Transmittance Measurement of Ultraviolet about Sapphire

INTRODUCTION

In the etching process associated with the high integration of semiconductors, the analysis in the ultraviolet region is required to shorten the exposure wavelength or to measure the absorption edge of ceramics for the characteristics evaluation. U-4100 spectrophotometer (ultraviolet region measurement system) installed with the trace sample transmittance accessory allows the analysis of a trace amount of a sample in the ultraviolet region. This time, sapphire used as a transparent diaphragm was analyzed. U-4100 spectrophotometer (ultraviolet region sample measurement system) can measure the spectrum up to the ultraviolet region with less noise compared with U-4100 spectrophotometer (solid sample measurement system).

SAMPLE

Sample: Sapphire (Al_2O_3)

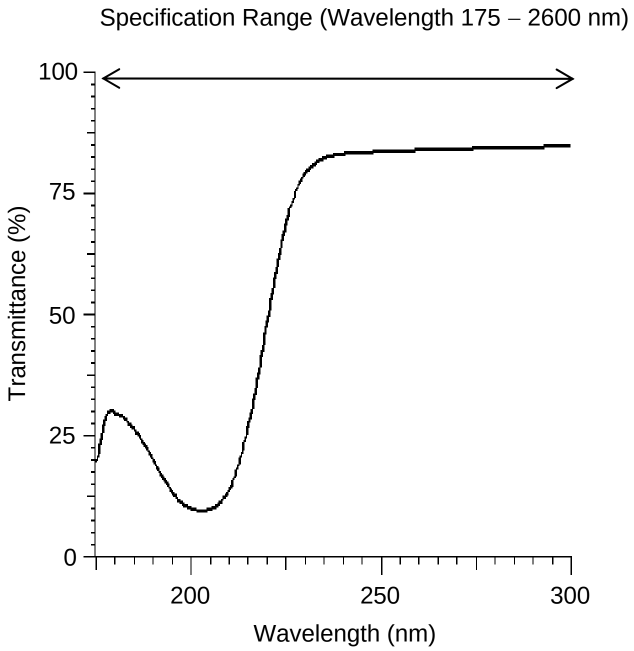
INSTRUMENT CONDITIONS

Instrument : U-4100 spectrophotometer
(ultraviolet region sample measurement system)
U-4100 spectrophotometer
(solid sample measurement system)
Measurement wavelength : 175 – 300 nm
Scan speed : 30 nm/min
Slit : 8 nm
Sampling interval : 0.5 nm

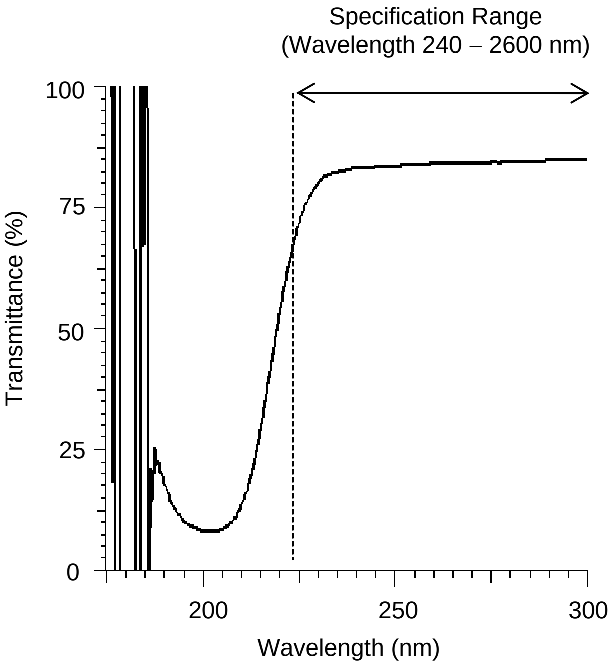
OTHER NECESSARIES

Trace sample transmittance
measurement accessory
(P/N : 1J0-0204)

Mask in front of the sample
ϕ3 mm
(sample size ϕ5 mm – ϕ20 mm)



U-4100 (Ultraviolet region sample measurement system)



U-4100 (Solid sample measurement system)

KEY WORDS
Material·Processing Material Related, Glass·Ceramics,
Inorganic Chemistry, Sapphire, Transmittance, Spectrophotometer,
Al_2O_3, Ultraviolet, U-4100

Spectrophotometer (UV)

Sheet No. UV090019-01

Transmittance Measurement of Ultraviolet about Calcium fluoride

INTRODUCTION

In the etching process associated with the high integration of semiconductors, the analysis in the ultraviolet region is required to shorten the exposure wavelength or to measure the absorption edge of ceramics for the characteristics evaluation. U-4100 spectrophotometer (ultraviolet region measurement system) installed with the trace sample transmittance accessory allows the analysis of a trace amount of a sample in the ultraviolet region. This time, calcium fluoride used as a material for excimer laser was analyzed. U-4100 spectrophotometer (ultraviolet region sample measurement system) can measure the spectrum up to the ultraviolet region with less noise compared with U-4100 spectrophotometer (solid sample measurement system).

SAMPLE

Sample: Calcium fluoride (CaF_2)

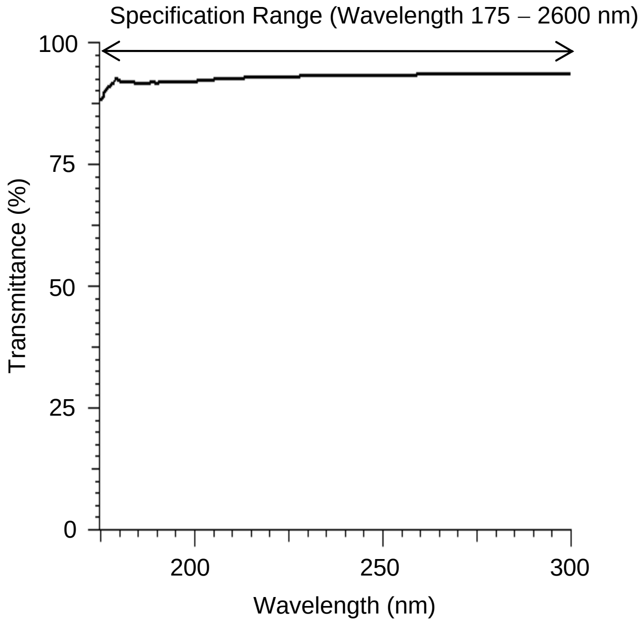
INSTRUMENT CONDITIONS

Instrument : U-4100 spectrophotometer
(ultraviolet region sample measurement system)
U-4100 spectrophotometer
(solid sample measurement system)
Measurement wavelength : 175 – 300 nm
Scan speed : 30 nm/min
Slit : 8 nm
Sampling interval : 0.5 nm

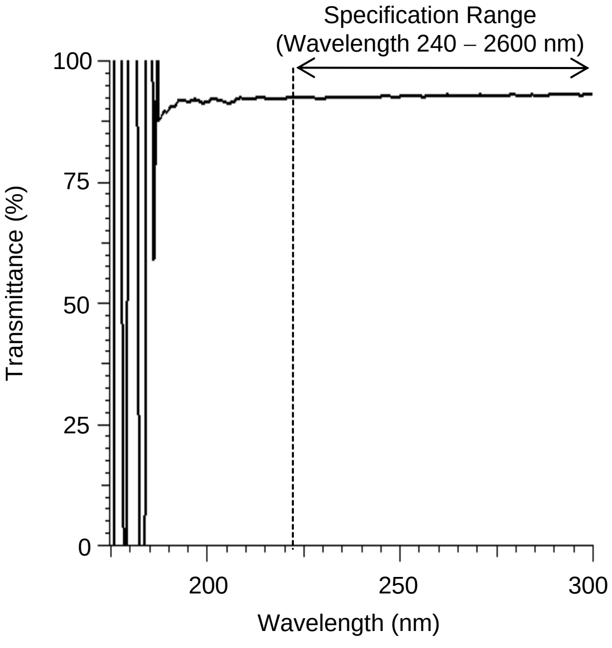
OTHER NECESSARIES

Trace sample transmittance measurement accessory
(P/N : 1J0-0204)

Mask in front of the sample
ϕ3 mm
(Sample size ϕ5 mm – ϕ20 mm)



U-4100 (Ultraviolet region measurement system)



U-4100 (Solid sample measurement system)

KEY WORDS
Material·Processing Material Related, Glass·Ceramics,
Inorganic Chemistry, Calcium Fluoride, Transmittance, Spectrophotometer,
Ultraviolet Region, CaF_2, Ultraviolet, U-4100

Spectrophotometer (UV)

Sheet No. UV090019-02

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