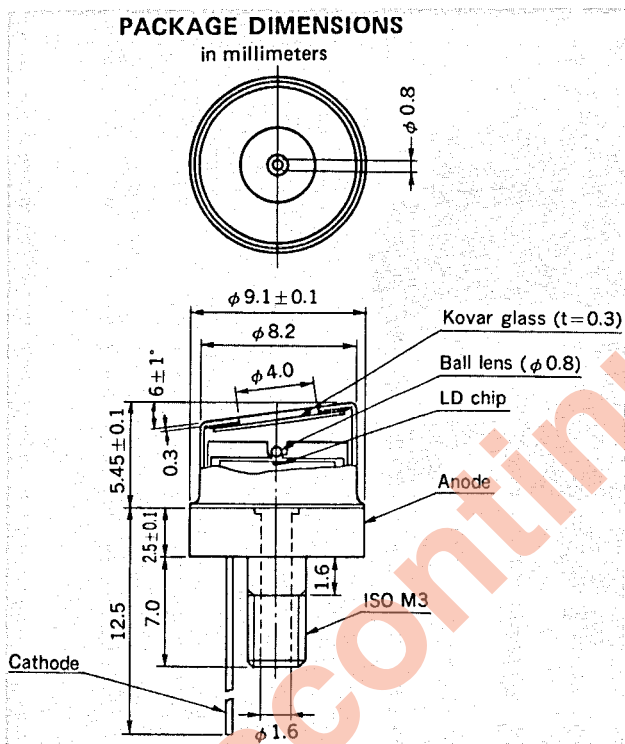


1 550 nm OPTICAL FIBER COMMUNICATION
InGaAsP DOUBLE HETEROSTRUCTURE PULSED LASER DIODE

DESCRIPTION

NDL5071 is a 1 550 nm pulsed laser diode especially designed for optical measurement equipment (OTDR). The DC-PBH (Double Channel Planar Buried Heterostructure) can achieve stable fundamental oscillation in wide temperature range. It incorporates ball lens and achieves collimated beam for easy optical coupling.



FEATURES

- High output power. $P_p = 50 \text{ mW MIN. @ } I_{FP} = 400 \text{ mA} *$
- Long wavelength. $\lambda_p = 1550 \text{ nm}$
- Low threshold current. $I_{th} = 40 \text{ mA TYP.}$
- Internal ball lens.
- Wide operating temperature range.

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Reverse Voltage	V_R	2.0	V
Pulse Forward Current *	I_{FP}	600	mA
Operating Case Temperature	T_c	-40 to +70	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +125	$^\circ\text{C}$

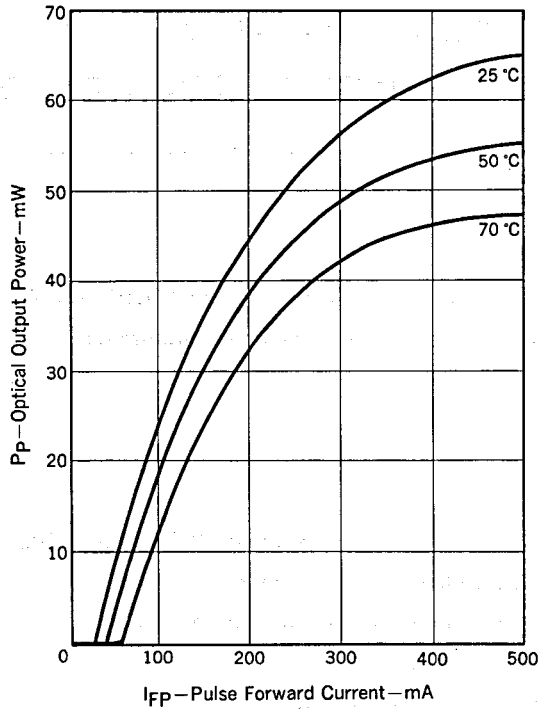
* Pulse Condition : PW (Pulse Width) = 1 μs , Duty = 1 %

ELECTRO-OPTICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

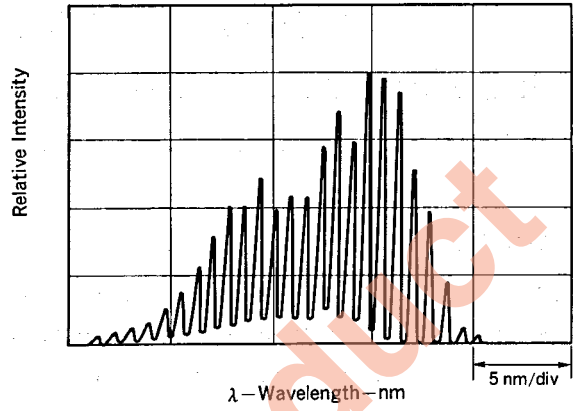
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Forward Voltage	V_F		1.0	1.5	V	$I_F = 30 \text{ mA}$
Threshold Current	I_{th}		40	60	mA	
Optical Output Power	P_p	50			mW	$I_{FP} = 400 \text{ mA}, \text{PW} = 1 \mu\text{s}, \text{Duty} = 1 \%$
Peak Emission Wavelength	λ_p	1520	1550	1580	nm	$I_{FP} = 400 \text{ mA}, \text{PW} = 1 \mu\text{s}, \text{Duty} = 1 \%$
Half Power Spectral Width	$\Delta\lambda$			20	nm	$I_{FP} = 400 \text{ mA}, \text{PW} = 1 \mu\text{s}, \text{Duty} = 1 \%$
Rise Time	t_r		0.5	1.0	ns	10-90 %
Fall Time	t_f		0.7	1.0	ns	90-10 %

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

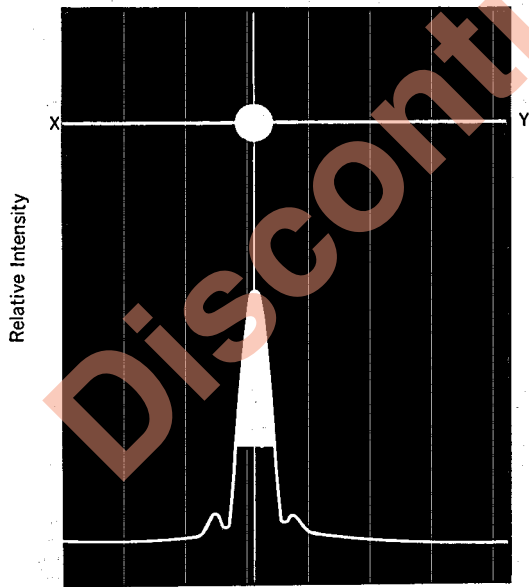
OPTICAL OUTPUT POWER vs. PULSE FORWARD CURRENT



LONGITUDINAL MODE



BEAM PROFILE



X-Y Beam Profile

PULSED LD FAMILY

Features		1 300 nm		1 550 nm		UNIT
		@I _{FP} = 250 mA	@I _{FP} = 400 mA	@I _{FP} = 250 mA	@I _{FP} = 400 mA	
Package						
Can with Ball lens		NDL5060	NDL5061	NDL5070	NDL5071	
14-pin DIP Module with Multi-Mode fiber (MMF)		NDL5062P		NDL5072P		
MAIN CHARACTERISTICS						
Optical Output	P _p MIN.	50	90	30	50	mW
Fiber Output	P _f MIN.	20		10		mW
Peak Wavelength	λ _p	1310±20		1550±30		nm
*Pulse Current	@I _{FP}	250	400	250	400	mA

* Pulse Width = 1 μs, Duty = 1 %

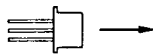
Discontinued Product

Discontinued Product



INVISIBLE LASER RADIATION
AVOID DIRECT EXPOSURE TO BEAM
OUTPUT POWER _____mw MAX
WAVELENGTH _____nm
CLASS IIIb LASER PRODUCT

SEMICONDUCTOR LASER



AVOID EXPOSURE-Invisible
Laser Radiation is emitted from
this aperture

NEC Corporation

NEC Building, 33-1, Shiba Gochome,
Minato-ku, Tokyo 108, Japan

Type number: _____

Manufactured: _____

Serial number: _____

This product conforms to DHHS
regulations as applicable
to standards 21 CFR Chapter I,
Subchapter J.