

OpticalSurface< T, U >

- + OpticalSurface(const vec3< T > &position,
- const vec3< T > &normal)
 + virtual ~OpticalSurface
 - ()=default + const vec3< T > & getNormal
- () const+ void setPosition(const
- vec3< T > &newPosition)

const =0

- + virtual vec3< T > getIntersection Point(const Ray< T, U > &ray)
- + virtual std::pair<
- bool, vec3< T > > intersects (const Ray< T, U > &ray) const =0
- + virtual void generatePoints (std::ofstream &outFile) const =0



- + PlanarSurface(const vec3< T > &position,
 - const vec3< T > &normal)
 + virtual ~PlanarSurface
 - ()=default + vec3< T > getIntersection
 - + vec3< T > getIntersection Point(const Ray< T, U >
 - &ray) const override

+ virtual std::pair<

- bool, vec3< T > > intersects (const Ray< T, U > &ray) const =0
- + virtual void generatePoints
- (std::ofstream &outFile)
 const =0