Quick Fact Sheet

Agilent Laser Interferometer Systems

Agilent's Laser Interferometer Systems enable precise measurement of position changes in many application areas. Agilent offers multiple product choices in all six system component areas (laser heads, directing optics, measurement optics, electronics and receivers, cables and compensation), allowing systems to easily be tailored to specific application requirements. Our complete documentation, along with factory applications support, help guide designers through some of the complexities associated with precision measurement systems.

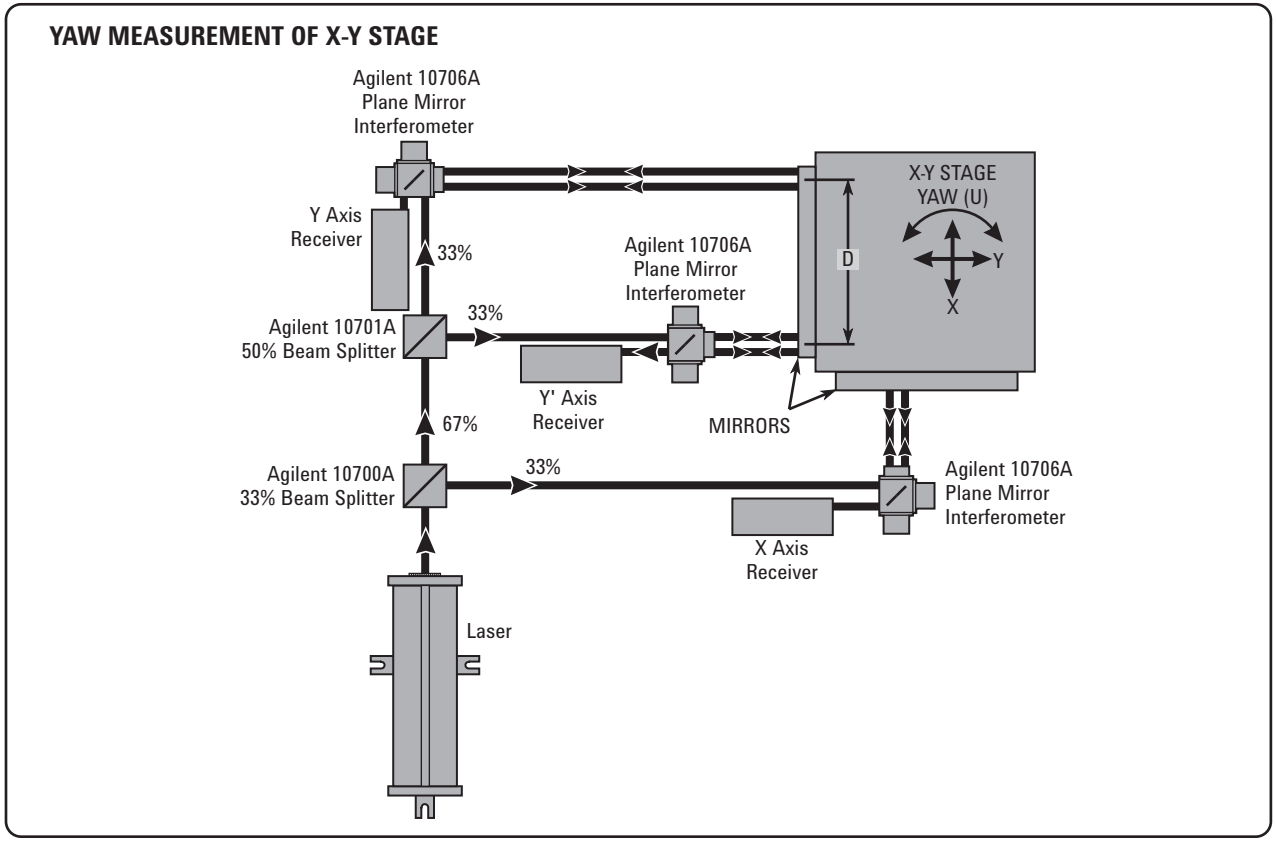

Figure 1. Typical multi-axis laser interferometer system.

Key features

- Long life laser source (> 50,000 hrs MTBF)
- High stability laser source reduces measurement uncertainty
- High reliability and exceptional repeatability reduce downtime
- Multiple choices for all system components
- Extensive optics guide for system designers
- Flexible hardware interface enables easy connection to user systems
- Software APIs and example programs ease creation of operating software

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Component type	Model number	Selection impacts	Pub# for more information
Laser heads	5517A, 5517B, 5517BL, 5517C, 5517CL, 5517D, 5517DL, 5517EL, 5517FL, 5517GL, 5519A/B, N1211A, N1212A, N1212B	Maximum stage velocity	5964-6190E: Laser and optics DS 5990-5634EN: 5517x lasers QFS 5990-9188EN: N1211A/N1212x QFS
Beam directing optics and mounts	10567A, 10700A/B/C, 10700AV, 10701A, 10701A-C04, 10707A, 10710A/B, 10725A/B/C, 10726A, E1833C/E/G/J/M, E1834E/G/J/M/Z, N1209A	Number and placement of axes, power balance between axes, ease of system alignment	5964-6190E: Laser and optics DS 5989-4740EN: Beam splitters DS 5990-5055EN: E1834x QFS 5990-6651EN:E1834x DS 5990-8267EN: beam directing optics QFS
Measurement optics and mounts	10702A, 10702A-001, 10702A-080, 10702AV, 10703A, 10703AV, 10704A, 10705A, 10705A-080, 10706A, 10706A-080, 10706B, 10706B-C02, 10706B-080, 10706BV, 10710A/B, 10711A, 10713B/C/D, 10715A/C, 10716A,10719A, 10719A-C02, 10721A, 10721A-C01, 10722A, 10723A, 10724A, 10724A-V02, 10728A, 10735A, 10736A, 10736A-001, 10737L/R, 10770A, 10774A, 10775A, E1826E/F/G, E1827A, Z4399A/C, Z4420B, Z4421B, Z4422B	Maximum stage velocity, measurement resolution, type of stage reflector	5964-6190E: Laser and optics DS 5990-5143EN: E1826E/F/G QFS 5990-5272EN: Z4399A QFS 5990-5273EN: Z4420B QFS 5990-5274EN: Z4421B QFS 5990-5275EN: Z4422B QFS 5990-9943EN: Measurement optics QFS 5991-0461EN: E1827A QFS
Receivers and electronics	10780C/F, E1706A, E1708A, E1709A, E1735A, N1231A/B, 10897D, 10898D, N1225A, N1226A, N1227A, N1228A/B	Measurement resolution, hardware interface, data rate	5989-8714EN: N1225A DS 5990-5142EN: N1225A QFS 5989-1787EN: N1231A DS 5989-1788EN: N1231B DS 5989-3959EN: N1231B AN 5990-5144EN: N1231A/B QFS 5990-3345EN: N1226A/7A/8A/8B DS 5990-7620EN: N1226A/7A/8A/8B QFS 5990-8206EN: Electronics QFS
Laser, receiver, sensor and fiber optic cables	10881A/B/C/D/E/F, N1251B, E1847A, E1848A/B, 10882A/B/C, 10880A/B/C, N1250A/B/E/F, E1739A/B/C/D, E1705A/B/C/E/F, N1211A-001	Distance between components	5990-8133EN: cables QFS
Compensation	10717A/C, E1736A, E1737A, E1738A	Measurement accuracy	5989-8455EN: E1737A DS 5989-8456EN: E1738A DS 5989-9709EN: E1736A DS 5964-6190E: Laser and optics DS

QFS: Quick Fact Sheet *DS: Data Sheet* *AN: Application Note*

System programming design references:

- 5991-0329EN: System position calculations QFS
- 5991-0334EN: System compensation numbers calculations QFS

For more details on Agilent interferometry systems, components and ordering information please visit **www.agilent.com/find/lasers**

Technical data, availability, and pricing subject to change without notice.
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