

1 550 nm InGaAsP MQW-FP LASER DIODE FOR OTDR APPLICATIONS**DESCRIPTION**

The NX5530SA is a 1 550 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

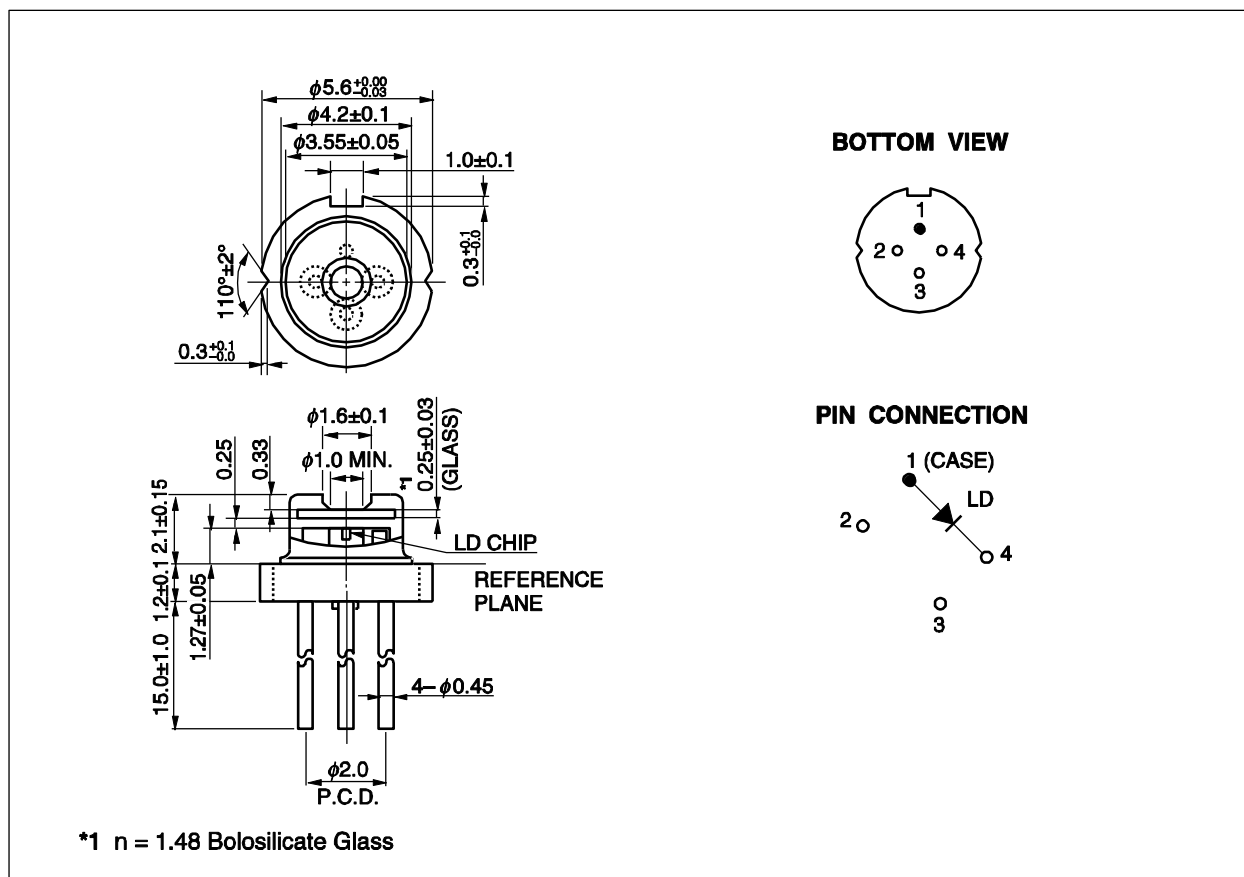
- High output power $P_O = 250 \text{ mW @ } I_{FP} = 1\,000 \text{ mA}^{*1}$
- Long wavelength $\lambda_C = 1\,550 \text{ nm}$

***1** Pulse Conditions: Pulse width (PW) = 10 μs , 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
NX5530SA-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 ($T_c = 25^\circ\text{C}$, unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Pulsed Forward Current* ¹	I_{FP}	1.2	A
Reverse Voltage	V_R	2.0	V
Operating Case Temperature	T_c	-20 to +60	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to +85	$^\circ\text{C}$
Lead Soldering Temperature	T_{slr}	350 (3 sec.)	$^\circ\text{C}$
Relative Humidity (noncondensing)	RH	85	%

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

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

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward Voltage	V_{FP}	$I_{FP} = 1\,000\text{ mA}$, PW = 10 μs , Duty = 1%		2.5	4.0	V
Threshold Current	I_{th}			35	60	mA
Optical Output Power	P_o	$I_{FP} = 1\,000\text{ mA}$, PW = 10 μs , Duty = 1%	100	250		mW
Center Wavelength	λ_c	RMS (-20 dB), $I_{FP} = 1\,000\text{ mA}$, PW = 10 μs , Duty = 1%	1 530	1 550	1 570	nm
Spectral Width	σ	RMS (-20 dB), $I_{FP} = 1\,000\text{ mA}$, PW = 10 μs , Duty = 1%		7.5	10.0	nm

REFERENCE

Document Name	Document No.
Opto-Electronics Devices Pamphlet	PX10160E

SAFETY INFORMATION ON THIS PRODUCT



SEMICONDUCTOR LASER



Warning	Laser Beam	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. • Do not look directly into the laser beam. • Avoid exposure to the laser beam, any reflected or collimated beam.
Caution	GaAs Products	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. • 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. 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. 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. • Do not burn, destroy, cut, crush, or chemically dissolve the product. • Do not lick the product or in any way allow it to enter the mouth.
Caution	Optical Fiber	A glass-fiber is attached on the product. Handle with care. • When the fiber is broken or damaged, handle carefully to avoid injury from the damaged part or fragments.