



SUSI

Main Features

- Large exit pupil
- Very high spatial uniformity
- Wide spectral range

SUSI is a large aperture sun simulator based on a Xenon continuous light source, that covers a very wide spectral range, from 270 to 2385nm, with an irradiance of 80 mW/cm².

The collimated beam of 0.318° divergence illuminates an exit pupil 151mm diameter with continuous light, and with a spatial non-uniformity better than 1% (according to IEC 60904-9 definition).

Performance Specifications		Electrical Specifications		
Light Source	Xenon short arc lamp	Power consumption	< 5kW	
Irradiance, mW/cm ²	80	Mechanical Specifications		
Spectral Irradiance, photons cm ⁻² nm ⁻¹ s ⁻¹	270-310nm	Min: 7.07E+12 Max: 9.09 E+12	Mass	241.2 kg
	300-500nm	Min: 1.29E+13 Max: 6.42E+13	Dimensions (LxWxH)	(2430 x 1040 x 460) mm
	685-773nm	Min: 2.75E+13 Max: 4.53E+13	Mounting I/F	Mounting plate and hoisting eyebolts
	1590-1675nm	1620 nm: 2.31E+13 1653 nm: 1.63E+13	Environmental Specifications	
	2305-2385nm	v2318 nm: 1.15E+13 2367 nm: 1.01E+13	Operating Temperature	22 °C ± 0.5 °C
Beam diameter, mm	151	Cleanroom	ISO 8	
Half angle Beam divergence, degrees	0.318			
PP Spatial non-uniformity, %	< 1 (inner pupil, 60 mm Ø) < 5 (Full pupil, 151 mm Ø)			
Pointing stability, arcsec	< 36			

Heritage

The large aperture sun simulator (SUSI) was developed as an optical ground support equipment (OGSE) for the calibration and characterization (C&C) of the Sentine-5 instrument.