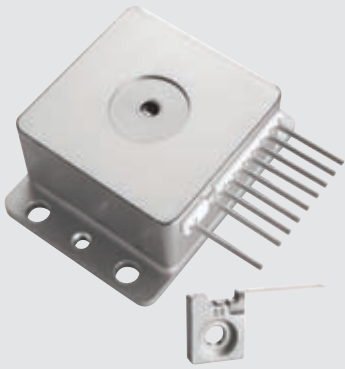




790-830 nm Single Emitter Devices

Packaged Single Emitters

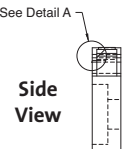
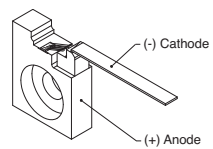
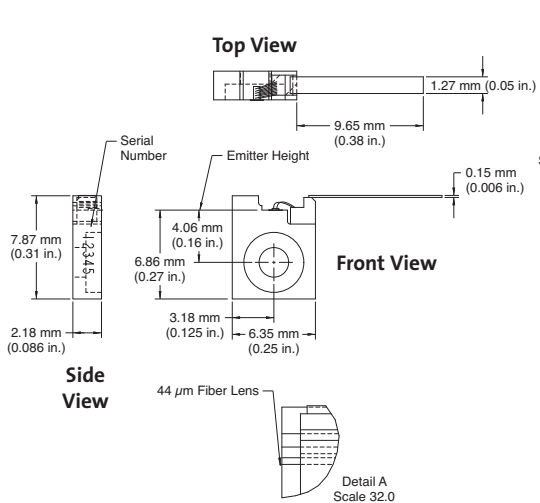


Features

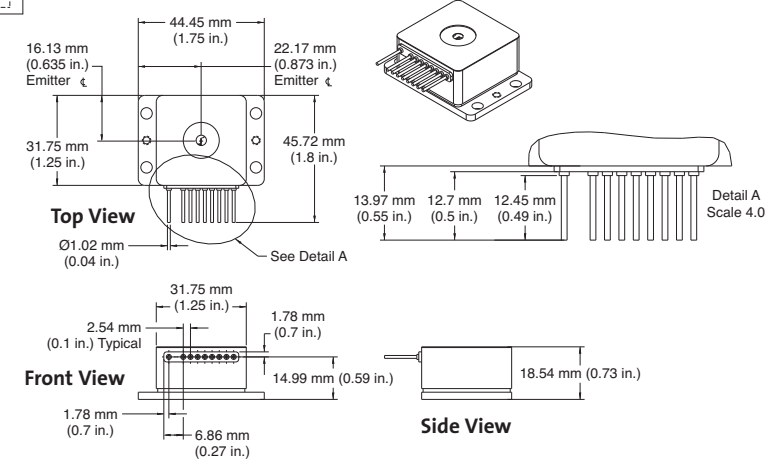
- Unique AAA™ (Aluminum-free Active Area) technology for highest reliability and lifetime
- Broad range of pump wavelengths
- Low divergence and lensing options available
- High temperature operation capability
- HHL package is environmentally sealed and includes photodiode, thermistor and TEC

Mechanical Specifications

790-830 Lensed C-Mount



790-830 HHL



Superior Reliability & Performance

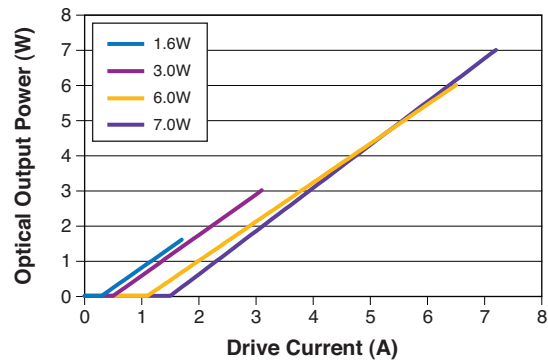
790-830 nm Single Emitter Devices

Packaged Single Emitters

Device Specifications

Description	1.6W 100 μ m	2.0W 150 μ m
Optical Output Power (Unlensed) (W)	1.6	2.0
Optical Output Power (Lensed) (W)	1.45	1.8
Emitter Width (μ m)	100	150
Center Wavelength (nm) (standard options, at 25°C)	797 \pm 3 800 \pm 3 805 \pm 3 808 \pm 3 810 \pm 10	808 \pm 3
Wavelength Temperature Coefficient (nm/°C)	0.28	0.28
Spectral Width (nm)	<2 <3 (810 nm)	<2
Polarization	TM	TM
Threshold Current (A)	0.3 (typical)	0.4 (typical)
Operating Current (A)	<2.0 (1.7 typical)	<2.5 (2.0 typical)
Operating Voltage (V)	<2.0 (1.8 typical)	<2.0 (1.9 typical)
Fast Axis Divergence (°)(FWHM)		
Unlensed	<35 (31 typical)	<35 (31 typical)
Lensed	<4	<4
Slow Axis Divergence (°)(FWHM)	<10	<10
Recommended Operating Temperature (°C)	25	25
Recommended Operating Temperature Range (°C)	15 to 35	15 to 35
Storage Temperature Range (°C)	-40 to +60	-40 to +60
Recommended Heat Sink Capacity (W)	5	6
Expected Lifetime (hours)(MTTF)	>10,000	>10,000
Package Option	C-mount or HHL	C-mount or HHL

Typical 790-830 Sdev P-I Plots



3.0W 200 μm	5.0W 200 μm	6.0W 200 μm	7.0W 500 μm
3.0	5.0	6.0	7.0
2.7	4.5	5.4	6.3
200	200	200	500
797 ±3 805 ±3 808 ±3 810 ±3 810 ±10	808 ±3 810 ±10	808 ±3 810 ±10	808 ±3 810 ±10
0.28	0.28	0.28	0.28
<2 <3 (810 ±10 nm)	<2 <3 (810 nm)	<2 <3 (810 nm)	<3 <4 (810 nm)
TM	TM	TM	TM
0.5 (typical)	1.0 (typical)	1.0 (typical)	1.5 (typical)
<3.7 (3.1 typical)	<6.0 (5.6 typical)	<7.0 (6.5 typical)	<9.0 (7.2 typical)
<2.0 (1.9 typical)	<2.0 (1.9 typical)	<2.0 (1.9 typical)	<2.0
<35 (31 typical) <4	<30 (21 typical) <4	<30 (21 typical) <4	<40 <2
<11	<11	<11	<10
25	25	25	25
15 to 35	15 to 35	15 to 35	15 to 35
-40 to +60	-40 to +60	-40 to +60	-40 to +60
9	15	18	20
>10,000	>10,000	>5,000	>10,000
C-mount or HHL	C-mount or HHL	C-mount or HHL	NCCP

Notes

Please consult the factory for any requirements not listed here, including the following options which may be available on a case by case basis:

- Other wavelengths and spectral specifications.
- Higher or lower operating powers.
- Higher and/or lower operating temperatures.
- Higher and/or lower storage temperatures.
- Lensing options.
- Low-divergence emitters.

Operating Notes

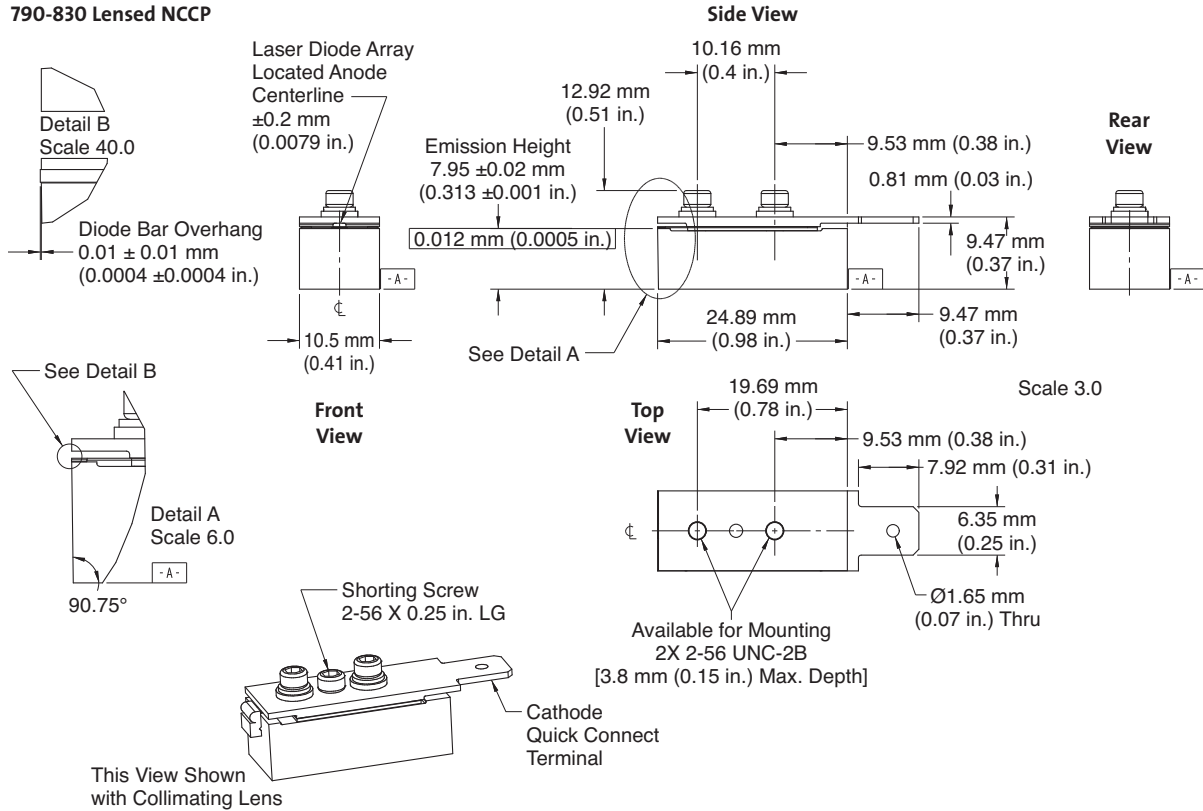
- ESD precautions must be taken when handling unit.
- Negative current transients greater than 25 μA and/or reverse voltages >3V can destroy the unit.
- Unit requires an adequate heat sink. Failure to supply an adequate heat sink will destroy the unit.
- A dry environment should be provided when storing or operating a device with an open diode laser facet at temperatures below the ambient dew point. Failure to do so will cause condensation on the unit and can destroy it.
- Output powers in excess of specification will accelerate device aging.
- Operation at higher temperatures will accelerate device aging, increase threshold current, and lower slope efficiency.
- Operation of a TEC will require higher heat sink capacity.
- HHL will require higher heat sink capacity due to use of TEC; please refer to Operator's Manual.

790-830 nm Single Emitter Devices

Packaged Single Emitters

Mechanical Specifications

790-830 Lensed NCCP



Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice.

Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all Sdevs. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.



www.Coherent.com

Coherent, Inc.
5100 Patrick Henry Drive
Santa Clara, CA 95054
phone (800) 527-3786
(408) 764-4983
fax (800) 362-1170
(408) 988-6838
e-mail tech.sales@Coherent.com

Benelux +31 (30) 280 6060
China +86 (10) 6280 0209
France +33 (0)1 6985 5145
Germany +49 (6071) 968 333
Italy +39 (02) 34 530 214
Japan +81 (3) 5635 8700
Korea +82 (2) 460 7900
UK +44 (1353) 658 833