方全有限公司
Rapitech Enterprise Co.,Ltd.

氦氖激光器
Helium-Neon Laser

JDSU

氦氖激光器

Helium - Neon Laser Heads - 1100 Series

Key Features

- Long operating life
- Low noise
- Exceptional beam-pointing stability
- Long-term amplitude stability

Applications

- Flow cytometry
- Metrology
- Semiconductor inspection
- Alignment
- Laser-induced fluorescence
- Hematology
- High-speed printing

Specifications

Parameter	1101/P	1103/P/H	1107/P	1108/P	1122/P	1125/P	1135/P	1137/P	1144/P	1145/P	Unit
Optical											
Min. output power (TEM_{00})	1.5	2.0	0.8	0.5	2.0	5.0	10.0	7.0	15.0	22.5/21.0	mW
Wavelength	632.8	632.8	632.8	632.8	632.8	632.8	632.8	632.8	632.8	632.8	nm
Mode purity (TEM_{00})	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	%
Beam diameter ($1/e^2$ points, ±3%,TEM_{00})	0.63	0.63	0.48	0.48	0.63	0.81	0.68	0.81	0.70	0.70	mm
Beam divergence(TEM_{00}, ±3%,mrad- full angle)	1.3	1.3	1.7	1.8	1.3	1.0	1.2	1.0	1.15	1.15	mrad
Polarization ratio (minimum,P versions)	N/A /500:1	N/A/500:1 /N/A	N/A /500:1	N/A /500:1	N/A /500:1	N/A /500:1	N/A /500:1	N/A /500:1	N/A /500:1	N/A /500:1	-
Longitudinal mode spacing (nominal)	730	730	1090	1090	730	435	320	435	257	257	MHz
Maximum noise (rms,30 Hz to 10 MHz)	0.1	0.1	0.1	0.1	0.1	0.2	1.0	0.2	0.5	0.5	%
Max.drift (mean power measured over 8 hours)	±2.5	±2.5	±2.5	±2.5	±2.5	±2.5	±3.0	±2.5	±2.0	±2.0	%
Max.mode sweeping contribution	3	3	10	20	3	2	2	2	1	1	%
Max.warm-up time (minutes to 95% power)	10	10	10	10	10	10	15	10	20	20	min.
Beam pointing stability (from cold start,25 °C)	N/A	N/A	N/A	N/A	<0.10	<0.10	<0.10	<0.10	<0.20	<0.20	mrad
Beam pointing stability (after 15 minutes warm-up)	N/A	N/A	N/A	N/A	<0.02	<0.02	<0.02	<0.02	<0.03	<0.03	mrad
Operating voltage (V DC ±100)	1700	1700	1250	1250	1800	2300	3100	2300	3800	3800	V DC
Operating current (±0.1 mA)	4.9	4.9	4.0	4.0	6.5	6.0	6.5	6.0	6.5	6.5	mA
Dimensions											
L-overall length	9.50	9.50	7.00	7.00	10.71	15.79	19.13	15.79	25.00	25.00	inches

Parameter	1101/P	1103/P/H	1107/P	1108/P	1122/P	1125/P	1135/P	1137/P	1144/P	1145/P	Unit
D-mounting diameter (±0.005 inches)	1.245	1.245	1.245	1.245	1.740	1.740	1.740	1.740	1.740	1.740	inches
B-distance:cable end to mounting surface	1.00	1.00	0.75	0.75	1.50	3.00	4.00	3.00	5.00	5.00	inches
A-distance:output end to mounting surface	0.75	0.75	0.50	0.50	1.50	3.00	4.00	3.00	5.00	5.00	inches
CDRH/IEC60825-1 class (head &1200 Series power supply)	IIIa/3R	IIIa/3R	IIIa/3R	II/2M	IIIa/3R	IIIb/3B	IIIb/3B	IIIb/3B	IIIb/3B	IIIb/3B	-
General											
Maximum starting voltage		10 kV DC									
Mode purity		>95%									
Storage lifetime		Indefinite (hard-sealed)									
Static alignment		Center to outer cylinder within ±0.01 inch.Parallel to outer cylinder within ±1 mR.									
Environmental											
Temperature		-40 to 70 °C (operating), -40 to 150 °C (non-operating)									
Atitude		0 to 10,000 feet (operating), 0 to 70,000 feet (non-operating)									
Relative humidity (no condensation)		0 to 100%									
Shock		25 g for 11 ms, 100 g for 1 ms									
Physical											
Laser Head weight	0.54	0.54	0.46	0.46	0.92	1.3	1.5	1.3	2.6	2.6	lbs.
Shipping weight		5 lb. (1100 Series heads); 10 lb. (1100 Series head and 1200 Series power supply)									