

To our customers,

Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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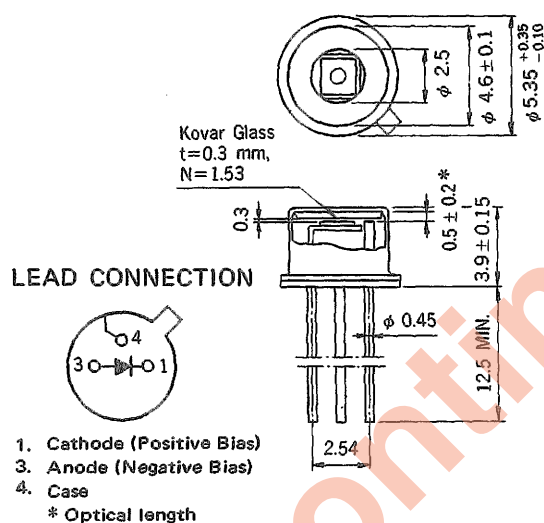
OPTICAL FIBER COMMUNICATION SILICON PIN PHOTO DIODE

DESCRIPTION

NDL2102 is an epitaxial PIN photodiode detectors with excellent quantum efficiency, switching speed, and spectral range. This photodetector is designed for a detector of communications system and as general purpose detectors for 550 to 950 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. 70 % @ 850 nm
- Low operating voltage.
- High speed response. $t_r, t_f = 1.0$ ns
- Short optical length. 0.5 mm
- Detecting area size. ϕ 240 μ m

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

Forward Current	I_F	100	mA
Reverse Voltage	V_R	100	V
Power Dissipation	P	100	mW
Operating Case Temperature	T_C	-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	2.5	pF	$V_R = 10$ V
Quantum Efficiency	η	60	70		%	$V_R = 10$ V, $\lambda = 850$ nm
Rise Time	t_r		1.0		ns	$V_R = 10$ V, $\lambda = 850$ nm, $R_L = 50 \Omega$, 10 - 90 %
Fall Time	t_f		1.0		ns	$V_R = 10$ V, $\lambda = 850$ nm, $R_L = 50 \Omega$, 90 - 10 %

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