

Analysis of High Reflective materials for LED and Solar Cell

INTRODUCTION

Reflective materials used for LED and solar cells need to have a high reflectance. In a LED, a reflective material is used to reflect the visible light and irradiate the target object with as much light as possible without wasting it. In a solar cell, a reflective material is used to reflect the visible to near infrared rays of the sunlight reached to the back of the module and reuse it so as to obtain the high electric generation efficiency.

U-4100, by setting a sample at the back of the integrating sphere, allows the analysis of the total reflectance spectrum including the diffusion light. It was found that Sample A has higher reflectance in wider range compared with Sample B.

SAMPLE

Sample : High reflective material

INSTRUMENT CONDITIONS

Instrument : U-4100 Spectrophotometer (solid sample measurement system)

[UV/VIS]

Measurement wavelength : 300 to 2600 nm

Scan speed : 300 nm/min

Slit : 8 nm

[NIR]

Scan speed : 750 nm/min

Slit : Automatic

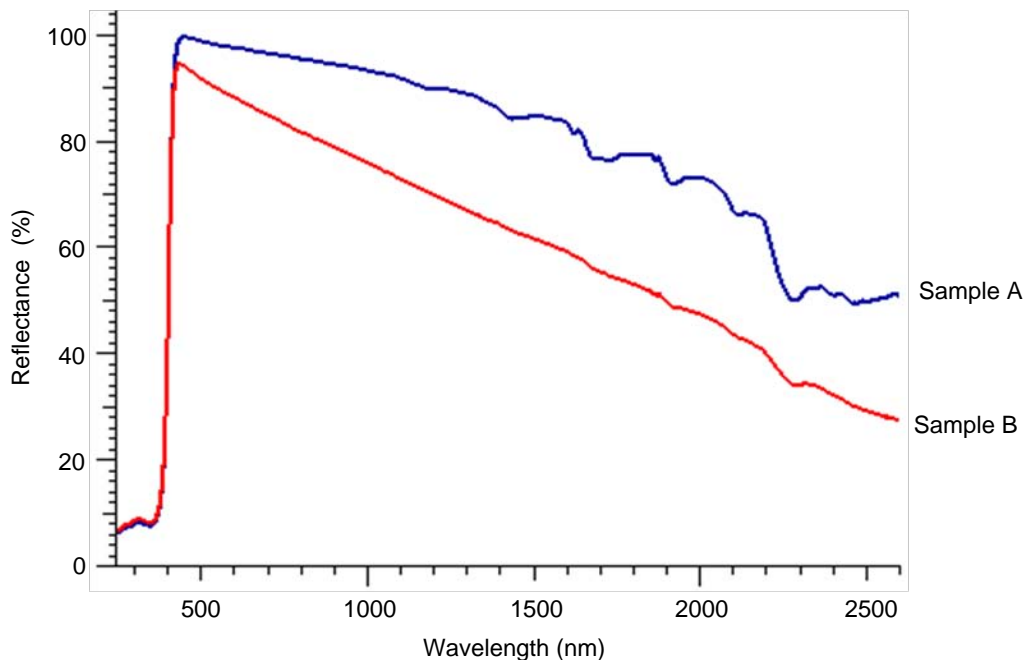
control

Sampling interval : 1 nm

Standard reflective material : Aluminum oxide auxiliary white sheet

ACCESSORY

Whiteboard holder with a transmission hole
(P/N : 5J0-0135/5J0-0136)



Reflectance Spectrum of High Reflective Material

KEY WORDS

Material-Processing Material Related, Composite Material·Thin Film Crystal, Reflectance Spectrum, Material, High Reflective Material, Solar Cell, LED, UV, NIR, U-4100

Spectrophotometer (UV)

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