

# Ultra Broadband Dielectric Mirrors

**UBDM**

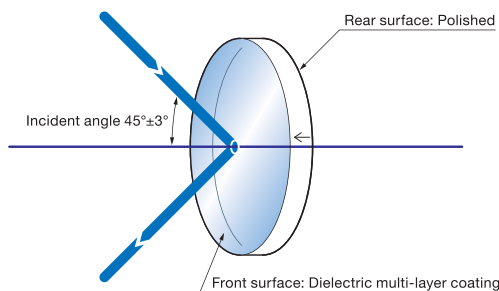
**RoHS**

Ultra Broadband Dielectric Mirrors are manufactured using all dielectric multi-layer coatings of alternating high and low index layers. These are specifically designed for use at 45 degrees angle of incidence. The mirrors are designed to achieve broad reflection like never before.

- Visible, near infrared and other multiple wavelengths are covered with a single mirror.
- These mirrors have many advantages over a metal mirror. With very little deterioration with age, it is durable and easy to clean and maintain.

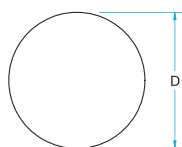


## Schematic



## Outline Drawing

(in mm)



- Tolerance  
Diameter D:  $\pm 0.1$   
Thickness t:  $\pm 0.1$

## Specifications

Material	BK7
Coating	Dielectric multi-layer coating
Incident angle	$45^\circ \pm 3^\circ$
Surface Flatness	$\lambda/10$
Parallelism	$< 3'$
Surface Quality (Scratch-Dig)	40-20
Clear aperture	90% of Actual Aperture
Rear Surface	Polished

## Guide

- ▶ Please contact our International Sales Division for customized products. (customized on outer diameter, wavelength characteristic, etc.) Please use the inquiry sheet. [Reference](#) > C036
- ▶ Also available are our surface flatness guarantee (SAGM) mirrors with accuracy guarantee after surface coating. [Reference](#) > C012

## Attention

- ▶ Reflectance of dielectric mirrors will vary according to the polarization of the input beams.
- ▶ The un-coated rear surface of the mirror is polished and is indicated with an arrow on the side of the substrate. Reflectance of laser line mirrors are different according to the polarization of input beams. S-Polarization has high reflectance with a wide reflective bandwidth compared with P-Polarization.
- ▶ The reflectance in the specification list is at random polarization or (P-Polarization reflectance + S-Polarization reflectance) / 2.

## Specifications

Part Number	Wavelength Range [nm]	Diameter D [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm <sup>2</sup> ]
UBDM-25.4C05-2/4	245 - 400	φ25.4	5	> Average 97	0.5
UBDM-30C05-2/4	245 - 400	φ30	5	> Average 97	0.5
UBDM-25.4C05-2/7	245 - 700	φ25.4	5	> Average 97	0.5
UBDM-30C05-2/7	245 - 700	φ30	5	> Average 97	0.5
UBDM-25.4C05-4/11	400 - 1100	φ25.4	5	> Average 98	0.5
UBDM-30C05-4/11	400 - 1100	φ30	5	> Average 98	0.5
UBDM-50C08-4/11	400 - 1100	φ50	8	> Average 98	0.5
UBDM-25.4C05-4/20	400 - 2000	φ25.4	5	> Average 98	0.5
UBDM-30C05-4/20	400 - 2000	φ30	5	> Average 98	0.5
UBDM-50C08-4/20	400 - 2000	φ50	8	> Average 98	0.5
UBDM-25.4C05-3/20	300 - 2000	φ25.4	5	> Average 97	0.5
UBDM-30C05-3/20	300 - 2000	φ30	5	> Average 97	0.5
UBDM-50C08-3/20	300 - 2000	φ50	8	> Average 97	0.5

\* Laser pulse width 10ns, wavelength 532nm, repetition frequency 20Hz

Application Systems

Machine Vision

Manual Positions

Motion Control Products

Optical & Mirror Holder

F A Parts

Measurement & Control

FA Electrical Parts

Tool & Measure

Cleanroom & AntiStatic

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## Mirrors

Beamsplitters

Filters

Polarizers

Lenses

Multi-Element Optics

Prisms

Substrates & Windows

Holder & Vibration isolator

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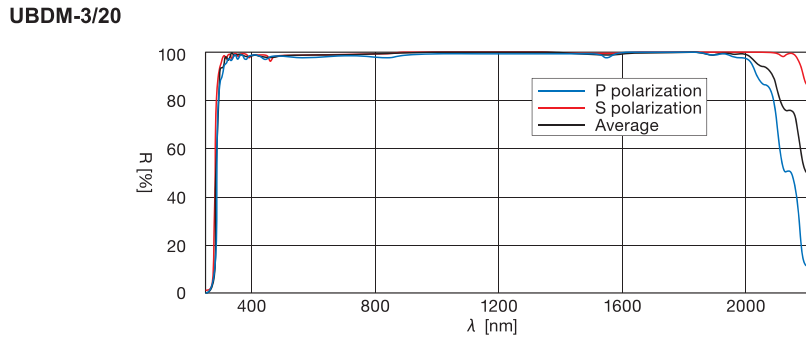
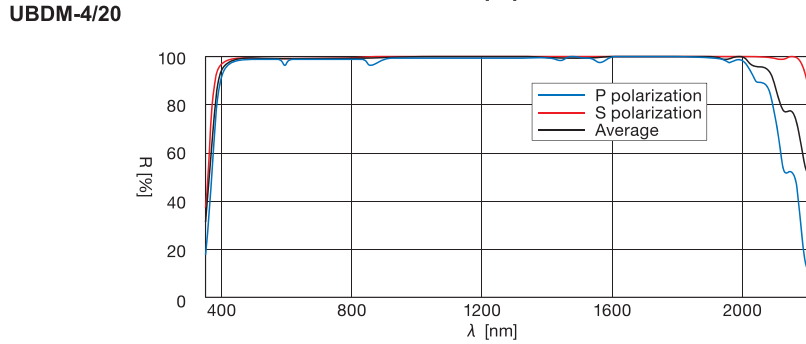
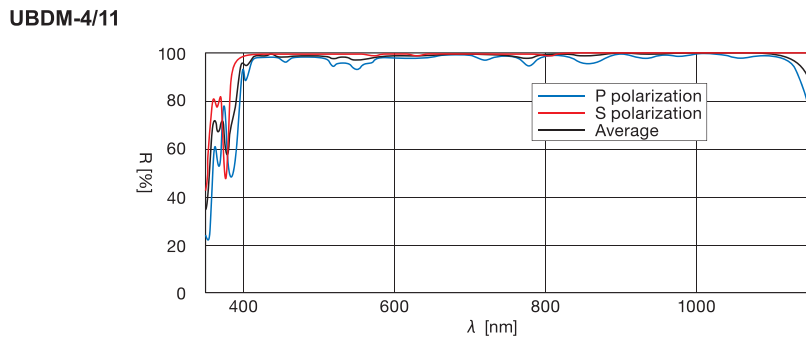
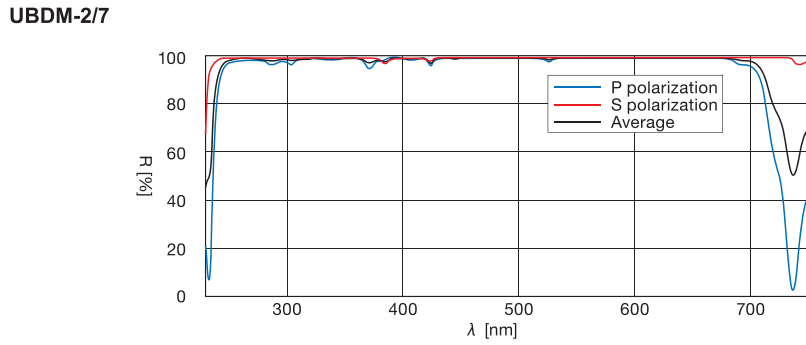
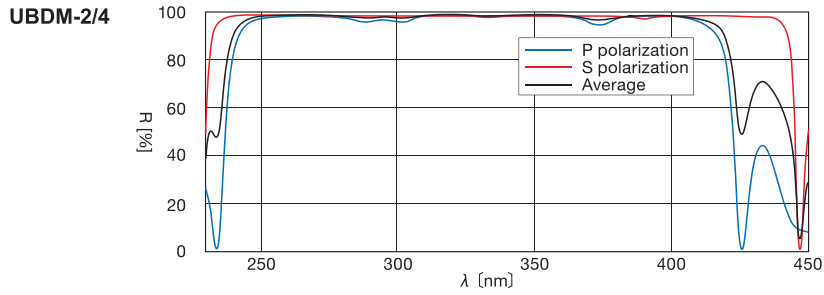
Prisms

Substrates & Windows

Holder & Vibration isolator

Typical Reflectance Data

R: Reflectance



### Compatible Optic Mounts

KMH-HS25-NL, -HS30-NL / KMH-MP50-NL / GMB-25.4S, -30S, -50S