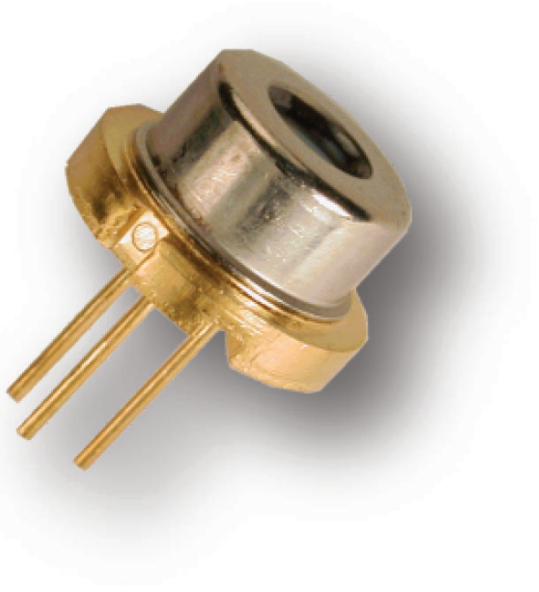
SHEAUMANN



M9

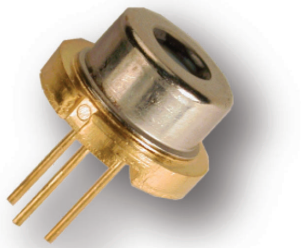
Chip on Submount, 9.0mm TO-CAN

MULTIMODE LASER DIODES

SHEAUMANN

DESCRIPTION

High brightness, high quality, and high reliability are the foundation of our product lines. Sheaumann's multimode laser diodes are available with up to 2W of continuous or pulsed output power from a single emitter chip. Sheaumann's trademark laser chip design offers un-measurable degradation and long lifetimes that make our chips among the most reliable in the industry today.



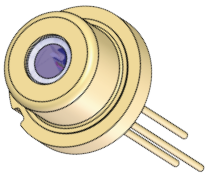
FEATURES

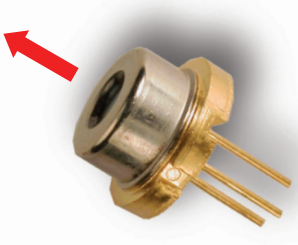
- 14.0 or 6.5mm pin length
- AR coated window
- AlN carrier, AuSn bonding
- Hermetically sealed package
- Plated gold over nickel pins

APPLICATIONS

- Raman Spectroscopy
- Laser Therapy
- Laser Pumping
- Medical
- Defense

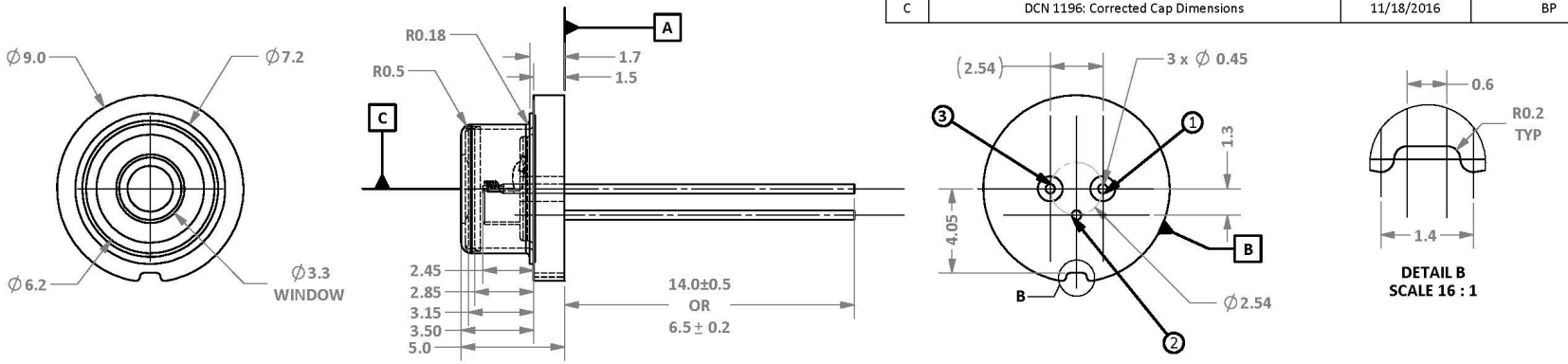
RENDERING & LASER OUTPUT

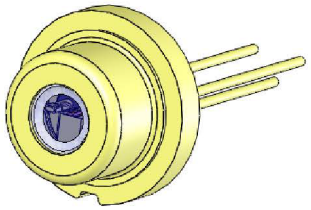




WARNING!
Invisible laser radiation is emitted from devices as shown above

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	INITIAL RELEASE	8/3/2015	GAP
A	ECN RELEASE	8/6/2015	GAP
B	ADDED DEVICE FROM WINDOW DIMENSIONS	4/21/2016	MCS
C	DCN 1196: Corrected Cap Dimensions	11/18/2016	BP





ELECTRICAL PIN-OUT (Single-Mode, SEE NOTE 4)						
PIN	-DxP	-SxP	-DxD	-SxD	-Sx0	-Dx0
1	LASER CATHODE (-)	LASER ANODE (+)	LASER CATHODE (-)	LASER ANODE (+)	LASER ANODE (+)	LASER CATHODE (-)
2	LASER ANODE (+) PD CATHODE (-)	LASER CATHODE (-) PD CATHODE (-)	LASER ANODE (+) PD ANODE (+)	LASER CATHODE (-) PD ANODE (+)	LASER CATHODE (-)	LASER ANODE (+)
3	PD ANODE (+)	PD ANODE (+)	PD CATHODE (-)	PD CATHODE (-)	-	-

ELECTRICAL PIN-OUT (Multi-Mode, SEE NOTE 4)			
PIN	-xxP	-xxD	-xx0
1	LASER CATHODE (-)	LASER CATHODE (-)	LASER CATHODE (-)
2	LASER ANODE (+) PD CATHODE (-)	LASER ANODE (+) PD ANODE (+)	LASER ANODE (+)
3	PD ANODE (+)	PD CATHODE (-)	-

Notes:

1. Mechanical Reference only. See configurator for "M9" part numbers. Dimensions are reference only.
2. Window is AR coated.
3. Package is hermetically sealed.
4. Connector pins are plated gold over nickel. Solder at MAX 250° C for ≤5s is recommended.

DIMENSIONS mm [in]
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:
ANGULAR: ± 30 MINUTES
X ± .25 [.010]
X.X ± .13 [.005]
X.XX ± .05 [.002]
X.XXX ± .025 [.001]
INTERPRET GEOMETRIC TOLERANCING PER: ASME Y14.5M-1994
MATERIAL
NA
FINISH (UNLESS OTHERWISE SPECIFIED)
DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	GAP	8/3/2015
CHECKED		
ENG APPR.	~	
MFG APPR.	~	
Q.A.	~	

THIRD ANGLE PROJECTION

PROPRIETARY AND CONFIDENTIAL
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SHEAUMANN LASER, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SHEAUMANN LASER, INC. IS PROHIBITED.

SHEAUMANN

TITLE:

M9

SIZE	DWG. NO.	REV
B	RDW 840015	C
SCALE: 5:1		SHEET 1 OF 1

785nm *100µm emitter*

SPECIFICATIONS

Parameter	Unit	1W series			1.5W series		
		Min	Typ	Max	Min	Typ	Max
Wavelength[1]	nm	-	785	-	-	785	-
Operating Power	W	-	1	-	-	1.5	-
Operating Current	A	-	1.3	1.6	-	1.8	2.2
Operating Voltage	V	-	1.9	2.2	-	1.9	2.2
Threshold	mA	-	400	600	-	400	600
Slope Efficiency	W/A	1	-	-	1	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	25	-	-	25	-
Horizontal Far Field @ FWHM	deg. FWHM	-	8	-	-	8	-
Operational Temp[2]	°C	-20°C	-	50°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-785-1000-150	9.0mm TO-Can 785±5nm 1W, 100µm emitter
M9-785-1000-15D	9.0mm TO-Can 785±5nm 1W, 100µm emitter, photodiode (anode ground)
M9-785-1000-15P	9.0mm TO-Can 785±5nm 1W, 100µm emitter, photodiode (cathode ground)
M9-785-1500-150	9.0mm TO-Can 785±5nm 1.5W, 100µm emitter
M9-785-1500-15D	9.0mm TO-Can 785±5nm 1.5W, 100µm emitter, photodiode (anode ground)
M9-785-1500-15P	9.0mm TO-Can 785±5nm 1.5W, 100µm emitter, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

(QA) Q-Mount

(CM) C-Mount

(BM) B-Mount

808nm *50µm emitter*

SPECIFICATIONS

		500mW series			1W series		
Parameter	**Unit**	**Min**	**Typ**	**Max**	**Min**	**Typ**	**Max**
Wavelength[1]	nm	-	808	-	-	808	-
Operating Power	W	-	0.5	-	-	1	-
Operating Current	A	-	0.54	0.6	-	1.1	1.3
Operating Voltage	V	-	-	2.2	-	-	2.2
Threshold	mA	-	-	110	-	-	110
Slope Efficiency	W/A	1	-	-	1	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	30	-	-	30	-
Horizontal Far Field @ FWHM	deg. FWHM	-	8	-	-	8	-
Operational Temp[2]	°C	-20°C	-	50°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-808-0500-S50	9.0mm TO-Can 808±5nm 50mW, 50µm emitter
M9-808-0500-S5D	9.0mm TO-Can 808±5nm 50mW, 50µm emitter, photodiode (anode ground)
M9-808-0500-S5P	9.0mm TO-Can 808±5nm 50mW, 50µm emitter, photodiode (cathode ground)
M9-808-1000-S50	9.0mm TO-Can 808±5nm 1W, 50µm emitter
M9-808-1000-S5D	9.0mm TO-Can 808±5nm 1W, 50µm emitter, photodiode (anode ground)
M9-808-1000-S5P	9.0mm TO-Can 808±5nm 1W, 50µm emitter, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

Please inquire about additional options.

808nm *100µm emitter*

SPECIFICATIONS

		1W series			2W series		
Parameter	**Unit**	**Min**	**Typ**	**Max**	**Min**	**Typ**	**Max**
Wavelength[1]	nm	-	808	-	-	808	-
Operating Power	W	-	1	-	-	2	-
Operating Current	A	-	1.2	1.5	-	2.2	2.6
Operating Voltage	V	-	1.9	2.2	-	1.9	2.2
Threshold	mA	-	300	500	-	400	600
Slope Efficiency	W/A	1	-	-	1	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	30	-	-	30	-
Horizontal Far Field @ FWHM	deg. FWHM	-	8	-	-	8	-
Operational Temp[2]	°C	-20°C	-	50°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-808-1000-130 9.0mm TO-Can 808±3nm 1W, 100µm emitter
M9-808-1000-13D 9.0mm TO-Can 808±3nm 1W, 100µm emitter, photodiode (anode ground)
M9-808-1000-13P 9.0mm TO-Can 808±3nm 1W, 100µm emitter, photodiode (cathode ground)
M9-808-2000-130 9.0mm TO-Can 808±3nm 2W, 100µm emitter
M9-808-2000-13D 9.0mm TO-Can 808±3nm 2W, 100µm emitter, photodiode (anode ground)
M9-808-2000-13P 9.0mm TO-Can 808±3nm 2W, 100µm emitter, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

(QA) Q-Mount

830nm *50µm emitter*

SPECIFICATIONS

Parameter	Unit	1W series		
		Min	Typ	Max
Wavelength[1]	nm	-	830	-
Operating Power	W	-	1	-
Operating Current	A	-	1.1	1.35
Operating Voltage	V	-	-	2.2
Threshold	mA	-	200	350
Slope Efficiency	W/A	1	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	30	-
Horizontal Far Field @ FWHM	deg. FWHM	-	8	-
Operational Temp[2]	°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-830-1000-050 9.0mm TO-Can 830±5nm 1W, 50µm emitter
M9-830-1000-05D 9.0mm TO-Can 830±5nm 1W, 50µm emitter, photodiode (anode ground)
M9-830-1000-05P 9.0mm TO-Can 830±5nm 1W, 50µm emitter, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

Please inquire about additional options.

830nm *100µm emitter*

SPECIFICATIONS

		1W series		
Parameter	**Unit**	**Min**	**Typ**	**Max**
Wavelength[1]	nm	-	830	-
Operating Power	W	-	1	-
Operating Current	A	-	1.5	1.9
Operating Voltage	V	-	-	2.2
Threshold	mA	-	600	900
Slope Efficiency	W/A	1	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	30	-
Horizontal Far Field @ FWHM	deg. FWHM	-	8	-
Operational Temp[2]	°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-830-1000-150 9.0mm TO-Can 830±5nm 1W, 100µm emitter
M9-830-1000-15D 9.0mm TO-Can 830±5nm 1W, 100µm emitter, photodiode (anode ground)
M9-830-1000-15P 9.0mm TO-Can 830±5nm 1W, 100µm emitter, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

Please inquire about additional options.

852nm *50µm emitter*

SPECIFICATIONS

Parameter	Unit	1W series		
		Min	Typ	Max
Wavelength[1]	nm	-	852	-
Operating Power	W	-	1	-
Operating Current	A	-	1.1	1.3
Operating Voltage	V	-	-	2.2
Threshold	mA	-	240	300
Slope Efficiency	W/A	1	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	30	-
Horizontal Far Field @ FWHM	deg. FWHM	-	8	-
Operational Temp[2]	°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-852-1000-030 9.0mm TO-Can 852±3nm 1W, 50µm emitter
M9-852-1000-03D 9.0mm TO-Can 852±3nm 1W, 50µm emitter, photodiode (anode ground)
M9-852-1000-03P 9.0mm TO-Can 852±3nm 1W, 50µm emitter, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

Please inquire about additional options.

852nm *100µm emitter*

SPECIFICATIONS

Parameter	Unit	1W series		
		Min	Typ	Max
Wavelength[1]	nm	-	852	-
Operating Power	W	-	1	-
Operating Current	A	-	1.1	1.3
Operating Voltage	V	-	-	2.2
Threshold	mA	-	240	300
Slope Efficiency	W/A	1	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	30	-
Horizontal Far Field @ FWHM	deg. FWHM	-	8	-
Operational Temp[2]	°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-852-1000-030 9.0mm TO-Can 852±3nm 1W, 50µm emitter
M9-852-1000-03D 9.0mm TO-Can 852±3nm 1W, , 50µm emitter, photodiode (anode ground)
M9-852-1000-03P 9.0mm TO-Can 852±3nm 1W, , 50µm emitter, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

Please inquire about additional options.

915nm *50µm emitter*

SPECIFICATIONS

		500mW series		
Parameter	**Unit**	**Min**	**Typ**	**Max**
Wavelength[1]	nm	-	915	-
Operating Power	mW	-	500	-
Operating Current	mA	-	650	750
Operating Voltage	V	-	-	2.2
Threshold	mA	-	100	120
Slope Efficiency	W/A	1	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	30	-
Horizontal Far Field @ FWHM	deg. FWHM	-	8	-
Operational Temp[2]	°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-915-0500-050	9mm TO-Can 915±5nm 500mW, 50µm emitter
M9-915-0500-05D	9mm TO-Can 915±5nm 500mW, 50µm emitter, photodiode (anode ground)
M9-915-0500-05P	9mm TO-Can 915±5nm 500mW, 50µm emitter, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

(M5) 5.6mm TO-Can

915nm *100µm emitter*

SPECIFICATIONS

Parameter	Unit	1W series		
		Min	Typ	Max
Wavelength[1]	nm	-	915	-
Operating Power	W	-	1	-
Operating Current	A	-	1.3	1.8
Operating Voltage	V	-	-	2.2
Threshold	mA	-	250	550
Slope Efficiency	W/A	1	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	30	-
Horizontal Far Field @ FWHM	deg. FWHM	-	9	-
Operational Temp[2]	°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-915-1000-150	9.0mm TO-Can 915±5nm 1W, 100µm emitter
M9-915-1000-15D	9.0mm TO-Can 915±5nm 1W, 100µm emitter, photodiode (anode ground)
M9-915-1000-15P	9.0mm TO-Can 915±5nm 1W, 100µm emitter, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

Please inquire about additional options.

940nm *100µm emitter*

SPECIFICATIONS

Parameter	Unit	1.5W series		
		Min	Typ	Max
Wavelength[1]	nm	-	940	-
Operating Power	W	-	1.5	-
Operating Current	A	-	1.9	2.5
Operating Voltage	V	-	-	2.2
Threshold	mA	-	250	550
Slope Efficiency	W/A	1	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	30	-
Horizontal Far Field @ FWHM	deg. FWHM	-	9	-
Operational Temp[2]	°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-940-1500-150 9mm TO-Can 940±5nm 1.5W
M9-940-1500-15D 9mm TO-Can 808±5nm 1.5W, photodiode (anode ground)
M9-940-1500-15P 9mm TO-Can 808±5nm 1.5W, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

Please inquire about additional options.

975nm *50µm emitter*

SPECIFICATIONS

		500mW series			1W series		
Parameter	**Unit**	**Min**	**Typ**	**Max**	**Min**	**Typ**	**Max**
Wavelength[1]	nm	-	975	-	-	975	-
Operating Power	W	-	0.5	-	-	1	-
Operating Current	A	-	0.65	0.75	-	1.2	1.5
Operating Voltage	V	-	-	2	-	-	2
Threshold	mA	-	120	200	-	120	200
Slope Efficiency	W/A	0.8	-	-	0.8	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	30	-	-	30	-
Horizontal Far Field @ FWHM	deg. FWHM	-	8	-	-	8	-
Operational Temp[2]	°C	-20°C	-	50°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-975-0500-050	9mm TO-Can 975±5nm 500mW, 50µm emitter
M9-975-0500-05D	9mm TO-Can 975±5nm 500mW, 50µm emitter, photodiode (anode ground)
M9-975-0500-05P	9mm TO-Can 975±5nm 500mW, 50µm emitter, photodiode (cathode ground)
M9-975-1000-050	9mm TO-Can 975±5nm 1W, 50µm emitter
M9-975-1000-05D	9mm TO-Can 975±5nm 1W, 50µm emitter, photodiode (anode ground)
M9-975-1000-05P	9mm TO-Can 975±5nm 1W, 50µm emitter, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

Please inquire about additional options.

1064nm *100µm emitter*

SPECIFICATIONS

Parameter	Unit	1W series		
		Min	Typ	Max
Wavelength[1]	nm	-	1064	-
Operating Power	W	-	1	-
Operating Current	A	-	1.5	2
Operating Voltage	V	-	-	2
Threshold	mA	-	250	550
Slope Efficiency	W/A	0.8	-	-
Vertical Far Field @ FWHM	deg. FWHM	-	30	-
Horizontal Far Field @ FWHM	deg. FWHM	-	8	-
Operational Temp[2]	°C	-20°C	-	50°C
Storage Temp	°C	-40°C	-	80°C
Lifetime (based at 25°C, Iop, CW)[3]	hour	>10,000	-	-

NOTES

1) Wavelength options at ±3, 5 and 10nm.
2) All specifications are tested at 25°C.
3) Lifetime is quoted on accelerated CW testing.

STANDARD PACKAGE CONFIGURATIONS

M9-A64-1000-150	9mm TO-Can 1064±5nm 1W, 100µm emitter
M9-A64-1000-15D	9mm TO-Can 1064±5nm 1W, 100µm emitter, photodiode (anode ground)
M9-A64-1000-15P	9mm TO-Can 1064±5nm 1W, 100µm emitter, photodiode (cathode ground)

ALTERNATE PACKAGING OPTIONS

Please inquire about additional options.

CUSTOMIZATION OPTIONS

PACKAGE-WAVELENGTH-POWER-OPTIONS

(M9) - (780-1080nm) - (Up to 2W) - (123)

PACKAGE | WAVELENGTH | POWER | OPTIONS

OPTIONS*

Option 1	
T	25µm aperture
0	50µm aperture (submounts, window modules) **OR** 50µm fiber, 0.22NA (fiber-coupled packages)
1	100µm aperture (submounts, window modules) **OR** 100µm fiber, 0.22NA (fiber-coupled packages)
~~M~~	~~145µm aperture (submounts, window modules) **OR** 145µm fiber, 0.22NA (fiber-coupled packages)~~
~~2~~	~~200µm aperture (submounts, window modules) **OR** 200µm fiber, 0.22NA (fiber-coupled packages)~~
~~3~~	~~290µm aperture (submounts, window modules) **OR** 300µm fiber, 0.22NA (fiber-coupled packages)~~
~~4~~	~~400µm aperture (submounts, window modules) **OR** 400µm fiber, 0.22NA (fiber-coupled packages)~~
~~6~~	~~600µm aperture (submounts, window modules) **OR** 600µm fiber, 0.22NA (fiber-coupled packages)~~
~~9~~	~~1000µm aperture (submounts, window modules)~~
D	SM chip, p-down (submounts)
~~E~~	~~50µm fiber, .12NA (fiber-coupled packages)~~
~~F~~	~~50µm fiber, .15NA (fiber-coupled packages)~~
~~G~~	~~100µm fiber, .15NA (fiber-coupled packages)~~
~~H~~	~~100µm fiber, .22NA (fiber-coupled packages)~~
~~I~~	~~200µm fiber, .15NA (fiber-coupled packages)~~
~~J~~	~~62.5µm fiber, .22NA (fiber-coupled packages)~~
~~P~~	~~PM fiber for module~~
S	SM chip, p-up (submounts)
Option 2	
3	Wavelength ±3nm
5	Wavelength ±5nm
9	Wavelength ±10nm
~~F~~	~~SM FBG ±0.5nm~~
~~N~~	~~SM narrow bandwidth FBG~~
~~P~~	~~SM PM FBG ±0.5nm~~
Option 3	
0	Standard submount/chip **OR** fiber without connector **OR** welded cap for M9
~~A~~	~~FC/PC connector for 0.22NA, PVC jacket~~
~~E~~	~~FC/PC connector for 0.37NA or 0.39NA, PVC jacket~~
~~F~~	~~FC/PC 8° connector for 0.22NA, PVC jacket~~
~~G~~	~~FC/PC 8° connector for 0.37NA or 0.39NA, PVC jacket~~
~~B~~	~~ST connector, PVC jacket~~
~~J~~	~~ST connector, 3mm jacket~~
~~C~~	~~SMA connector, PVC jacket~~
~~H~~	~~SMA connector, 3mm jacket~~
~~I~~	~~SMA connector, armored cable~~
M	Microlens (8x8 square beam)
U	Microlens (collimated, <2°)
D	5.6mm or 9.0mm TO-Can with PD welded cap (PD anode ground)
P	5.6mm or 9.0mm TO-Can with PD welded cap (PD cathode ground)
Q	5.6mm or 9.0mm TO-Can, taped or loose cap, no PD
T	5.6mm or 9.0mm TO-Can, taped or loose cap, PD
~~R~~	~~Thermistor~~
S	Ultra low AR coating (<0.5%)
V	High AR coating (>4%)
~~1~~	~~Bar with fill length >15 chips per bar~~
~~2~~	~~2 chip bar~~
~~3~~	~~3 chip bar~~
~~4~~	~~4 chip bar~~
~~5~~	~~5 chip bar~~
~~6~~	~~6 chip bar~~
~~9~~	~~10 chip bar~~

*options listed in gray are currently unavailable for this product.
*please note that some options may not be available in multimode devices. Contact sales@sheaumann.com for more information.

Alternate package configurations and options may be available. Please inquire about additional options when contacting our sales team.

OPERATING CONSIDERATIONS

Operating the diode laser outside of its maximum ratings may present a safety hazard or cause a device failure. Additionally, CW diode lasers may be damaged by excessive drive current or switching transients. When using a power supply with the component, it must be used within the specified parameters. DO NOT exceed the maximum peak optical power. Before turning the power supply on, connect the component to the power supply and ensure the output voltage value is zero. After the component has been successfully connected, increase the current slowly and monitor both the output power and drive current. Device degradation accelerates with increased temperature; therefore, careful attention to minimize the case temperature is advised. A proper heat-sink for the diode laser on a thermal radiator will greatly enhance laser life.

ESD CAUTION

The primary cause of diode failure is unexpected electrostatic discharge. To help prevent device failures, be sure to handle devices with extreme care. The user should always wear an ESD wrist strap, ground all applicable work surfaces and follow anti-static techniques when handling diode lasers.

FDA 21 CFR 1040.10

All devices are manufactured, tested and labeled in compliance with FDA 21 CFR 1040.10 regulations, as applicable under the Radiation Control for Health and Safety Act of 1968. For smaller devices, the appropriate compliance labeling may be affixed to the shipping containter.

All products comply with 21 CFR Chapter 1, Subchapter J.

SAFETY

Caution: Laser light emitted from a diode may be harmful to the human eye. Avoid looking directly into the diode laser aperture when the device is in operation. Note: The use of optical instruments with this product will increase eye hazard.

NOTE

Specifications are subject to change without

Alternate package configurations and options may be available. Please inquire about additional options when contacting our sales team.

POWER OUTPUT DANGER LABEL

SHEAUMANN LASER, INC.

45 BARTLETT STREET
MARLBOROUGH, MA 01752 USA
+1 (508) 970-0600
www.sheaumann.com