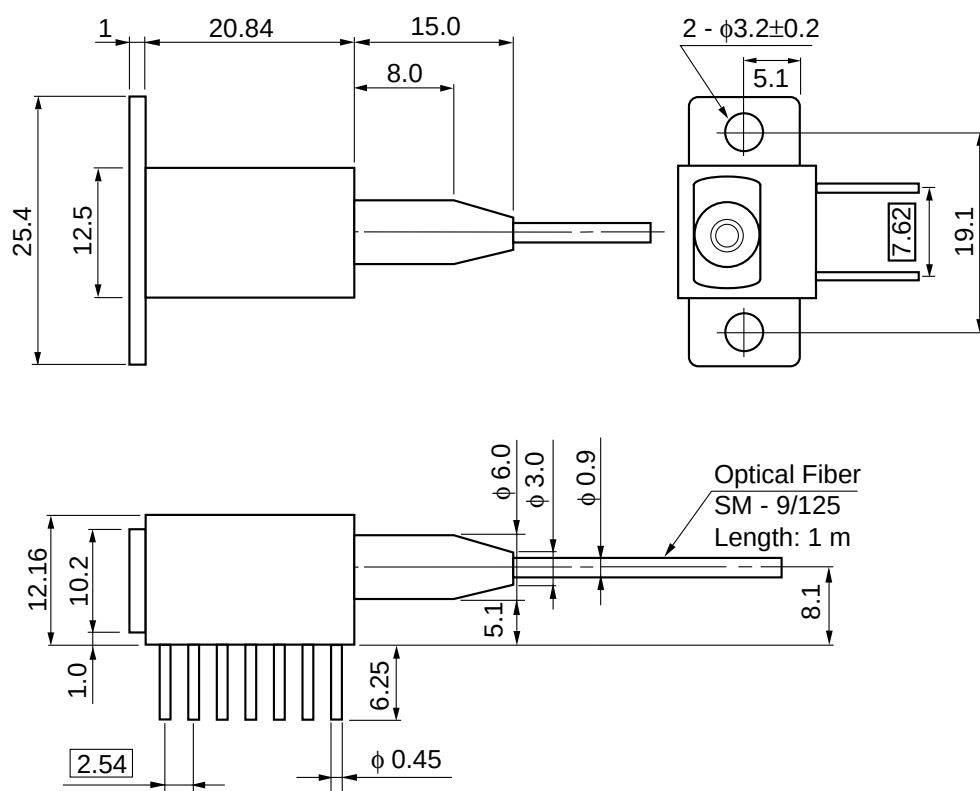
TYPICAL PERFORMANCE CURVES (T_c = 25°C, unless otherwise specified)



ORDERING INFORMATION

PART NUMBER	DESCRIPTION
NDL7562P	Without Connector
NDL7562PC	With FC-PC Connector

OUTLINE DIMENSIONS (Units in mm)



PIN CONNECTIONS

PIN No.	FUNCTION	PIN No.	FUNCTION
1	COOLER ANODE	8	NC
2	NC	9	LASER CATHODE
3	NC	10	LASER ANODE, CASE GROUND
4	NC	11	THERMISTOR
5	LASER ANODE, CASE GROUND	12	THERMISTOR
6	NC	13	NC
7	NC	14	COOLER CATHODE

BOTTOM VIEW

