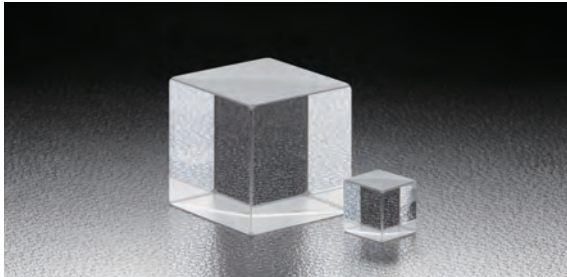
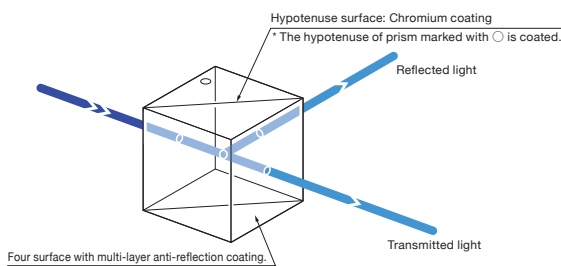


Chromium cube half mirrors consist of two right angle prisms. One of them is coated with chromium (Cr) on the hypotenuse face. Half mirror divides input beam to reflectance and transmittance in 1:1. A beamsplitter of R:T=1:1 is called "Half Mirror".

- Four surfaces of the cube are coated with multi-layer anti-reflection coatings.
- Approximately one third of the input beam is lost because of absorption of chromium coating on the hypotenuse. However these beamsplitters are not wavelength, polarization and incident angle of the input beam dependent and therefore provide a highly neutral reflectivity.
- For cube beamsplitters, unlike plate beamsplitters, transmission beam deviations and ghosts rarely occur.

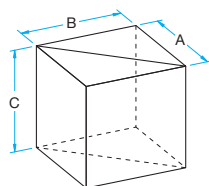


### Schematic



### Outline Drawing

(in mm)



- Tolerance
- A  $\pm 0.2$
- B  $\pm 0.2$
- C  $\pm 0.1$

### Specifications

Part Number	Wavelength Range [nm]	A=B=C [mm]
CSCH-10-550	400 – 700	10
CSCH-15-550	400 – 700	15
CSCH-20-550	400 – 700	20
CSCH-25-550	400 – 700	25
CSCH-30-550	400 – 700	30
CSCH-40-550	400 – 700	40
CSCH-50-550	400 – 700	50
CSCH-10-800	750 – 850	10
CSCH-15-800	750 – 850	15
CSCH-20-800	750 – 850	20

### Specifications

Material	BK7
Surface flatness of substrate	$\lambda/4$
Beam Deviation	$<5'$
Coating	Hypotenuse surface: Chromium Four surfaces: Multi-layer anti-reflection coating
Incident angle	$0^\circ$
Transmittance	Average $28 \pm 5\%$ (The average value of the P-Polarization and the S-Polarization)
Divergence ratio (reflectance : transmittance)	1 : 1
Laser Damage Threshold	$0.3\text{J}/\text{cm}^2$ (Laser pulse width 10ns, repetition frequency 20Hz)
Surface Quality (Scratch-Dig)	40-20
Clear aperture	85% of actual aperture

### Guide

- ▶ Please contact our Sales Team for customized products. (Customized on size, wavelength or R:T, etc.) [Reference](#) B068
- ▶ For a guarantee in reflected wavefront error or transmitted wavefront error, please contact our Sales Division.

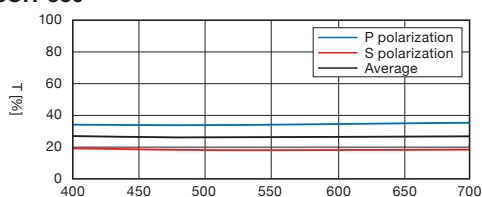
### Attention

- ▶ Input beam from the prism side is indicated by a "O".
- ▶ Phase retardation of light input will not be preserved. Use a wave-plate for phase compensation.
- ▶ Wavelength dispersion of transmitted and reflected light is derived from refractive index and glass thickness and when diverging or introducing a focusing beam, chromatic aberration or spherical aberration may occur.
- ▶ The transmittance curves are based on actual measurements and may vary with manufacturing lots.
- ▶ The surface flatness is the reflected wavefront distortion of the surface before coating.
- ▶ Be sure to wear laser safety goggles when checking optical path and adjusting optical axis.

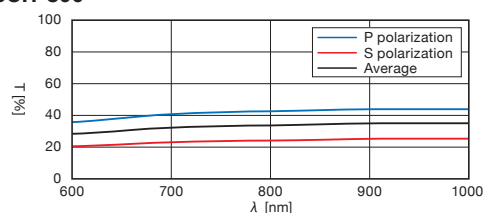
### Typical Reflectance Data

T: Transmission

#### CSCH-550



#### CSCH-800



### Compatible Optic Mounts

PLH-25, -40 / KKD-25PHRO, -40PHRO