

Measurement of Digital Single-Lens Reflex Camera Material

INTRODUCTION

Digital single-lens reflex cameras allow lens changes and record images as digital data. This time, a telephoto lens for a digital single-lens reflex camera and lens protective filter used to protect the lens were analyzed. A telephoto lens consists of multiple lenses and layers of multiple lenses. U-4100 spectrophotometer, as it has a nearly parallel luminous flux, is the most suitable instrument for the measurement of samples with a long optical path such as telephoto lenses.

The large lens measurement unit was used for the analysis. This unit is movable as indicated by (1) (up and down) and by (2) (front and back) as shown in the Photo 1 and thus, the position can be easily adjusted. The measurement result indicated that the lens had a high transmittance of 80% in the visible range. As for the lens protective filter, the measurement result obtained by using a transmission holder (tight adhesion) indicated its high transmittance of 95% in the visible range.

SAMPLE

Sample : Telephoto lens, Lens protective filter

INSTRUMENT CONDITIONS

Instrument : U-4100 spectrophotometer (solid sample measurement system)
 Measurement wavelength range : 250 - 800 nm
 Scan speed : 300 nm/min
 Slit : 8 nm
 Sampling interval : 1 nm

ACCESSORY

Large lens measurement unit (P/N : 134-0203)
 Transmission holder (tight adhesion) (P/N : 1J0-0202)

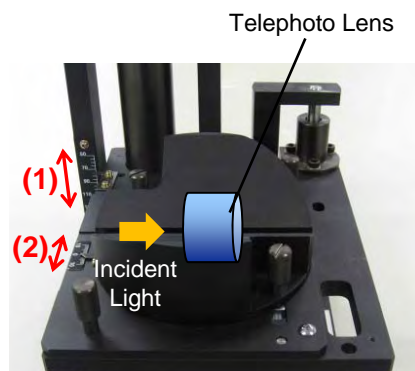
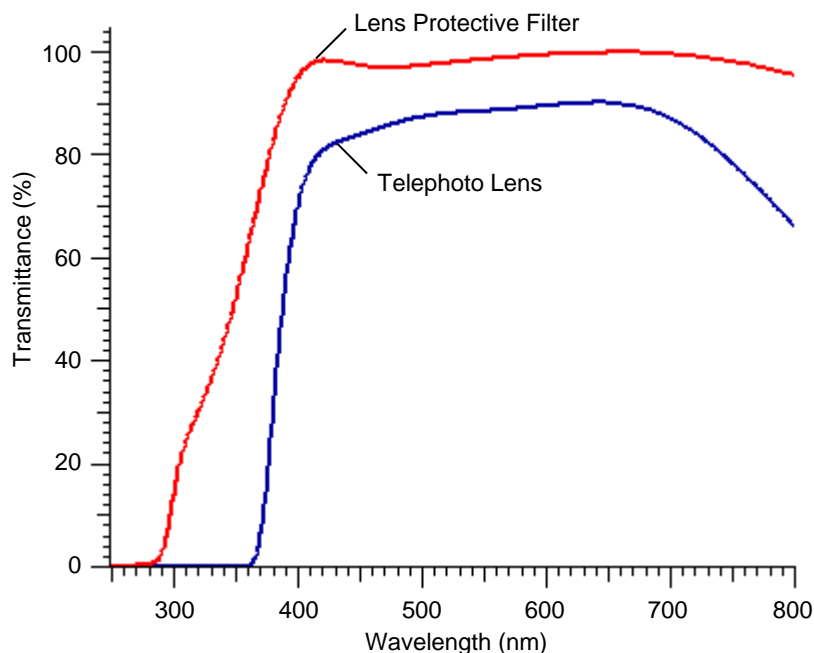


Photo 1: Large Lens Measurement Unit

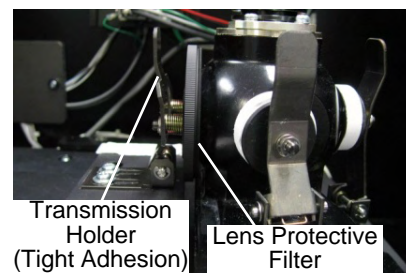


Photo 2 : Transmission Holder (Tight Adhesion)

KEY WORDS

Material/Processing Material Related, Glass/Ceramic, Telephoto Lens, Lens Protective Filter, Transmission Spectrum, Transmittance, Spectrophotometer, U-4100

Spectrophotometer (UV)

Sheet No. UV110009-01