

### FEATURES

- **HIGH OUTPUT POWER:**  
Pf = 110 mW at I<sub>FP</sub> = 400 mA<sup>1</sup>
- **LONG WAVELENGTH:**  
λ<sub>c</sub> = 1310 nm
- **COAXIAL MODULE WITHOUT THERMOELECTRIC COOLER**
- **SINGLE MODE FIBER PIGTAIL**

Note:

1. Pulse Conditions: Pulse width (PW) = 10 μs, Duty = 1%.

### DESCRIPTION

The NDL7503P Series is a 1310 nm newly developed Strained Multiple Quantum Well (st-MQW) structure pulsed laser diode coaxial module with single mode fiber. It is designed for a light source of optical measurement equipment (OTDR).

### ELECTRO-OPTICAL CHARACTERISTICS (T<sub>C</sub> = 25°C)

PART NUMBER			NDL7513P Series		
SYMBOLS	PARAMETERS AND CONDITIONS	UNITS	MIN	TYP	MAX
V <sub>FP</sub>	Forward Voltage, I <sub>FP</sub> = 400 mA, PW = 10 μs, Duty = 1%	V		2.5	4.0
I <sub>TH</sub>	Threshold Current	mA		20	30
P <sub>f</sub>	Optical Output Power from Fiber, I <sub>FP</sub> = 400 mA, PW = 10 μs, Duty = 1%	mW	70	110	
λ <sub>c</sub>	RMS Center Wavelength, I <sub>FP</sub> = 400 mA, PW = 10 μs, Duty = 1%	nm	1290	1310	1330
σ	RMS Spectral Width, I <sub>FP</sub> = 400 mA, PW = 10 μs, Duty = 1%	nm		4.5	10.0
t <sub>r</sub>	Rise Time, 10-90%	ns			1.0
t <sub>f</sub>	Fall Time, 90-10%	ns			1.0

### ELECTRO-OPTICAL CHARACTERISTICS (T<sub>C</sub> = 0 to +60°C)

PART NUMBER			NDL7513P Series		
SYMBOLS	PARAMETERS AND CONDITIONS	UNITS	MIN	TYP	MAX
I <sub>TH</sub>	Threshold Current	mA			50
P <sub>f</sub>	Optical Output Power from Fiber, I <sub>FP</sub> = 400 mA, PW = 10 μs, Duty = 1%	mW	50		
λ <sub>c</sub>	RMS Center Wavelength, I <sub>FP</sub> = 400 mA, PW = 10 μs, Duty = 1%	nm	1280		1342.5
Δλ/ΔT	Temperature Dependency of Center Wavelength	nm/°C		0.35	
σ	RMS Spectral Width, I <sub>FP</sub> = 400 mA, PW = 10 μs, Duty = 1%	dB			10

# NDL7513P SERIES

## ABSOLUTE MAXIMUM RATINGS<sup>1</sup>

(T<sub>C</sub> = 25°C, unless otherwise specified)

SYMBOLS	PARAMETERS	UNITS	RATINGS
I <sub>FP</sub>	Pulsed Forward Current <sup>2</sup>	mA	600
V <sub>R</sub>	Reverse Voltage	V	2.0
T <sub>C</sub>	Operating Case Temperature	°C	-20 to +60
T <sub>STG</sub>	Storage Temperature	°C	-40 to +85
T <sub>SLD</sub>	Lead Soldering Temperature (10 sec)	°C	260

Notes:

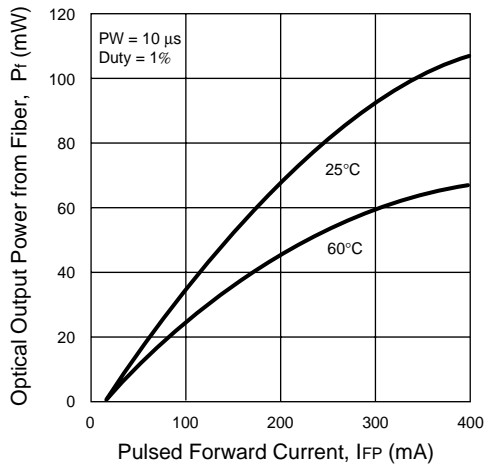
- Operation in excess of any one of these parameters may result in permanent damage.
- Pulse Condition: Pulse Width (PW) = 10 μs, Duty = 1 %.

## ORDERING INFORMATION

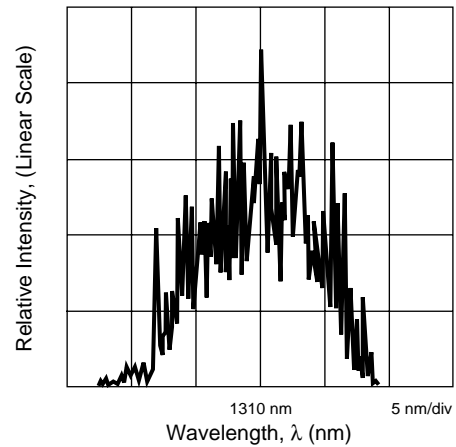
PART NUMBER	DESCRIPTION	FLANGE TYPE
NDL7513P	Without Connector	No Flange
NDL7513PC	With FC-PC Connector	
NDL7513PD	With SC-PC Connector	
NDL7513P1	Without Connector	Flat Mount
NDL7513P1C	With FC-PC Connector	Flange
NDL7513P1D	With SC-PC Connector	

## TYPICAL PERFORMANCE CURVES (T<sub>C</sub> = 25°C, unless otherwise specified)

OPTICAL OUTPUT POWER FROM FIBER vs. LD PULSE FORWARD CURRENT

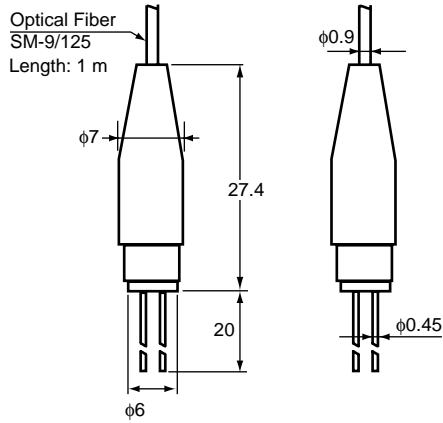


LONGITUDINAL MODE (FROM FIBER)

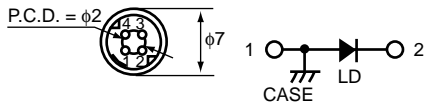


**OUTLINE DIMENSIONS** (Units in mm)

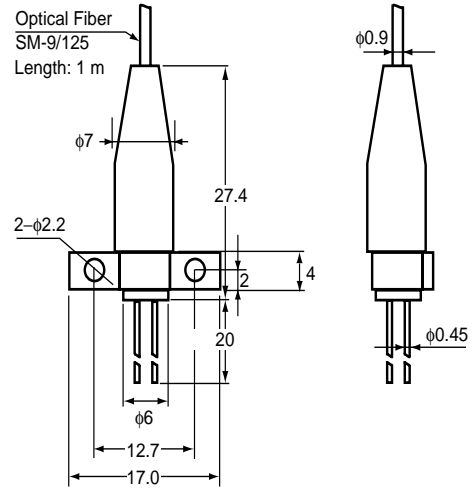
**NDL7513P**



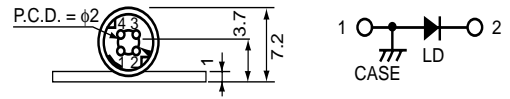
**PIN CONNECTIONS**



**NDL7513P1**



**PIN CONNECTIONS**



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