

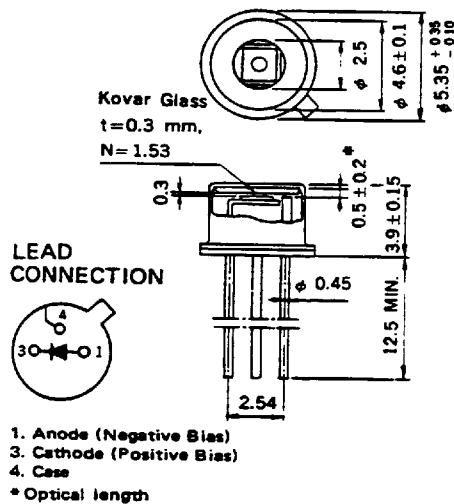
**OPTICAL FIBER COMMUNICATION**  
**SILICON PIN PHOTO DIODE**

**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 1100 nm spectral range.

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

**PACKAGE DIMENSIONS**  
in millimeters



**FEATURES**

- High quantum efficiency.  $\eta = 85\%$ , @850 nm
- Low operating voltage.
- Small dark current.  $I_D = 1.0$  nA MAX.
- Short optical length 0.5 mm
- Large detecting area size.  $\phi 880 \mu\text{m}$

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

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	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-65 to +150	$^\circ\text{C}$

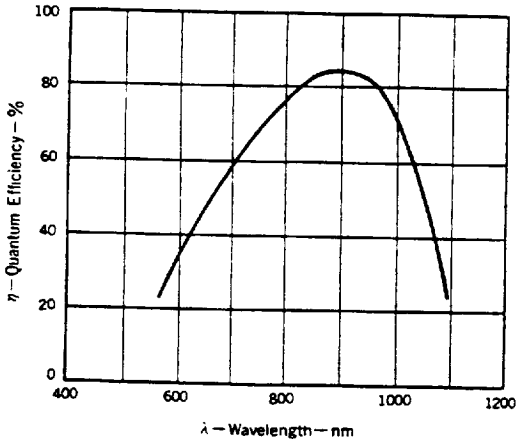
**ELECTRO-OPTICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )**

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	$\eta$	70	85		%	$\lambda = 850$ nm
Rise Time	$t_r$		10		ns	$V_R = 10$ V, $\lambda = 850$ nm, 10-90%, $R_L = 50 \Omega$
Fall Time	$t_f$		10		ns	$V_R = 10$ V, $\lambda = 850$ nm, 90-10%, $R_L = 50 \Omega$

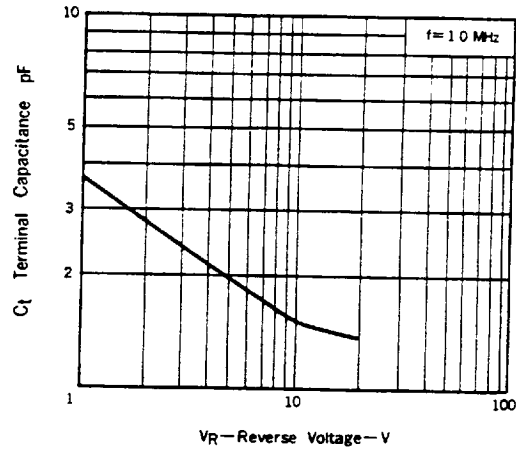
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TYPICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )

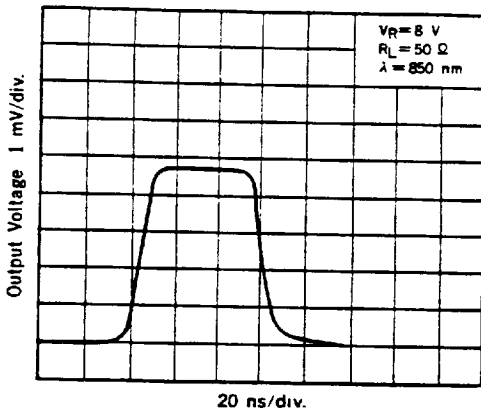
QUANTUM EFFICIENCY vs. WAVELENGTH



TERMINAL CAPACITANCE vs. REVERSE VOLTAGE



RESPONSE TIME CHARACTERISTIC



RESPONSE TIME vs. REVERSE VOLTAGE

