

NEC

1310 nm InGaAsP STRAINED MQW DC-PBH PULSED LASER DIODE MODULE

NDL7514P SERIES

FEATURES

- **OUTPUT POWER:**
 $P_r = 50 \text{ mW}$ at $I_{FP} = 400 \text{ mA}$
- **LONG WAVELENGTH**
 $\lambda_c = 1310 \text{ nm}$
- **COAXIAL MODULE WITHOUT THERMOELECTRIC COOLER**
- **SINGLE MODE FIBER PIGTAIL**

DESCRIPTION

The NDL75148P Series is a 1310 nm newly developed strained Multiple Quantum Well (st-MQW) structure laser diode coaxial module with single mode fiber. It is designed as the light source of optical measurement equipment (OTDR).

ELECTRO-OPTICAL CHARACTERISTICS

PART NUMBER PACKAGE OUTLINE			NDL7514P Series		
SYMBOLS	PARAMETERS AND CONDITIONS	UNITS	MIN	TYP	MAX
T_c = 25°C					
V _{FP}	Forward Voltage, I _{FP} = 400 mA, PW = 10 μs, Duty = 1%	V		2.5	4.0
I _{TH}	Threshold Current	mA		20	30
P _r	Optical Output Power from Fiber, I _{FP} = 400 mA, PW = 10 μs, Duty = 1%	mW	25	50	
λ _c	RMS Center Wavelength, I _{FP} = 400 mA, PW = 10 μs, Duty = 1%	nm	1290	1310	1330
σ	RMS Spectral Width, I _{FP} = 400 mA, PW = 10 μs, Duty = 1%	nm		4.5	10
t _r	Rise Time, 10 to 90%	ns			1.0
t _f	Fall Time, 90 to 10%	ns			1.0
T_c = 0 to +60°C					
I _{TH}	Threshold Current,	mA			50
PF	Optical Output Power from Fiber I _{FP} = 400 mA, PW = 10 μs, Duty = 1%	mA		15	30
λ _c	RMS Center Wavelength, I _{FP} = 400 mA, PW = 10 μs, Duty = 1%	nm	1280		1342.5
Δλ/ΔT	Temperature Dependence of Center Wavelength	nm/°C			0.35
σ	RMS Spectral Width, I _{FP} = 400 mA, PW = 10 μs, Duty = 1%	nm			10

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ABSOLUTE MAXIMUM RATINGS¹

(T_c = 25°C, unless otherwise specified)

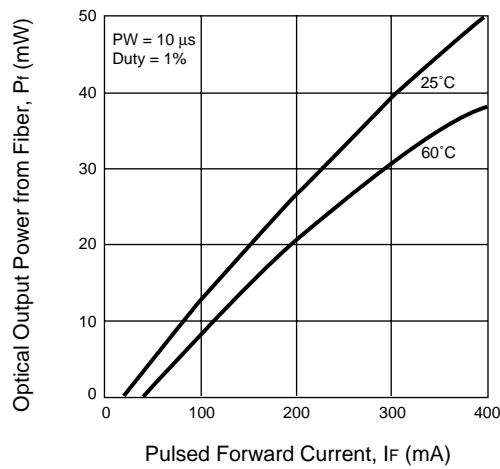
SYMBOLS	PARAMETERS	UNITS	RATINGS
IFP	Pulsed Forward Current ²	mA	600
V _R	Reverse Voltage	V	2.0
T _c	Operating Case Temperature	°C	-20 to +60
T _{STG}	Storage Temperature	°C	-40 to +85
T _{SLD}	Lead Soldering Temperature (10 s)	°C	260

Note:

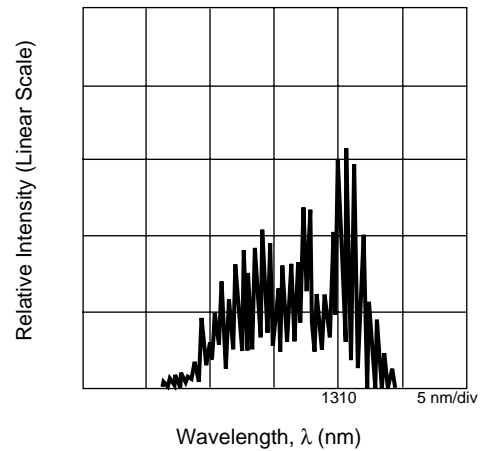
- Operation in excess of any one of these parameters may result in permanent damage.
- Pulse Condition: Pulse Width (PW) = 10 μs, Duty = 1%.

TYPICAL PERFORMANCE CURVES

OPTICAL OUTPUT POWER FROM FIBER vs. LD PULSE FORWARD CURRENT

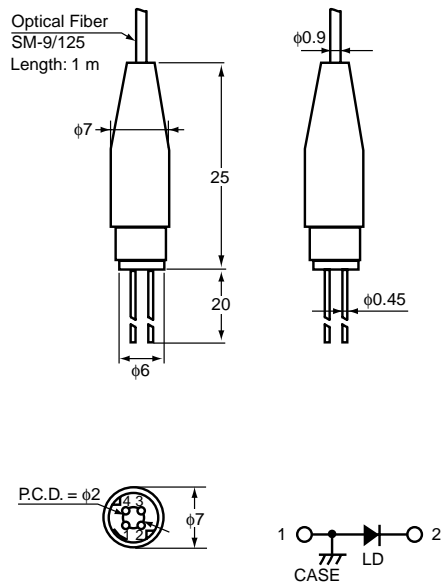


LONGITUDINAL MODE FROM FIBER FOR NDL7408P SERIES

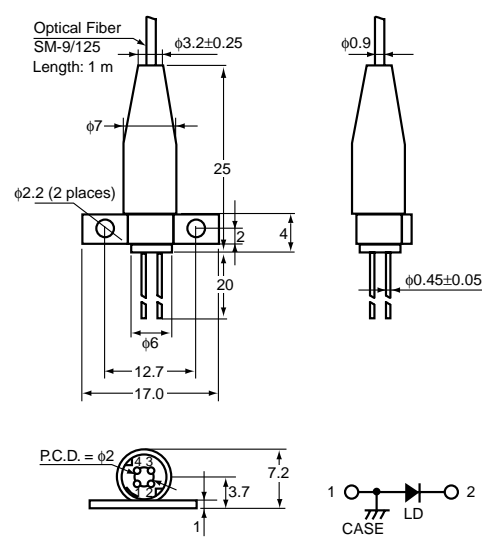


OUTLINE DIMENSIONS (Units in mm)

NDL7514P



NDL7514P1



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CEL CALIFORNIA EASTERN LABORATORIES • Headquarters • 4590 Patrick Henry Drive • Santa Clara, CA 95054-1817 • (408) 988-3500 • Telex 34-6393 • FAX (408) 988-0279
24-Hour Fax-On-Demand: 800-390-3232 (U.S. and Canada only) • Internet: <http://WWW.CEL.COM>

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