VPSL™ – Virtual point Source Lasers

Compact, high-reliability laser sources for precision optical applications

Features

- ✓ High Reliability, +10,000Hrs
- ✓ Circular, diverging beam
- ✓ Standard 5.6 or 9.0mm TO-can packages
- ✓ Wavelengths Options: 633nm to 905nm
- ✓ Excellent fiber coupling efficiency

Description

The VPSL™ consists of a laser diode with an integrated microlens, housed in a hermetically sealed package. It delivers a single transverse circular beam mode, making it ideal for use in medical, metrology, industrial, and optical measurement applications. The table below showcases a representative selection of VPSL™ products.

*Standard Product Specifications**

VPSL Part Number	Lasing Wavelength λ (nm)	Optical Power Po (mW)	TO Can Package (mm)	Operating Current I_{OP} (mA) Typical	Pin Out
VPSL-633-100-X-5-F	633	100	5.6	170	F
VPSL-637-100-x-5-B	637	100	5.6	140	B
VPSL-639-010-X-5-B	639	10	5.6	40	B
VPSL-640-040-X-5-A	640	40	5.6	90	A
VPSL-658-080-X-5-A	658	80	5.6	90	A
VPSL-660-120-X-5-E	660	120	5.6	175	E
VPSL-685-050-X-5-A	685	50	5.6	75	A
VPSL-785-200-X-5-B	785	200	5.6	230	B
VPSL-808-150-X-9-A	808	150	9.0	190	A
VPSL-830-210-X-5-A	830	210	5.6	225	A
VPSL-850-250-X-5-A	850	250	5.6	270	A
VPSL-905-010-X-5-B	905	10	5.6	16	B

* We offer a large variety of VPSL™ wavelengths and output powers. The table above highlights a representative sample of VPSL™ products. If you would like additional performance specifications or want a specific wavelength, power level, TO can package, or electrical pinout please contact Sales@Necsel.com for details.

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Environmental Specifications (Typical)

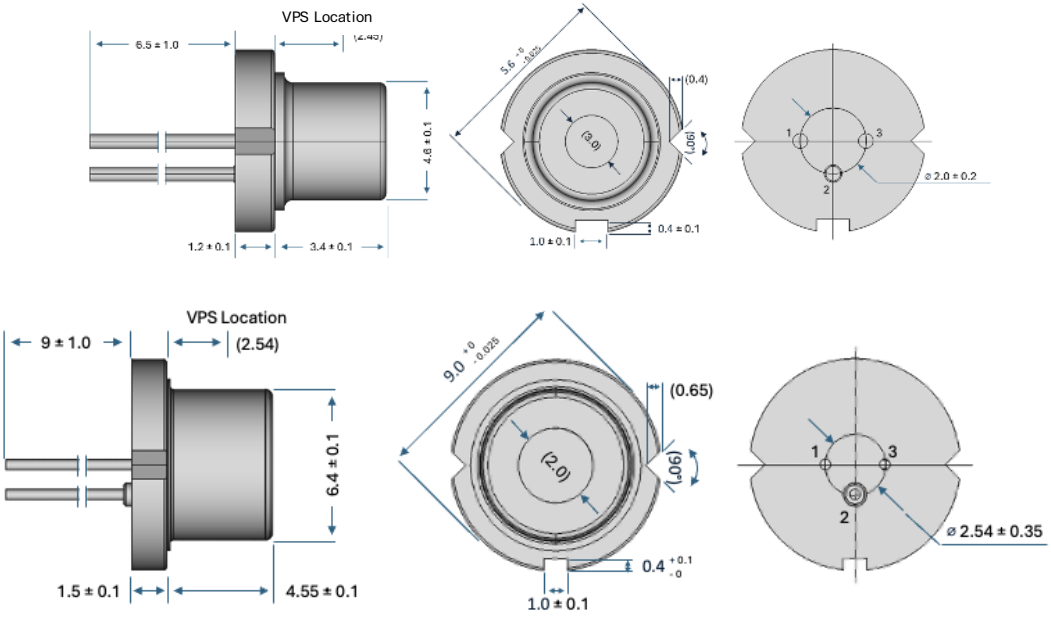
Parameter	Units	Specification Min	Specification Max*	Conditions, Notes
Operating Temperature (Typical)	°C	-10	50	Non-Condensing, * Op Temp up to +70 with specific LDs
Storage Temperature	°C	-40	85	Non-Condensing
Storage Humidity	%	10	90	Non-Condensing

Optical Specifications (Typical)

Wavelength	nm	633	640	658	685	785	808	830	850	905
Circularity	Ratio	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.2	1.2
Beam Divergence (θ II, FWHM)	θ Degree	8.5	9	8	10	9	12	9	8	8
Off Axis Angle	Δθ Degree	+/-3	+/-3	+/-3	+/-3	+/-3	+/-3	+/-3	+/-3	+/-3

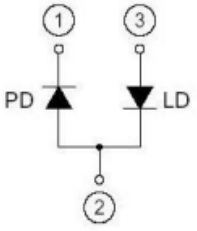
* Please contact Sales@Necsel.com for detailed Laser Diode performance specifications

Mechanical Package Detail



Electrical Connection (common configurations)

A PINOUT PACKAGE



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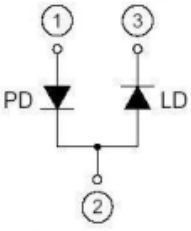

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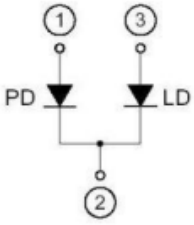
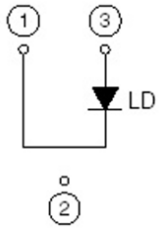


F PINOUT PACKAGE



Cautions

Products and product specifications may be subject to change without notice. Confirm that you have received the latest product standards or specifications before final design, purchase or use.

Design your application so that the products is used within the ranges guaranteed by Necsel. particularly for maximum rating, operating supply voltage range, heat radiation characteristics, installation conditions and other characteristics. Necsel bears no responsibility for failure or damage when used beyond the guaranteed ranges. Even within the guaranteed ranges, consider normally foreseeable failure rates or failure modes in semiconductor devices and employ systemic measures such as fail-safes, so that the equipment incorporating Necsel product does not cause bodily injury, fire or other consequential damage due to operation of the Necsel product.

This product is not designed to be radiation resistant.

This product is static sensitive, observe precautions

Contact our sales office for any questions regarding this document or Necsel products.

Laser Safety

1.The laser light is harmful to human body especially to eye no matter what directly or indirectly. The laser beam shall be observed or adjusted through infrared camera or equivalent. Refer to IEC 825-1 and 21 CFR 1040.10 – 10-1040.11 as radiation safety standard for laser products

2.This product contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product. When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage

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