

## Harmonic Separators | HSB

RoHS

Application Systems

Machine Vision

Manual Positions

Motion Control Products

Optical & Mirror Holder

FA Parts

Measurement & Control

FA Electrical Parts

Tool & Measure

Cleanroom & AntiStatic

Index

Mirrors

Beamsplitters

Filters

Polarizers

Lenses

Multi-Element Optics

Prisms

Substrates & Windows

Holder & Vibration isolator

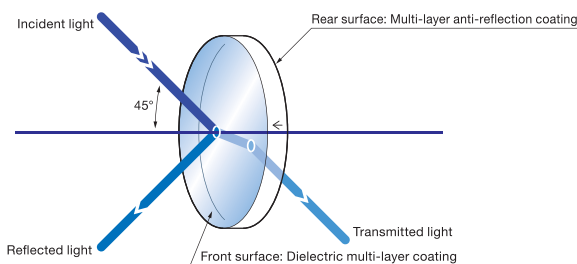
Harmonic separators are part of dichoric mirrors used to separate specific YAG harmonic from other harmonics.

We have prepared three different wavelength reflectance.

- These mirrors are coated with multi-layered dielectric with different refractive index by turns using BK7 optical parallels with  $\lambda/10$  surface flatness and parallelism is 5 arc second. The other surface is coated with multi-layer anti-reflection.
- These mirrors are used at 45° incident angle to reflect specific wavelength beam and transmits other wavelength.
- For plate type, you can use a large laser beam diameter.
- These mirrors are used at 45° incident angle to reflect specific wavelength beam and transmits other wavelength.

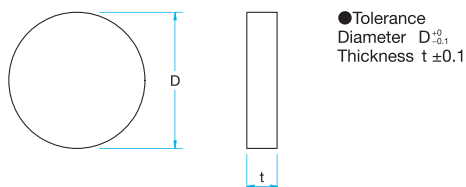


### Schematic



### Outline Drawing

(in mm)



### Specifications

Material	BK7
Surface Flatness	$\lambda/10$
Coating	Front surface: Dielectric multi-layer coating Rear surface: Multi-layer anti-reflection coating
Angle of Incidence	45°
Parallelism	<5"
Surface Quality (Scratch-Dig)	10-5
Clear aperture	90% of actual aperture

### Guide

- ▶ Please contact our International Sales Division for customized products. (Customized on size, wavelength or R:T, etc.) [Reference](#) C063
- ▶ For a guarantee in reflected wavefront error or transmitted wavefront error, please contact our International Sales Division.

### Attention

- ▶ The reflection surface is indicated with an arrow on the side of substrate.
- ▶ The reflectance curves are based on actual measurements and may vary from different manufacturing lots.
- ▶ Be sure to wear laser safety goggles when checking optical path and adjusting optical axis.
- ▶ The reflectance in the specifications list is at random polarization or (p-polarization reflectance + s-polarization reflectance) / 2.
- ▶ The surface flatness is the reflected wavefront distortion of the surface before coating.

### For Reflected wavelength : 355nm, Transmitted wavelength : 532, 1064nm

Part Number	Diameter D [mm]	Thickness t [mm]	Reflectance at 355nm [%]	Transmittance at 532·1064nm [%]	Laser Damage Threshold* [J/cm <sup>2</sup> ]
HSB-30C05-355	φ30	5	>99.5	>85	5
HSB-50C08-355	φ50	8	>99.5	>85	5

\*Laser pulse width 10ns, repetition frequency 20Hz

### For Reflected wavelength : 532nm, Transmitted wavelength : 1064nm

Part Number	Diameter D [mm]	Thickness t [mm]	Reflectance at 355nm [%]	Transmittance at 532·1064nm [%]	Laser Damage Threshold* [J/cm <sup>2</sup> ]
HSB-30C05-532	φ30	5	>99.5	>95	8
HSB-50C08-532	φ50	8	>99.5	>95	8

\*Laser pulse width 10ns, repetition frequency 20Hz

### For Reflected wavelength : 1064nm, Transmitted wavelength : 532nm

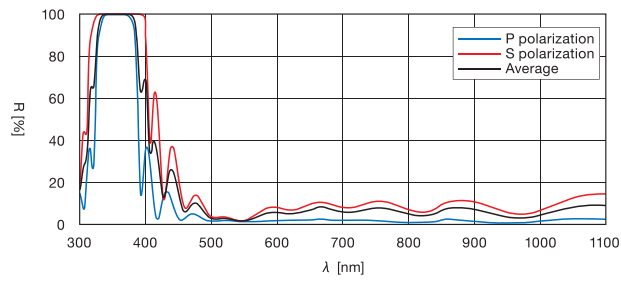
Part Number	Diameter D [mm]	Thickness t [mm]	Reflectance at 355nm [%]	Transmittance at 532nm [%]	Laser Damage Threshold* [J/cm <sup>2</sup> ]
HSB-30C05-1064	φ30	5	>99.5	>90	20
HSB-50C08-1064	φ50	8	>99.5	>90	20

\*Laser pulse width 10ns, repetition frequency 20Hz

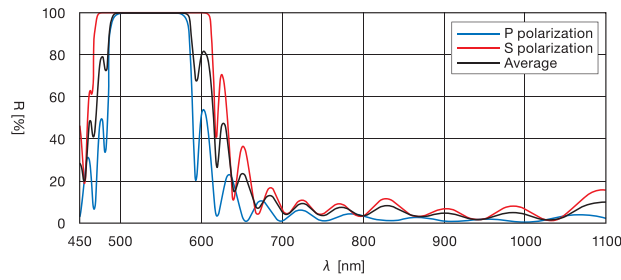
Typical Reflectance Data

R:Reflectance

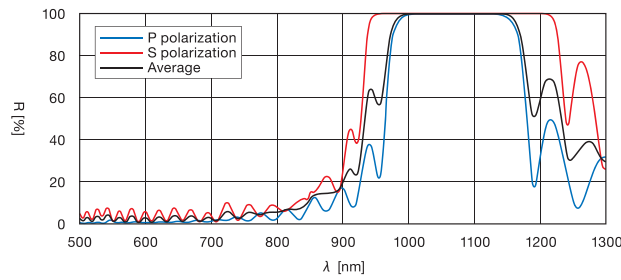
HSB-355



HSB-532



HSB-1064



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Compatible Optic Mounts

KMH-HS30-NL / KMH-PM50-NL / GBH-30S, -50S