Sapphire Plano Convex Lens | SLSH

RoHS

Sapphire crystal is a transparent crystal without absorption from the visible to infrared wavelength of 5μm. In addition, sapphire has extremely hard and resists scratching.

- Sapphire crystal is a very stable material used in optical equipment in the field.
- Since there is no absorption (1.4μm, 2.2μm, 2.7μm) by water (OH radical), it can be used on a lens for the analyzer for near-infrared.

Specifications

Material	Optical sapphire crystal (uniaxial crystal)
Design Wavelength	546.1nm
Coating	Uncoated
Shape	Spherical Plano Convex Polished Both Surfaces
Centration	<10′
Clear Aperture	90% of diameter
Surface Quality (Scratch–Dig)	60–40

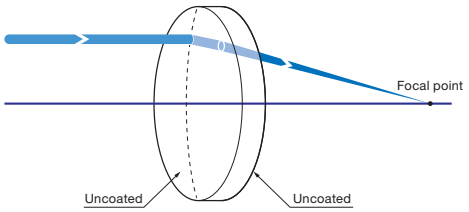
Guide

- Sapphire jewelry is the thing that metal ions such as iron and titanium are mixed with natural sapphire crystal. The artificial sapphire crystal is colorless and transparent. It is available for the AR coating to reduce the transmission loss at the requested wavelength.
- It can be used safely because it is harmless to the human body.

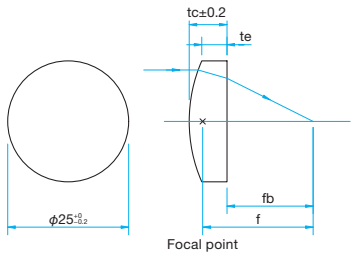
Attention

- Transmissions losses due to reflection off the front and rear surfaces can be minimized by coating the surfaces. Consult our Sales Division for anti-reflection coatings suitable for your application.

Schematic



Outline Drawing (in mm)

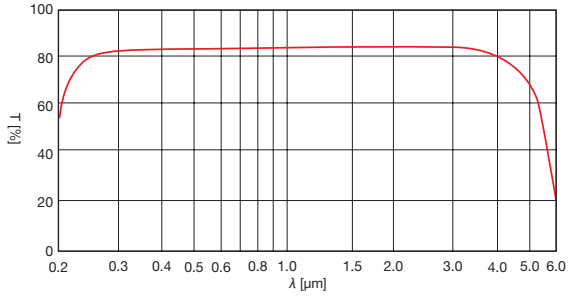


●Chamfer
Ridge line <C0.3
●Tolerance
Focal length ±3%

Specifications

Part Number	Focal length f [mm]	Back focal length fb [mm]	Edge thickness te [mm]	Center thickness tc [mm]
SLSH-25-50P	50	47.7	2.0	4.1
SLSH-25-100P	100	98.3	2.0	3.0
SLSH-25-200P	200	198.6	2.0	2.5

Typical Transmittance Data T: Transmission



Physics

Wavelength [nm]	Refractive Index
248.4	1.834
325.0	1.804
365.0	1.794
404.7	1.786
587.6	1.769
694.3	1.764
1014	1.756
1800	1.742
2200	1.733
3400	1.699
4500	1.650
Density	3.98g/cm^3
Thermal Conductivity	42W·m^{-1}K^{-1} (25°C)
Thermal Expansion Coefficient	6.9×10^{-6}/°C (Perpendicular to the C axis 200°C) 7.6×10^{-6}/°C (Parallel to the C axis 200°C)