VERTILAS VCSEL Diodes

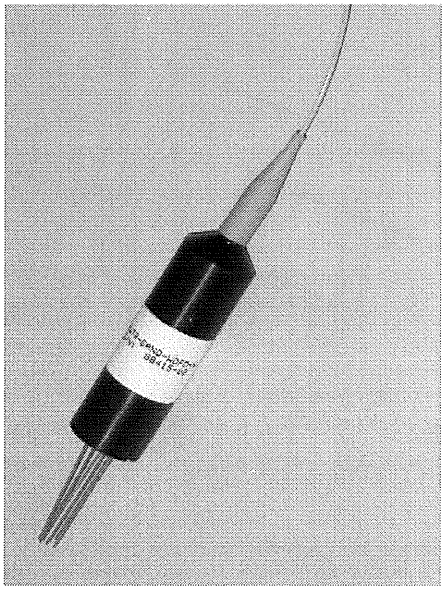
ATTENTION
OBSERVE PRECAUTIONS
ELECTROSTATIC SENSITIVE DEVICES

VERTILAS

FINAL TEST DATA

Serial No. 114944-09 DiodeNo: Date 2008-04-30

Type VL-1854-1-SP-P5 **Product State: Engineering Sample**



Description

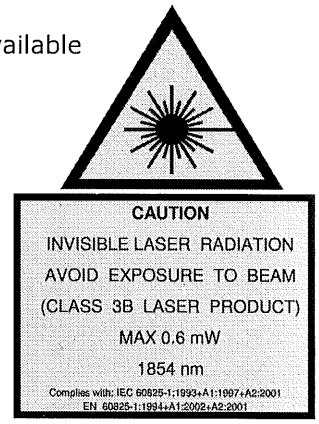
The VL single-mode series diodes are VCSELs for customer specified emission wavelengths. The vertical cavity structure is employed to obtain excellent threshold and operating current and tuning performance.
The range of operation is from -20°C to +70°C (T_{case}) and +15°C to +35°C (T_{laser}).

Applications

- Tunable Diode Laser Absorption Spectroscopy
- Fiberoptical Light Source

Features

- Wide and fast tuning performance for insitu measurements in high pressure environments
- Customer specific packaging options (TO39, TO46 and others)
- Individual laser data sheets available



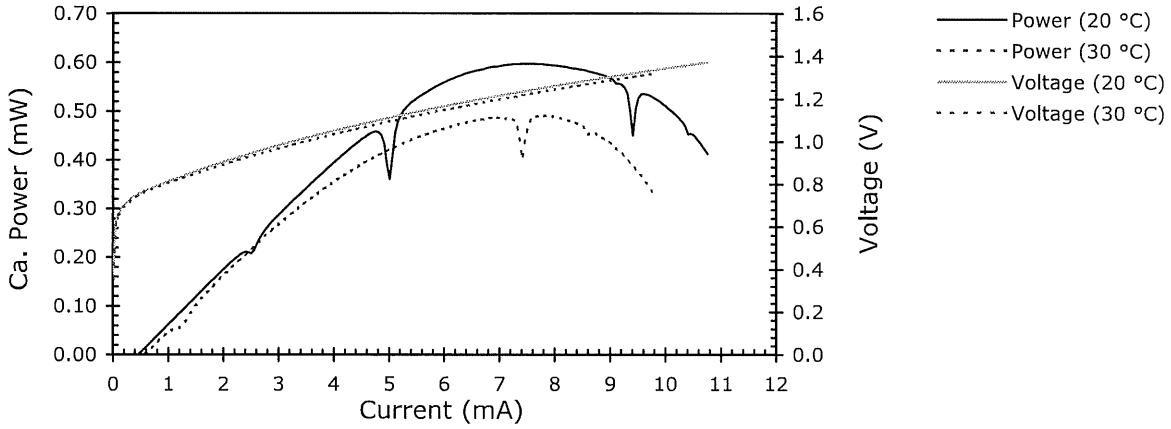
Electrical / Optical Characteristics

Serial No. 114944-09

CW Current	Recommended Range	Maximum Ratings
	1.0 mA - 7.0 mA	8.0 mA

	Threshold Current	Max. Output Power
20 °C	0.45 mA	ca. 0.60 mW
30 °C	0.51 mA	ca. 0.49 mW

Ild (20°C)	0.68 mA	2.37 mA	4.07 mA	5.77 mA	7.46 mA
Wavelength	1852.49 nm	1852.89 nm	1853.57 nm	1854.31 nm	1855.33 nm
Ild (30°C)	0.76 mA	2.51 mA	4.26 mA	6.01 mA	7.76 mA
Wavelength	1853.85 nm	1854.29 nm	1854.95 nm	1855.83 nm	1856.85 nm



VERTILAS GmbH
Lichtenbergstrasse 8
c/o Gate Garching
D-85748 Garching

Tel.: +49 (0)89 54 84 20-00
Fax: +49 (0)89 54 84 20-19
www.vertilas.com

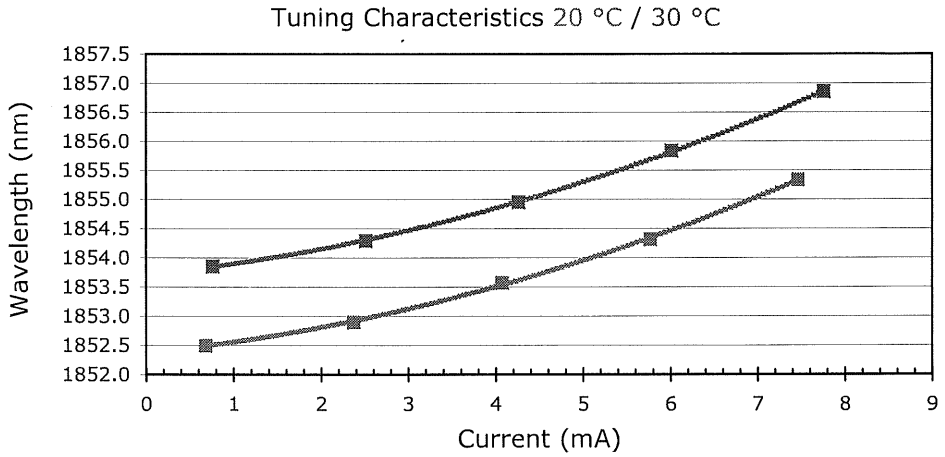
Sales Requirements: sales@vertilas.com
Further information: info@vertilas.com

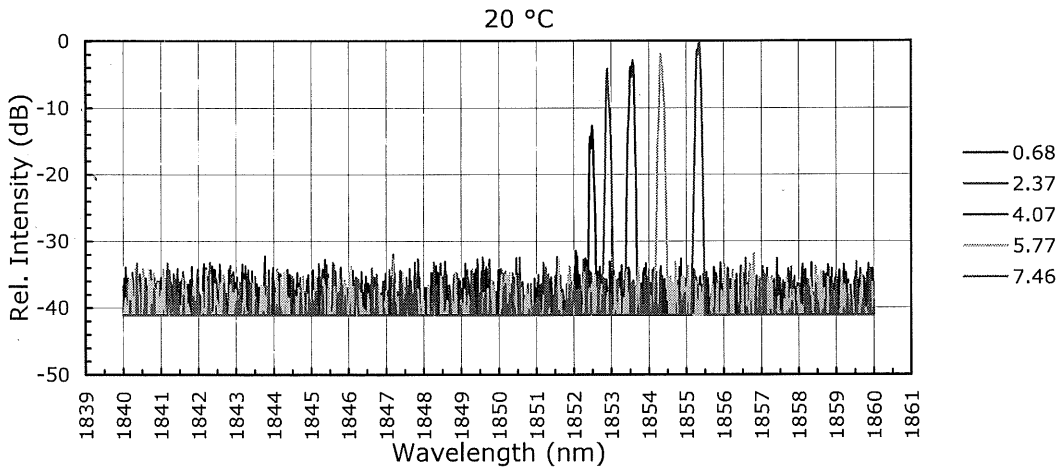
FINAL TEST DATA

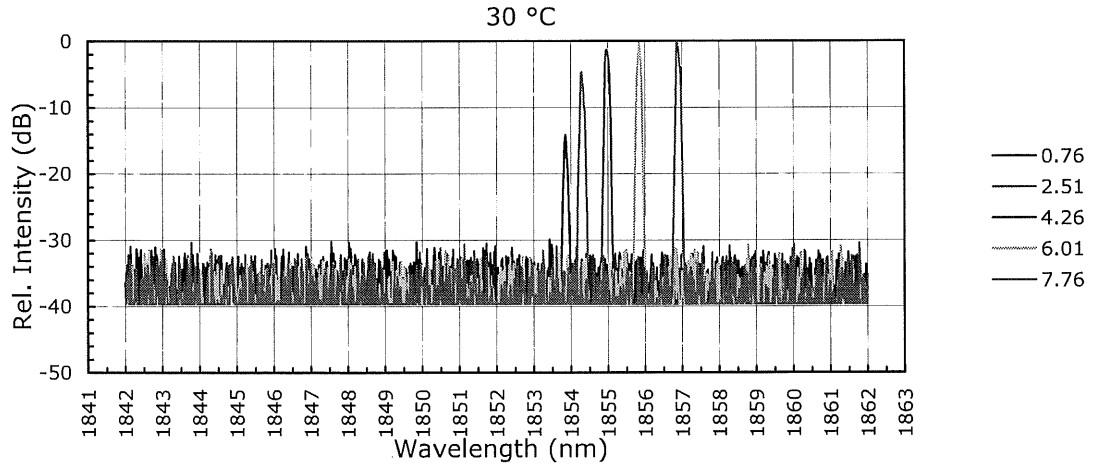
Serial No. 114944-09 DiodeNo:

Date 2008-04-30

Type VL-1854-1-SP-P5







VERTILAS GmbH
Lichtenbergstrasse 8
c/o Gate Garching
D-85748 Garching

Tel.: +49 (0)89 54 84 20-00
Fax: +49 (0)89 54 84 20-19
www.vertilas.com

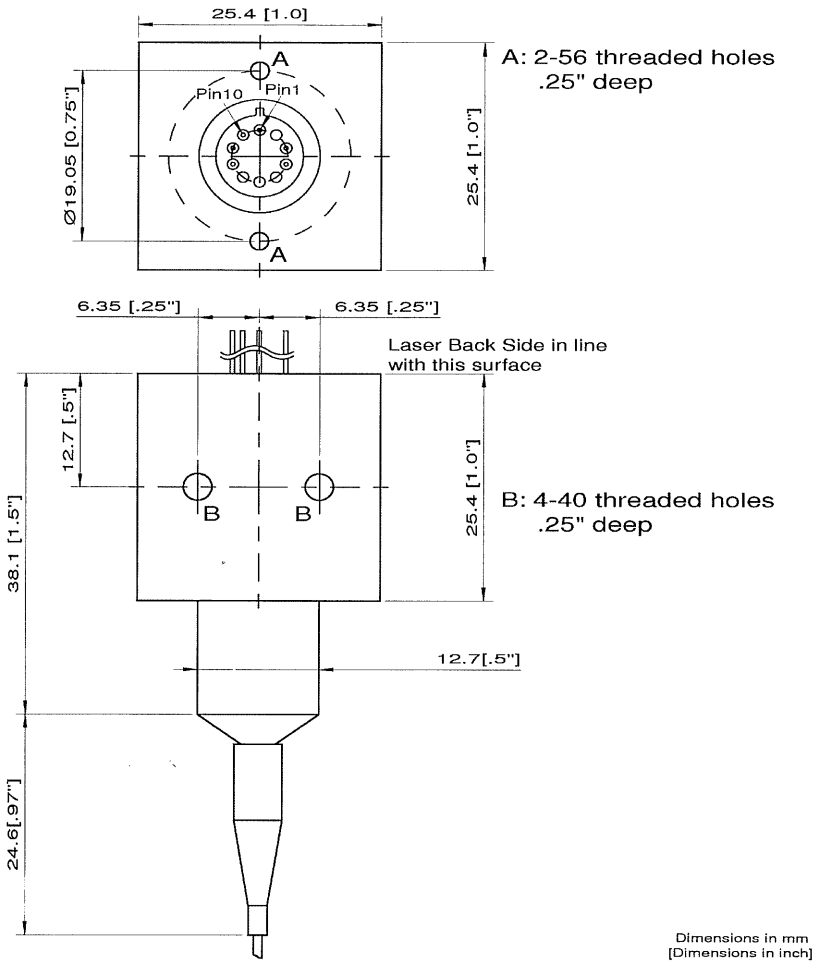
Sales Requirements: sales@vertilas.com
Further information: info@vertilas.com

HEADER SCHEMATICS

Serial No. 114944-09 DiodeNo:

Type VL-1854-1-SP-P5

Date: 2008-04-30



Dimensions in mm
[Dimensions in inch]

Pin assignment	
Pin	Function
3	Laser (−)
4	Laser (+)
8	Thermistor
9	Thermistor
10	Cooler (−)
1	Cooler (+)

Steinhart-Hart-Coefficients	
A	1.129148E-03
B	2.341250E-04
C	8.76741E-08

TEC	
I_{max}	0.45 A
V_{max}	2.1 V

proper heatsinking is required

T_{case} max: 70°C

VERTILAS GmbH
Lichtenbergstrasse 8
c/o Gate Garching
D-85748 Garching

Tel.: +49 (0)89 54 84 20-00
Fax: +49 (0)89 54 84 20-19
www.vertilas.com

Sales Requirements: sales@vertilas.com
Further information: info@vertilas.com

General notes and recommendations

This product is a class 3B laser product and emits invisible laser radiation. Do not expose eyes to this laser beam, as it may be harmful to the eye.

Do not operate or store this product beyond the specified operating or storage conditions. Doing so may damage the product and VERTILAS does not assume any responsibility or warranty in this case.

Any product that is supplied in a non-hermetically sealed package is subject to limited warranty. A non-hermetically sealed VCSEL is potentially exposed to hazardous conditions, such as moisture, gases, physical damage, in the customer application, that may damage the product or alter its performance. VERTILAS does not assume responsibility in this case.

Handle and operate this product with care. VCSEL products are sensitive, and can be easily damaged, e.g. by electro-static discharge, supply power peaks, signal peaks, overload and other operating or storage conditions. Failing to prevent these conditions may damage the product and VERTILAS does not assume any responsibility or warranty in this case.

This specification is subject to change without prior notification. The information is believed to be correct and accurate at the time of printing. However, VERTILAS does not take responsibility for ommissions or inaccuracies.

VERTILAS general terms and conditions apply. They can be viewed on the VERTILAS website at www.vertilas.com or we can send them on request.

VERTILAS GmbH
Lichtenbergstrasse 8
c/o Gate Garching
D-85748 Garching

Tel.: +49 (0)89 54 84 20-00
Fax: +49 (0)89 54 84 20-19
www.vertilas.com

Sales Requirements: sales@vertilas.com
Further information: info@vertilas.com