

High Power Pulsed Laser Diodes 850-Series

Features

- Proven AlGaAs high reliability structure
- 0.9 W/A efficiency
- Excellent temperature stability
- Hermetic and custom designed package

Applications

- Range finding
- Surveying equipment
- Weapons simulation
- Laser radar
- Security barrier
- Optical trigger



Optical Characteristics at $t_{RT} = 21^{\circ}\text{C}$, I_{FM}

	Min	Typ	Max	Units
Wavelength of peak radiant intensity λ_m	835	850	860	nm
Spectral bandwidth $\Delta\lambda$ at 50% intensity points		5.5		nm
Wavelength temperature coefficient		0.21		nm/ $^{\circ}\text{C}$
Beam spread (50% peak intensity)				
Parallel to junction plane \parallel		10.5		Degrees
Perpendicular to junction plane \perp		20		Degrees

Single Chip

Single chip characteristics at $t_{RT} = 21^\circ\text{C}$, $t_w = 150\text{ ns}$, $P_{rr} = 6.66\text{ kHz}$

Parameter	850D1S09X
P_O at I_{FM} (typ.)	13 W
Emitting area	225 x 1 μm
Max peak forward current I_{FM}	18 A
I_{TH} typ	900 mA
Forward voltage at I_{FM}	3 V

Absolute Maximum Ratings

Maximum ratings	Limiting values
Peak reverse voltage	6 V
Pulse duration	150 ns
Duty factor	0.1%
Temperature	
- Storage	-55 °C to + 100 °C
- Operating	-45 °C to + 85 °C
Lead soldering	
- 5 seconds max at	200 °C

Germany & Other Countries

Laser Components Germany GmbH
Tel: +49 8142 2864 - 0
Fax: +49 8142 2864 - 11
info@lasercomponents.com
www.lasercomponents.com

France

Laser Components S.A.S.
Tel: +33 1 39 59 52 25
Fax: +33 1 39 59 53 50
info@lasercomponents.fr
www.lasercomponents.fr

United Kingdom

Laser Components (UK) Ltd.
Tel: +44 1245 491 499
Fax: +44 1245 491 801
info@lasercomponents.co.uk
www.lasercomponents.co.uk

Nordic Countries

Laser Components Nordic AB
Tel: +46 31 703 71 73
Fax: +46 31 703 71 01
info@lasercomponents.se
www.lasercomponents.se

USA

Laser Components USA, Inc.
Tel: +1 603 821 - 7040
Fax: +1 603 821 - 7041
info@laser-components.com
www.laser-components.com

Figure 1:
Peak power vs Current

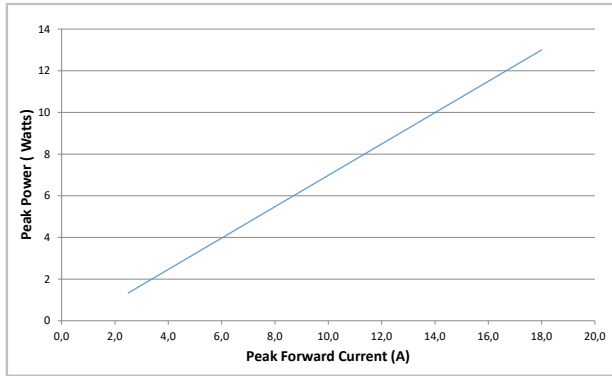


Figure 2:
Static Forward voltage against current

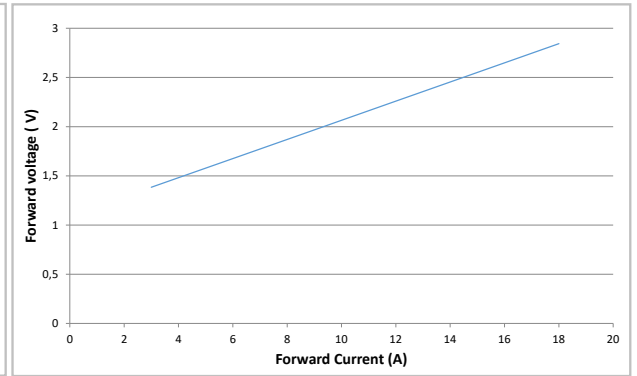


Figure 3:
Peak power vs Temperature

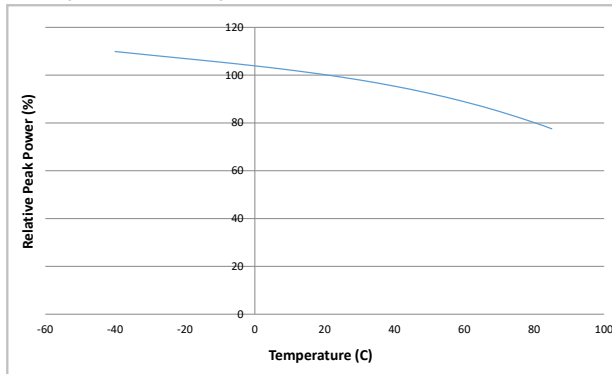


Figure 4:
Wavelength

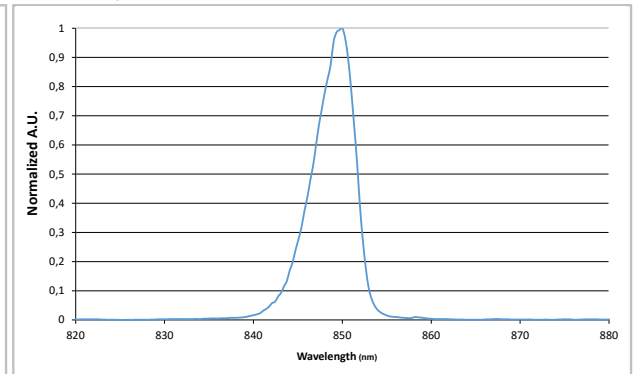
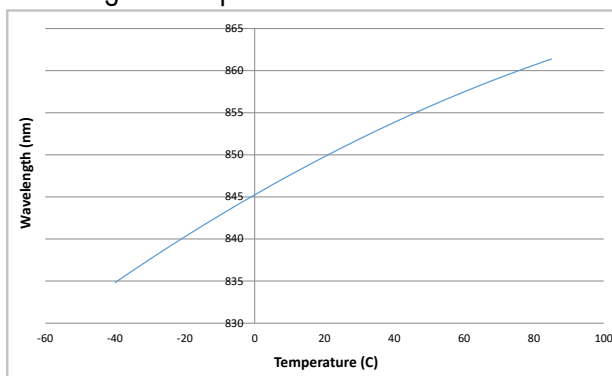
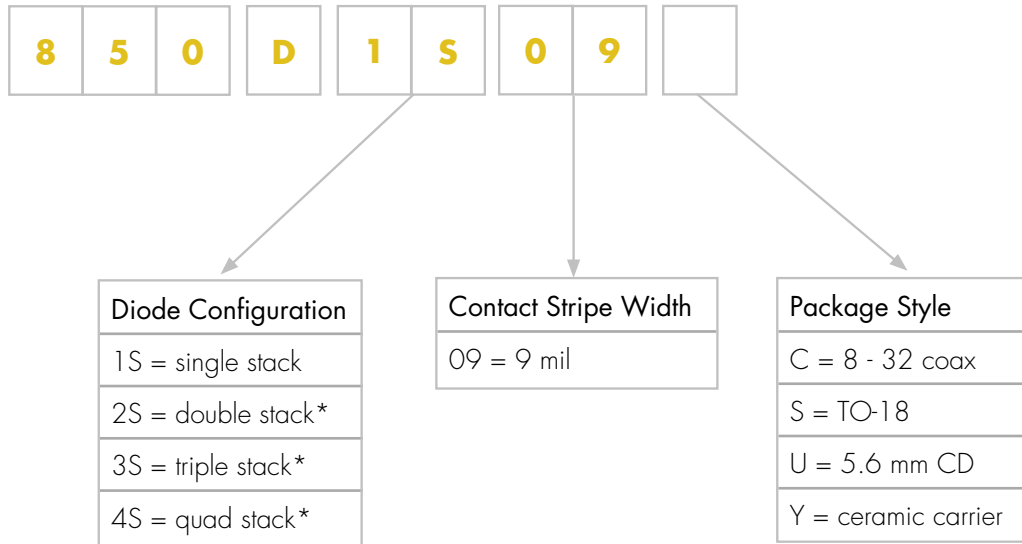


Figure 5:
Wavelength vs Temperature



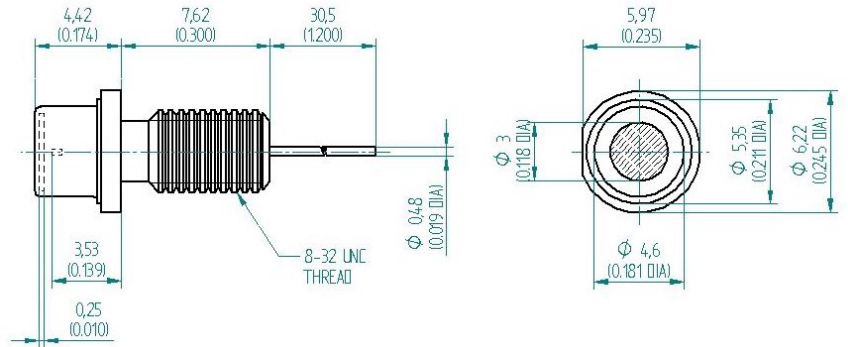
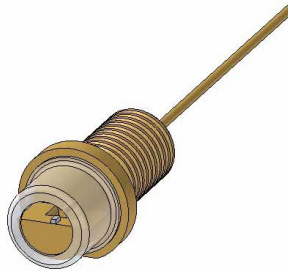
Product Number Designations



* only available on request

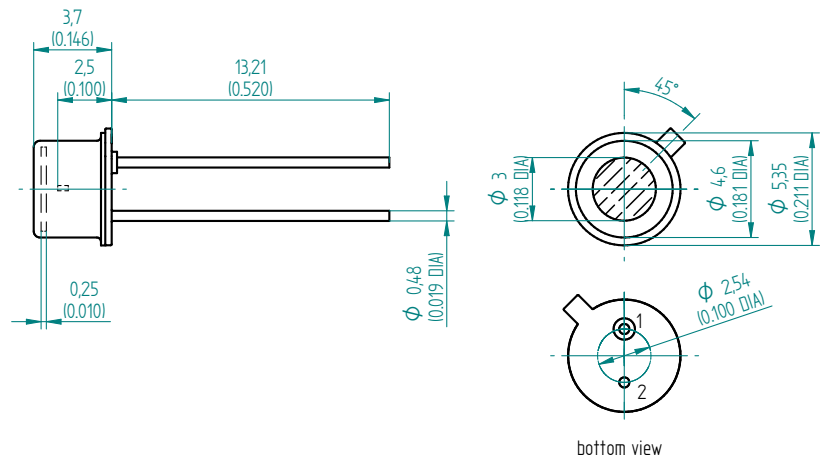
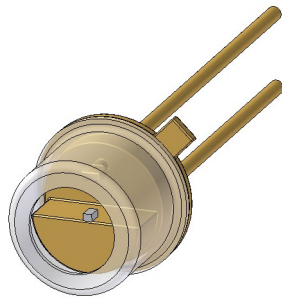
Package Drawings

Package C 8 - 32 coax



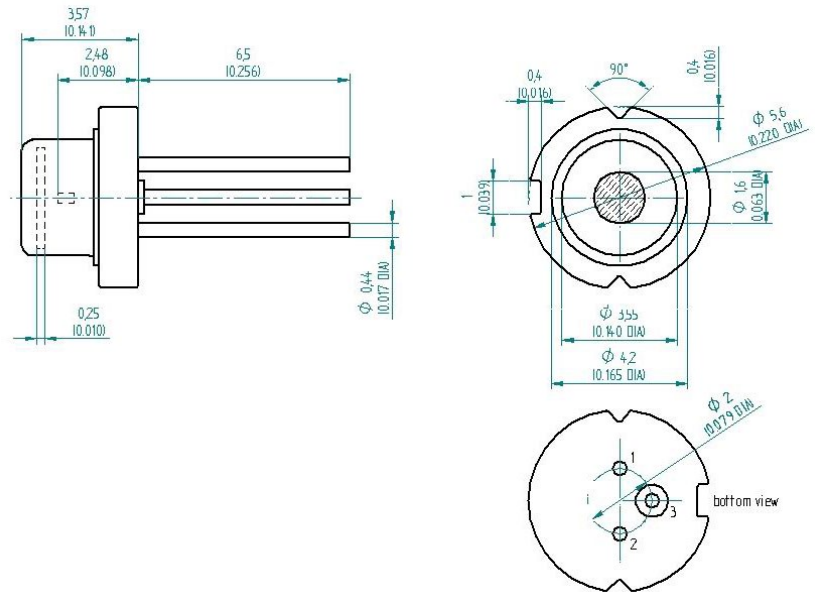
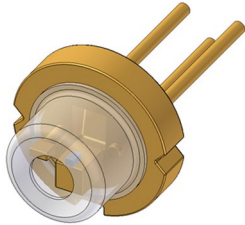
Package C: Pin Out: Case (-), Pin (+), Inductance 12 nH

Package S TO-18



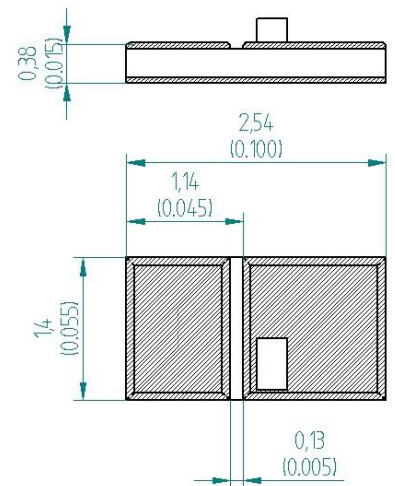
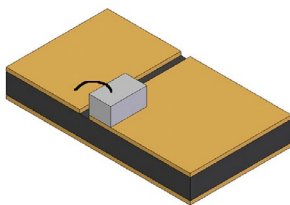
Package S: Pin Out: 1. LD Anode (+), 2. LD Cathode (-) Case, Inductance 5.2 nH

Package U 5.6 mm CD



Package U: Pin Out: 1. LD Anode (+),
2. NC,
3. LD Cathode (-) Case, Inductance 5.0 nH

Package Y ceramic carrier



Package U: Pin Out: 1. LD Anode (+),
2. LD Cathode (-) Case, Inductance 1.6 nH

Product Changes

LASER COMPONENTS reserves the right to make changes to the product(s) or information contained herein without notice. No liability is assumed as a result of their use or application.

Ordering Information

Products can be ordered directly from LASER COMPONENTS or its representatives. For a complete listing of representatives, visit our website at www.lasercomponents.com

Custom designed products are available on request.

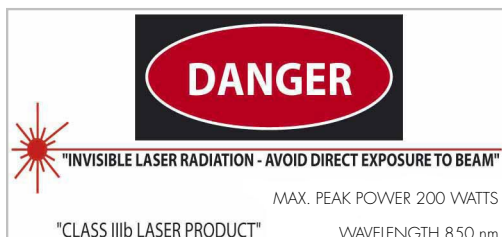
Laser Safety

Personal Hazard:

Depending on the mode of operation, these devices emit highly concentrated non visible infrared light which can be hazardous to the human eye. Products which incorporate these devices have to follow the safety precautions given in IEC 60825-1 "Safety of laser products".

Handling Precautions:

Products are subject to the risks normally associated with sensitive electronic devices including static discharge, transients, and overload.



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info@lasercomponents.se
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