


## Excitation Spectrum of Lamp Phosphor for LED (Yellow)

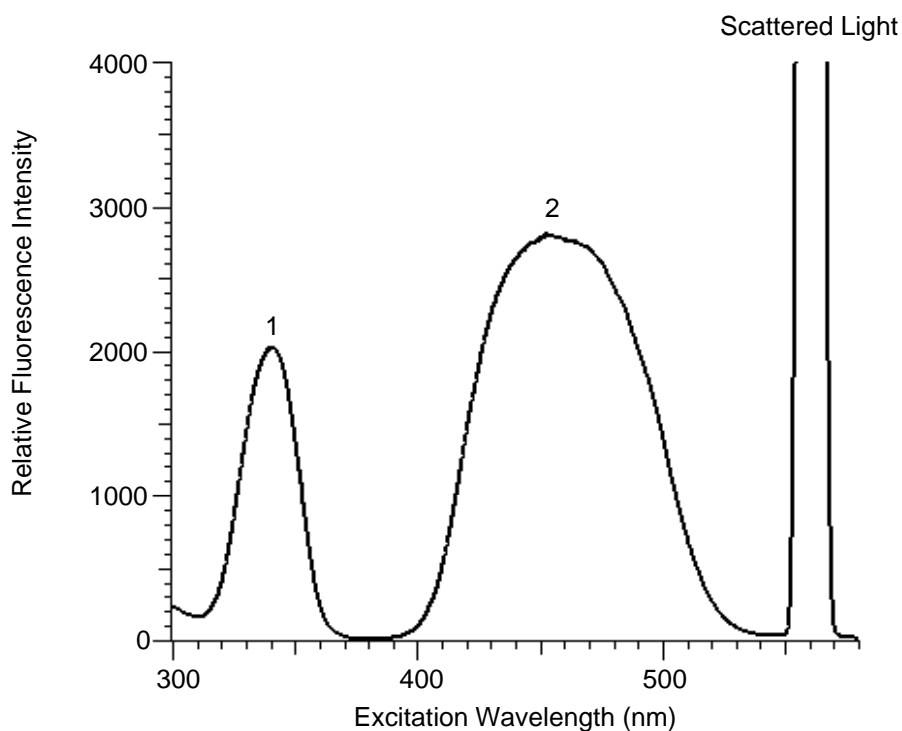
### INTRODUCTION

In the daylight white type LED, the light emitted from the blue LED and yellow light emitted from the phosphor are synthesized to produce the color close to the color of fluorescence lamps. This time, the fluorescence properties of the yellow phosphor used in the daylight white type LED lighting were analyzed. The manufacturers of LED control the color tones by using newly developed phosphors so as to produce unique LED emission colors. By analyzing the fluorescence spectra, the information of the colors emitted by phosphors can be obtained and thus, the analysis is useful for the research and development as well as for the quality control.

By using the spectral correction functions of the F-7000 spectrophotometer, the wavelength characteristics originating from the detection optical system (spectrophotometer, mirror, detector, etc) can be corrected and thus, the accurate spectrum analysis is possible.

SAMPLE	ACCESSORY
Sample : Daylight white phosphor <div style="text-align: center; margin-top: 10px;">  </div>	Solid Sample Holder (P/N : 650-0161)  Substandard Light Source (P/N : 5J0-0135/5J0-0136)

ANALYSIS CONDITIONS	WAVELENGTH (nm)
Instrument : F-7000 Fluorescence wavelength : 560 nm Slit on excitation side : 5 nm Slit on fluorescence side : 5 nm Scan speed : 240 nm/min	1. 340 2. 452  Response : Automatic EM filter : 390 Detector : R928F Photomultiplier Vol. : 400 V




[With Spectral Corrections]

<b>KEY WORDS</b> Electronics/Semiconductor Related, Other Electronics/Semiconductor Related, Industrial Chemistry, Energy Saving, Environment, Color, Daylight White Phosphor, LED Light Bulb, Excitation Spectrum, LED, Light Emitting Diode, Color Measurement, FL, F-7000	Fluorophotometer (FL)
Sheet No. FL100011-01	

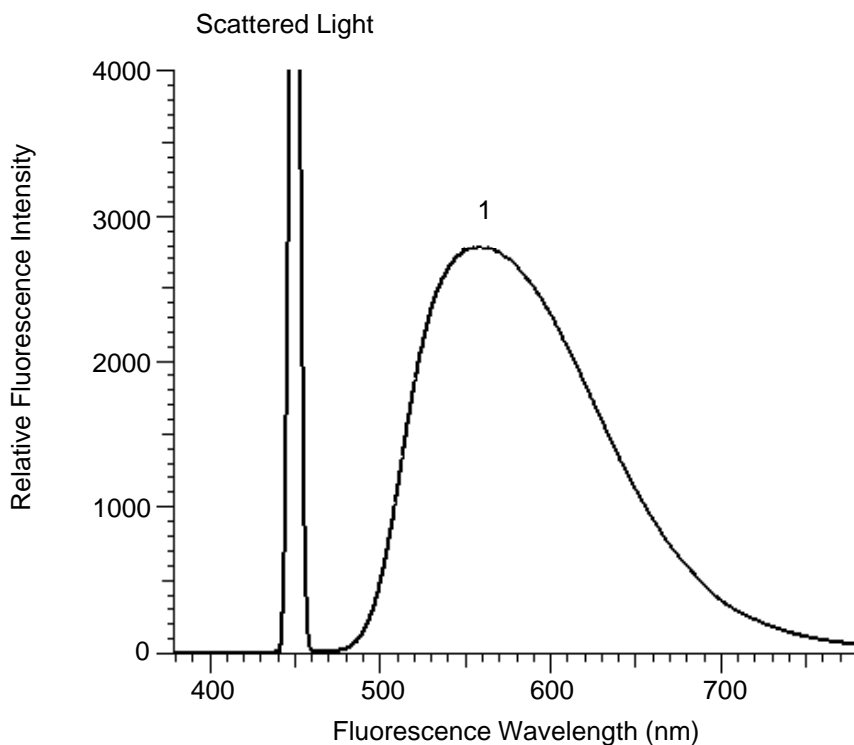
## Fluorescence Spectrum of Lamp Phosphor for LED (Yellow)

### INTRODUCTION

In the daylight white type LED, the light emitted from the blue LED and yellow light emitted from the phosphor are synthesized to produce the color close to the color of fluorescence lamps. This time, the fluorescence properties of the yellow phosphor used in the daylight white type LED lighting were analyzed. The manufacturers of LED control the color tones by using newly developed phosphors so as to produce unique LED emission colors. By analyzing the fluorescence spectra, the information of the colors emitted by phosphors can be obtained and thus, the analysis is useful for the research and development as well as for the quality control. By using the spectral correction functions of the F-7000 spectrophotometer, the wavelength characteristics originating from the detection optical system (spectrophotometer, mirror, detector, etc) can be corrected and thus, the accurate spectrum analysis is possible.

SAMPLE	ACCESSORY
Sample : Daylight white phosphor <div style="text-align: center; margin-top: 10px;">  </div>	Solid Sample Holder (P/N : 650-0161)  Substandard Light Source (P/N : 5J0-0135/5J0-0136)

ANALYSIS CONDITIONS	WAVELENGTH (nm)																											
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Instrument</td> <td style="width: 40%;">: F-7000</td> <td style="width: 30%;"></td> </tr> <tr> <td>Excitation wavelength</td> <td>: 450 nm</td> <td>Response</td> </tr> <tr> <td>Slit on excitation side</td> <td>: 5 nm</td> <td>: Automatic</td> </tr> <tr> <td>Slit on fluorescence side</td> <td>: 5 nm</td> <td>EM filter</td> </tr> <tr> <td>Scan speed</td> <td>: 240 nm/min</td> <td>: 390</td> </tr> <tr> <td></td> <td></td> <td>Detector</td> </tr> <tr> <td></td> <td></td> <td>: R928F</td> </tr> <tr> <td></td> <td></td> <td>Photomultiplier Vol.</td> </tr> <tr> <td></td> <td></td> <td>: 400 V</td> </tr> </table>	Instrument	: F-7000		Excitation wavelength	: 450 nm	Response	Slit on excitation side	: 5 nm	: Automatic	Slit on fluorescence side	: 5 nm	EM filter	Scan speed	: 240 nm/min	: 390			Detector			: R928F			Photomultiplier Vol.			: 400 V	1. 555
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[With Spectral Corrections]

<b>KEY WORDS</b> Electronics/Semiconductor Related, Other Electronics/Semiconductor Related, Industrial Chemistry, Energy Saving, Environment, Color, Daylight White Phosphor, LED Light Bulb, Fluorescence Spectrum, LED, Light Emitting Diode, Color Measurement, FL, F-7000	Fluorophotometer (FL)
	Sheet No. FL100011-02

## 3D Fluorescence Spectrum of Lamp Phosphor for LED (Yellow)

### INTRODUCTION

In the daylight white type LED, the light emitted from the blue LED and yellow light emitted from the phosphor are synthesized to produce the color close to the color of fluorescence lamps. This time, the fluorescence properties of the yellow phosphor used in the daylight white type LED lighting were analyzed. The manufacturers of LED control the color tones by using newly developed phosphors so as to produce unique LED emission colors. By analyzing the fluorescence spectra, the information of the colors emitted by phosphors can be obtained and thus, the analysis is useful for the research and development as well as for the quality control.

By using the spectral correction functions of the F-7000 spectrophotometer, the wavelength characteristics originating from the detection optical system (spectrophotometer, mirror, detector, etc) can be corrected and thus, the accurate spectrum analysis is possible.

### SAMPLE

Sample : Daylight white phosphor



### ACCESSORY

Solid Sample Holder  
(P/N : 650-0161)

Substandard Light Source  
(P/N : 5J0-0135/5J0-0136)

### ANALYSIS CONDITIONS

Instrument : F-7000

Slit on excitation side : 5 nm

Slit on fluorescence side : 5 nm

Scan speed : 60000 nm/min

Response : Automatic

EM filter : 390

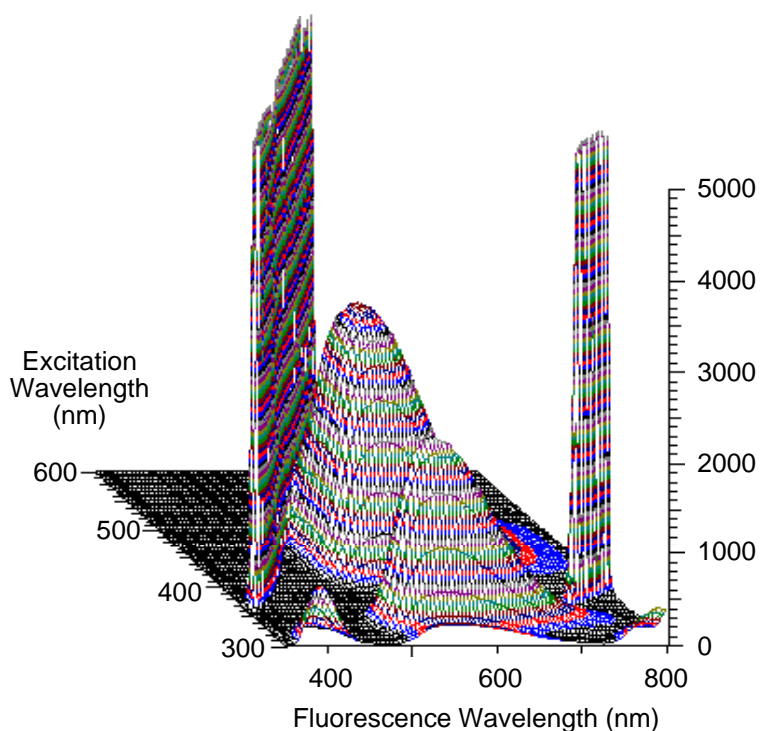
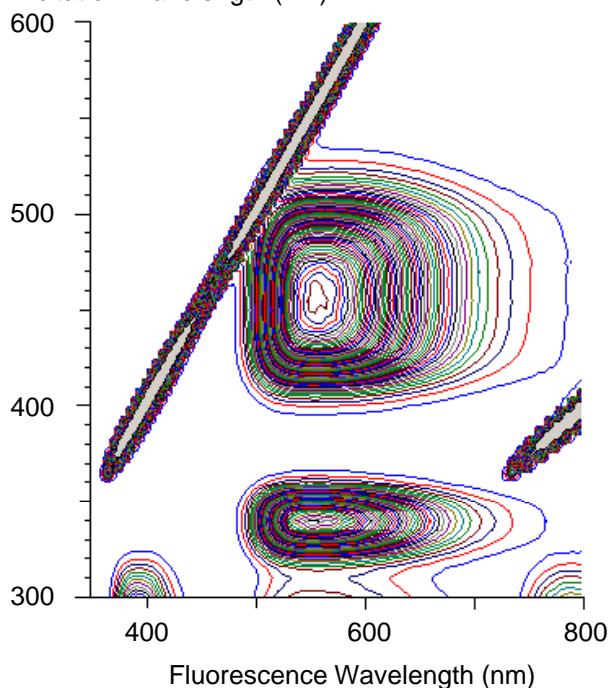
Detector : R928F

Photomultiplier Vol. : 400 V

Full scale : 5000

Contour line interval : 50

Excitation Wavelength (nm)



[With Spectral Corrections]

#### KEY WORDS

Electronics/Semiconductor Related, Other Electronics/Semiconductor Related, Industrial Chemistry, Energy Saving, Environment, Color, Daylight White Phosphor, LED Light Bulb, 3D Fluorescence Spectrum, 3D, LED, Light Emitting Diode, Color Measurement, FL, F-7000

Fluorophotometer (FL)

Sheet No. FL100011-03