

LASER DAMAGE THRESHOLD

Customer:

Part No.:

Certificate No.:

11974 #1

Purchase Order Number:

42253

Issued:

Nov. 7, 2006

Substrate Material:

Unknown Mirror (Epner)

Epner Technology Inc.

Coating Type: Lot No.:

HR@1064nm Art.NR.39633

25111049/5

BSLT#1

Special Requirements:

Per P.O.

Wavelength (nm):

1064 20

Repetition Freq. (Hz): Pulse Width (FWHM, ns):

20

Axial Modes:

Multiple

Transverse Modes:

0 Linear TEMoo

1

No. Sites Tested: Damage Definition:

Permanent surface change

No. Shots/Site: Inspection Method:

Polarization State:

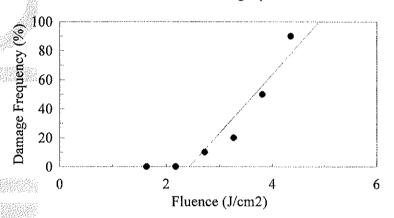
Spot Diam. (FW/e2, mm):

Incidence Angle (deg.):

200 Nomarski/Darkfield 150X

Preparation:

Acetone methanol drag wipe



J/cm2	MW/cm2	%Fail
4.35	198	90
3.81	173	50
3.27	148	20
2.72	124	10
2.18	98.9	0
1.63	74.2	0

Test Results:

Damage Threshold:

2.42 J/cm2 or

110 MW/cm2

Damage Type:

Propagating pit(s) to the entrance surface

Notes:

Test polished side

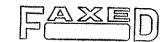
Big Sky Laser Technologies, Inc., certifies that the Laser Damage Threshold of this sample was tested as shown! hereon. Fluence measurement precision was plus or minus 10%, traceable to NIST. The test method was substantially in agreement with ISO 11254. Specific calibration data are maintained in this office and are available on request. We certify that this test report conforms to all applicable provisions of the purchase order."

Menkel

PO Box 8100 Bozeman, MT 59715-2001 406 586 0131

406 586 2924 fax www.bigskylaser.com Form 19-F-005 Rev A





LASER DAMAGE THRESHOLD

Customer:

Epner Technology Inc.

Purchase Order Number:

42253

Certificate No.: Issued:

11974 #2

Nov. 7, 2006

Substrate Material: Part No.:

Unknown Mirror (Epner) Coating Type: Lot No.:

HR@1064nm Art.NR.39633

BSLT #2

25111049/08

Special Requirements:

Per P.O.

Wavelength (nm):

1064 20

Repetition Freq. (Hz): Pulse Width (FWHM, ns):

20

Axial Modes: No. Sites Tested: Multiple

Damage Definition: Preparation:

Permanent surface change

Polarization State: Transverse Modes: No. Shots/Site:

Spot Diam. (FW/e2, mm):

Incidence Angle (deg.):

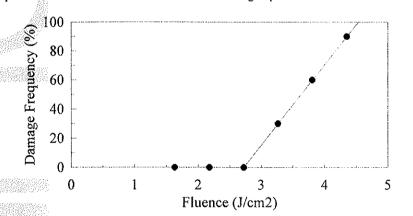
0 Linear TEMoo

200

Acetone methanol drag wipe

Inspection Method:

Nomarski/Darkfield 150X



J/cm2	MW/cm2	%Fail
4.35	198	90
3.81	173	60
3.27	148	30
2.72	124	0
2.18	98.9	0
1.63	74.2	0

Test Results:

Damage Threshold:

2.72 J/cm2 or

124

Damage Type:

Propagating pit(s) to the entrance surface

Notes:

Test polished side

"Big Sky Laser Technologies, Inc., certifies that the Laser Damage Threshold of this sample was tested as shown hereon. Fluence measurement precision was plus or minus 10%, traceable to NIST. The test method was substantially in agreement with ISO 11254. Specific calibration data are maintained in this office and are available on request. We certify that this test report conforms to all applicable provisions of the purchase order."

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