

***LASER DAMAGE THRESHOLD SPECIFICATION SHEET  
AND CERTIFICATE OF COMPLIANCE***

DATE: December 12, 2018

CUSTOMER: Northrop Grumman Synoptics

ADDRESS: 1201 Continental Blvd.  
Charlotte, NC 28273

ATTN: Tri Tiet

TEST TYPE: Laser Damage Threshold

TEST LOG NUMBER: 60812

SAMPLE SIZE: ~

COATING TYPE: Not specified

TEST WAVELENGTH: 2100 nm

POLARIZATION: Random

PULSEWIDTH (FWHM): 150  $\mu$ sec

SPOT DIAMETER ( $1/e^2$ ): 102  $\mu$ m

TEST METHOD: Least Fluence Failure

P.O. NUMBER: 547065

PART ID: A1505 SP YAG

LOT NUMBER: F5227-1

QUANTITY: 1

SUBSTRATE MATERIAL: YAG

TEST PREP: N<sub>2</sub> gas

INCIDENCE ANGLE: 0°

PRF: 5 Hz

TEST BEAM PROFILE: TEM<sub>00</sub>

AXIAL MODES: Multiple

NUMBER OF SITES: 30

EXPOSURE DURATION: 200 shots/site

DAMAGE DEFINITION: Plasma, increased He-Ne scatter. Visible damage as observed with 150x Nomarski brightfield microscope.

COMMENTS: Laser damage measured as 19.00 kJ/cm<sup>2</sup>, peak fluence. Part irradiated at 19.00 kJ/cm<sup>2</sup> with no damage in 5 sites. See page 2.

**Spica Technologies certifies that this sample has been exposed to the conditions described above. All test and calibration data are maintained on file. All instrument calibration is traceable to NIST.**

Test conducted by 