

**1 310 nm InGaAsP MQW-FP LASER DIODE FOR OTDR APPLICATIONS****DESCRIPTION**

The NX5330SA is a 1 310 nm Multiple Quantum Well (MQW) structured Fabry-Perot (FP) laser diode. This device is specified to operate under pulsed condition and designed for light source of Optical Time Domain Reflectometer (OTDR).

**FEATURES**

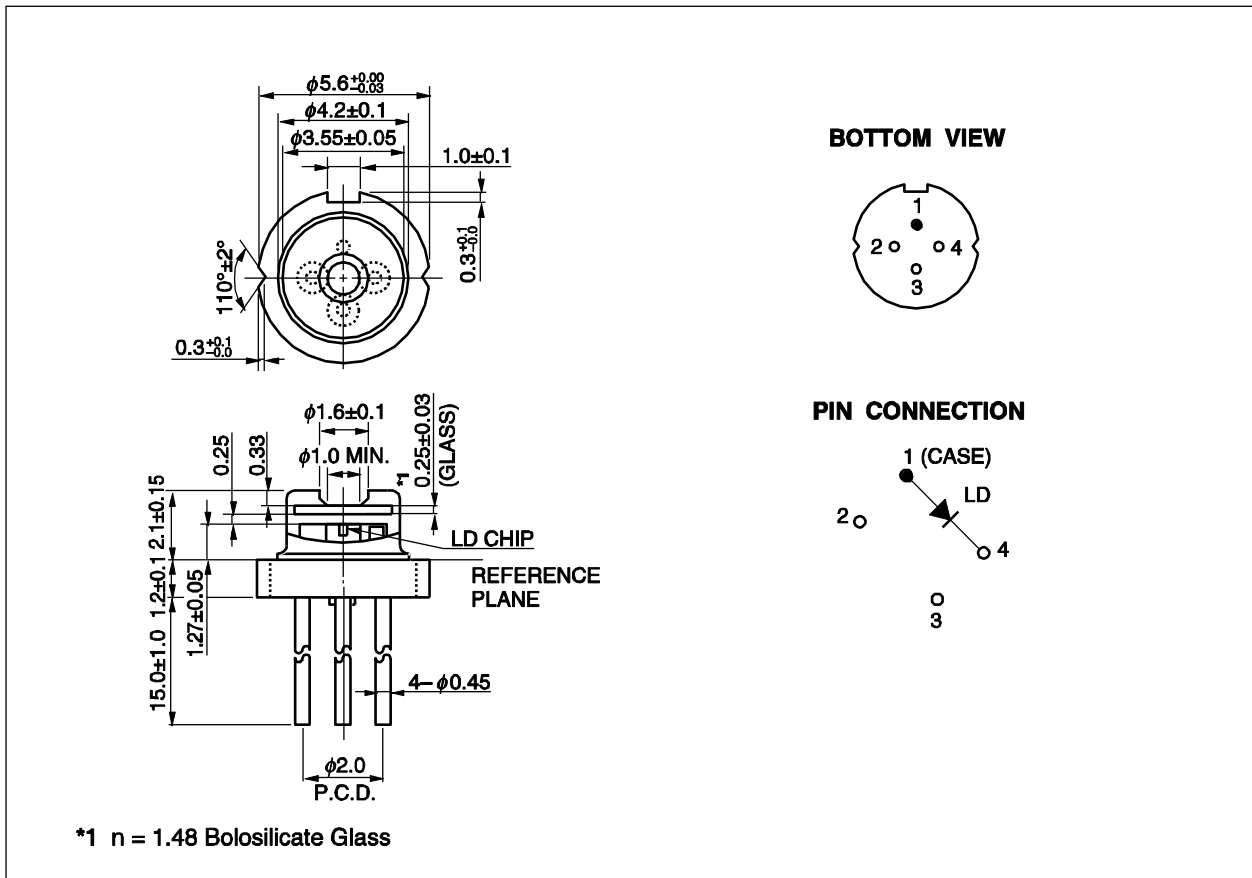
- High output power  $P_O = 350 \text{ mW @ } I_{FP} = 1\,000 \text{ mA}^{*1}$
- Long wavelength  $\lambda_C = 1\,310 \text{ nm}$

\*1 Pulse Conditions: Pulse width (PW) = 10  $\mu\text{s}$ , Duty = 1%



The information in this document is subject to change without notice. Before using this document, please confirm that this is the latest version.

**PACKAGE DIMENSION (UNIT: mm)**



**ORDERING INFORMATION**

Part Number	Package
NX5330SA-AZ*	4-pin CAN with flat glass cap

\***Note** Please refer to the last page of this data sheet “Compliance with EU Directives” for Pb-Free RoHs Compliance Information.

**ABSOLUTE MAXIMUM RATINGS (T<sub>c</sub> = 25°C, unless otherwise specified)**

Parameter	Symbol	Ratings	Unit
Pulsed Forward Current* <sup>1</sup>	I <sub>FP</sub>	1.2	A
Reverse Voltage	V <sub>R</sub>	2.0	V
Operating Case Temperature	T <sub>C</sub>	-20 to +60	°C
Storage Temperature	T <sub>stg</sub>	-40 to +85	°C
Lead Soldering Temperature	T <sub>slid</sub>	350 (3 sec.)	°C
Relative Humidity (noncondensing)	RH	85	%

\*1 Pulse Condition: Pulse Width (PW) = 10 μs, Duty = 1%

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

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward Voltage	V <sub>FP</sub>	I <sub>FP</sub> = 1 000 mA, PW = 10 μs, Duty = 1%		2.5	4.0	V
Threshold Current	I <sub>th</sub>			35	60	mA
Optical Output Power	P <sub>O</sub>	I <sub>FP</sub> = 1 000 mA, PW = 10 μs, Duty = 1%	200	350		mW
Center Wavelength	λ <sub>C</sub>	RMS (-20 dB), I <sub>FP</sub> = 1 000 mA, PW = 10 μs, Duty = 1%	1 290	1 310	1 330	nm
Spectral Width	σ	RMS (-20 dB), I <sub>FP</sub> = 1 000 mA, PW = 10 μs, Duty = 1%		4.5	10.0	nm

**REFERENCE**

Document Name	Document No.
Opto-Electronics Devices Pamphlet	PX10160E

**SAFETY INFORMATION ON THIS PRODUCT**



**SEMICONDUCTOR LASER**



<p><b>Warning</b> Laser Beam</p>	<p>A laser beam is emitted from this diode during operation. The laser beam, visible or invisible, directly or indirectly, may cause injury to the eye or loss of eyesight.</p> <ul style="list-style-type: none"> <li>• Do not look directly into the laser beam.</li> <li>• Avoid exposure to the laser beam, any reflected or collimated beam.</li> </ul>
<p><b>Caution</b> GaAs Products</p>	<p>This product uses gallium arsenide (GaAs). GaAs vapor and powder are hazardous to human health if inhaled or ingested, so please observe the following points.</p> <ul style="list-style-type: none"> <li>• Follow related laws and ordinances when disposing of the product. If there are no applicable laws and/or ordinances, dispose of the product as recommended below.             <ol style="list-style-type: none"> <li>1. Commission a disposal company able to (with a license to) collect, transport and dispose of materials that contain arsenic and other such industrial waste materials.</li> <li>2. Exclude the product from general industrial waste and household garbage, and ensure that the product is controlled (as industrial waste subject to special control) up until final disposal.</li> </ol> </li> <li>• Do not burn, destroy, cut, crush, or chemically dissolve the product.</li> <li>• Do not lick the product or in any way allow it to enter the mouth.</li> </ul>
<p><b>Caution</b> Optical Fiber</p>	<p>A glass-fiber is attached on the product. Handle with care.</p> <ul style="list-style-type: none"> <li>• When the fiber is broken or damaged, handle carefully to avoid injury from the damaged part or fragments.</li> </ul>