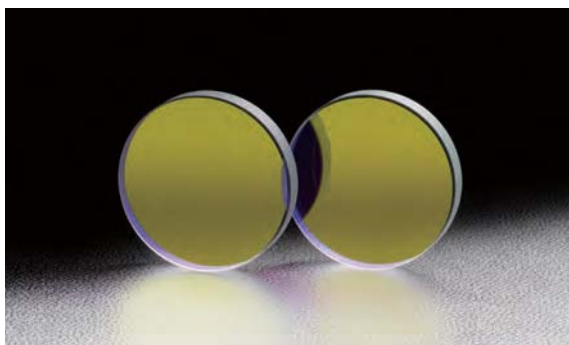


Harmonic Separators | YHS

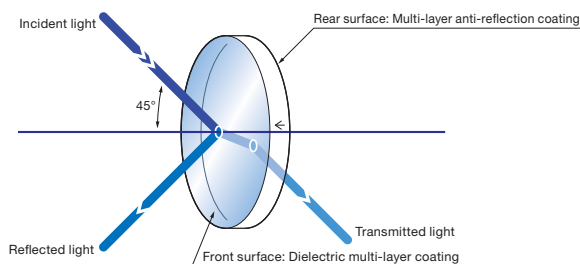
RoHS

Harmonic separators are designed to separate specific YAG harmonics from other harmonics. We offer three standard wavelength (1064nm, 532nm, 355nm) reflectance YAG harmonics.

- These mirrors are coated with multi-layered dielectric with different refractive index, using BK7 optical parallels with $\lambda/10$ surface flatness and parallelism of 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 YAG wavelengths.
- For plate type, you can use a large laser beam diameter.

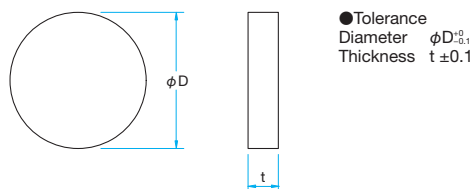


Schematic



Outline Drawing

(in mm)



- Tolerance
Diameter $\phi D_{\pm 0.1}$
Thickness $t \pm 0.1$

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 Sales Division for customized products. (Customized on size, wavelength or R:T, etc.)
- ▶ For a guarantee in reflected wavefront error or transmitted wavefront error, please contact our Sales Team with your requests.

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 $(p\text{-polarization reflectance} + s\text{-polarization reflectance}) / 2$.

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

Part Number	Diameter ϕD [mm]	Thickness t [mm]	Reflectance at 355nm (The average value of the P-Polarization and the S-Polarization)		Transmittance at 532-1064nm (The average value of the P-Polarization and the S-Polarization)		Laser Damage Threshold* [J/cm ²]
			[%]	[%]	[%]	[%]	
YHS-25.4C05-355	$\phi 25.4$	5	>99.5	>99.5	>85	>85	5
YHS-30C05-355	$\phi 30$	5	>99.5	>99.5	>85	>85	5
YHS-50C08-355	$\phi 50$	8	>99.5	>99.5	>85	>85	5

*Laser pulse width 10ns, repetition frequency 20Hz

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

Part Number	Diameter ϕD [mm]	Thickness t [mm]	Reflectance at 532nm (The average value of the P-Polarization and the S-Polarization)		Transmittance at 1064nm (The average value of the P-Polarization and the S-Polarization)		Laser Damage Threshold* [J/cm ²]
			[%]	[%]	[%]	[%]	
YHS-25.4C05-532	$\phi 25.4$	5	>99.5	>99.5	>95	>95	8
YHS-30C05-532	$\phi 30$	5	>99.5	>99.5	>95	>95	8
YHS-50C08-532	$\phi 50$	8	>99.5	>99.5	>95	>95	8

*Laser pulse width 10ns, repetition frequency 20Hz

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

Part Number	Diameter ϕD [mm]	Thickness t [mm]	Reflectance at 1064nm (The average value of the P-Polarization and the S-Polarization)		Transmittance at 532nm (The average value of the P-Polarization and the S-Polarization)		Laser Damage Threshold* [J/cm ²]
			[%]	[%]	[%]	[%]	
YHS-25.4C05-1064	$\phi 25.4$	5	>99.5	>99.5	>90	>90	20
YHS-30C05-1064	$\phi 30$	5	>99.5	>99.5	>90	>90	20
YHS-50C08-1064	$\phi 50$	8	>99.5	>99.5	>90	>90	20

*Laser pulse width 10ns, repetition frequency 20Hz

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Half Mirror Plate

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Harmonic Separator

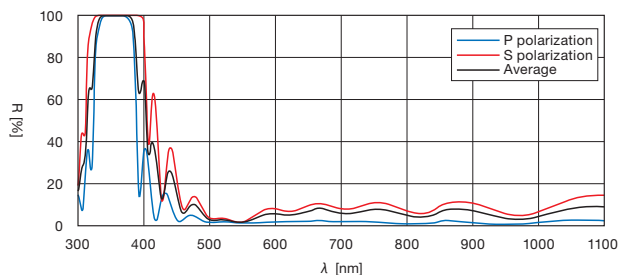
Beam Samplers

Others

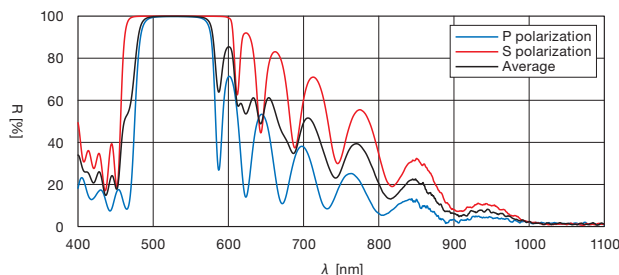
Typical Reflectance Data

R: Reflectance

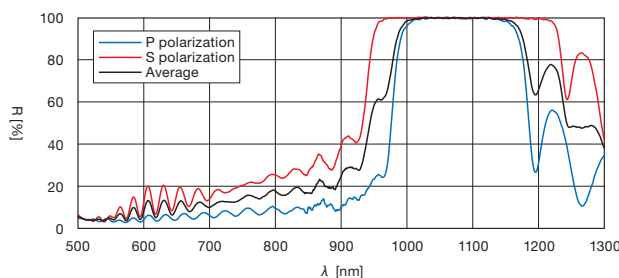
YHS-355



YHS-532



YHS-1064



Compatible Optic Mounts

MHG-HS25-NL, HS30-NL / MHG-PM50-NL / BHAN-30S, -50S

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