NEC
ELECTRON DEVICE

PHOTO DIODE
NDL2208

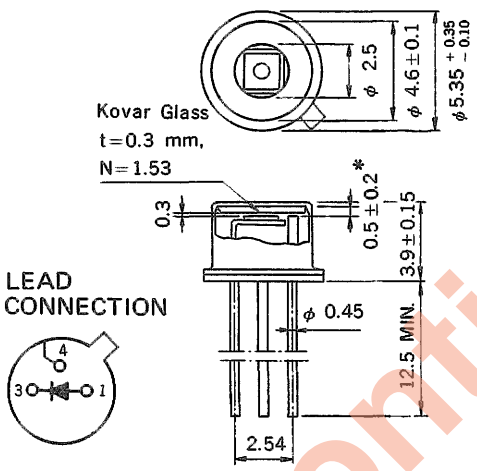
OPTICAL FIBER COMMUNICATION
SILICON PIN PHOTO DIODE

DESCRIPTION

NDL2208 is a PIN photodiode detectors with excellent quantum efficiency, switching speed, and spectral range. This photo-detector is designed for a detector of communications system and as general purpose detector for 600 to 1 100 nm spectral range.

It is hermetically sealed in a rugged TO-18 type package with a window and floating leads.

PACKAGE DIMENSIONS
in millimeters



1. Anode (Negative Bias)
3. Cathode (Positive Bias)
4. Case

* Optical length

FEATURES

- High quantum efficiency. η = 85 %, @850 nm
- Low operating voltage.
- Small dark current. I_D = 1.0 nA MAX.
- Short optical length 0.5 mm
- Large detecting area size. ϕ 880 μm

ABSOLUTE MAXIMUM RATINGS (T_a = 25 °C)

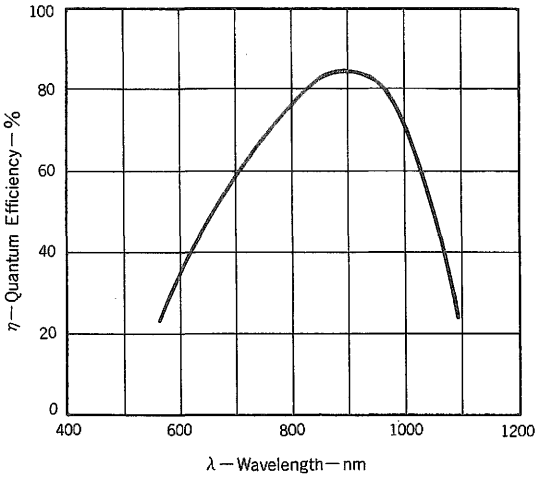
Reverse Voltage	V_R	50	V
Forward Current	I_F	100	mA
Power Dissipation	P_T	100	mW
Operating Temperature	T_{opt}	−65 to +150	°C
Storage Temperature	T_{stg}	−65 to +150	°C

ELECTRO-OPTICAL CHARACTERISTICS (T_a = 25 °C)

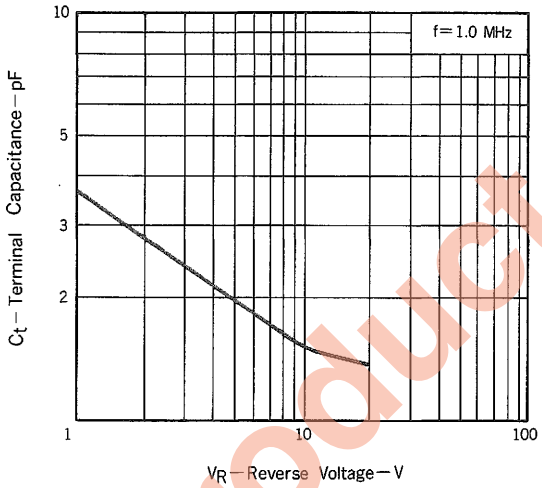
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Dark Current	I_D			1.0	nA	V_R = 10 V
Terminal Capacitance	C_t		1.5	3.0	pF	V_R = 10 V, f = 1.0 MHz
Quantum Efficiency	η	70	85		%	λ = 850 nm
Rise Time	t_r		10		ns	V_R=10 V, λ=850 nm, 10−90 %, R_L=50 Ω
Fall Time	t_f		10		ns	V_R=10 V, λ=850 nm, 90−10 %, R_L=50 Ω

TYPICAL CHARACTERISTICS (T_a = 25 °C)

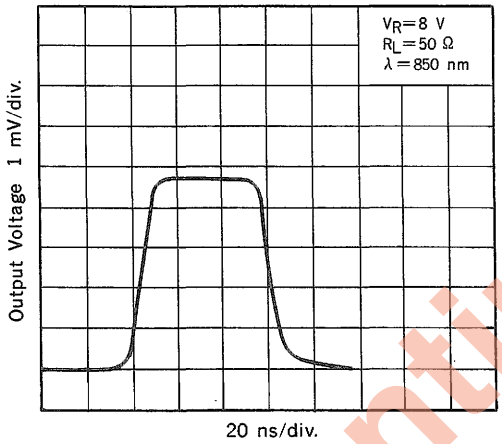
QUANTUM EFFICIENCY vs. WAVELENGTH



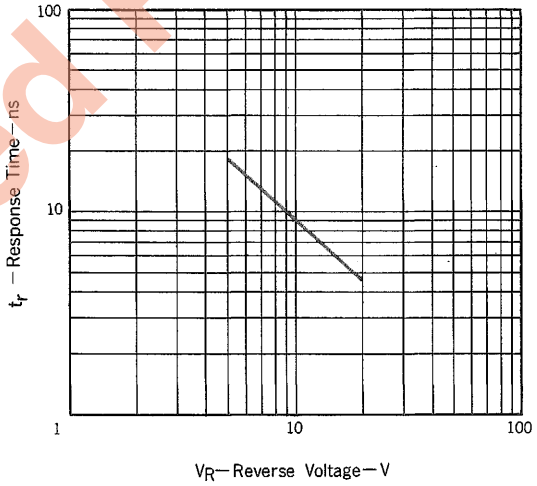
TERMINAL CAPACITANCE vs. REVERSE VOLTAGE



RESPONSE TIME CHARACTERISTIC



RESPONSE TIME vs. REVERSE VOLTAGE



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