

## Phosphor Information Leaflet

### GENERAL

Name	Lumogen F Gelb 170
Chemical formula	Derivative of Perylene
Application areas	plastics

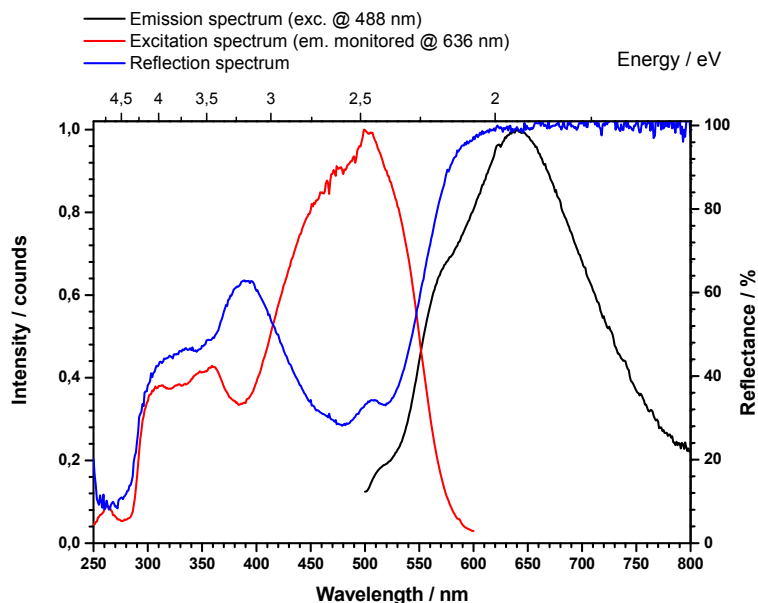
### OPTICAL PROPERTIES

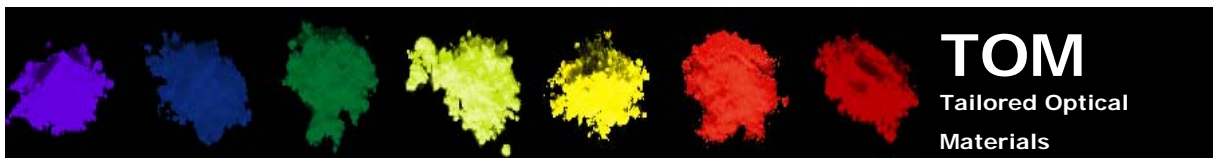
### Diluted in PMMA

Excitation maxima @ 636 nm	499 nm (2.48 eV)
Emission maximum @ 488 nm exc.	640 nm (1.94 eV)
Centroid wavelength	648 nm (1.91 eV)
Full width @ half emission maximum	175 nm
Lumen equivalent	216 lm/W <sub>opt.</sub>
CIE1931 chromaticity coordinates (x, y)	0.5484; 0.4445
Band edge of host lattice	
Reflection @ 488 nm	29 %
Decay time $\tau_{1/e}$	5 ns (48 %); 20 ns (52 %)

### PHYSICAL PROPERTIES

Body colour	orange
Density	about 1.4 g/cm <sup>3</sup>
Refractive index	-





## Phosphor Information Leaflet

### GENERAL

Name	Lumogen F Grün 850
Chemical formula	Derivative of Perylene
Application areas	plastics

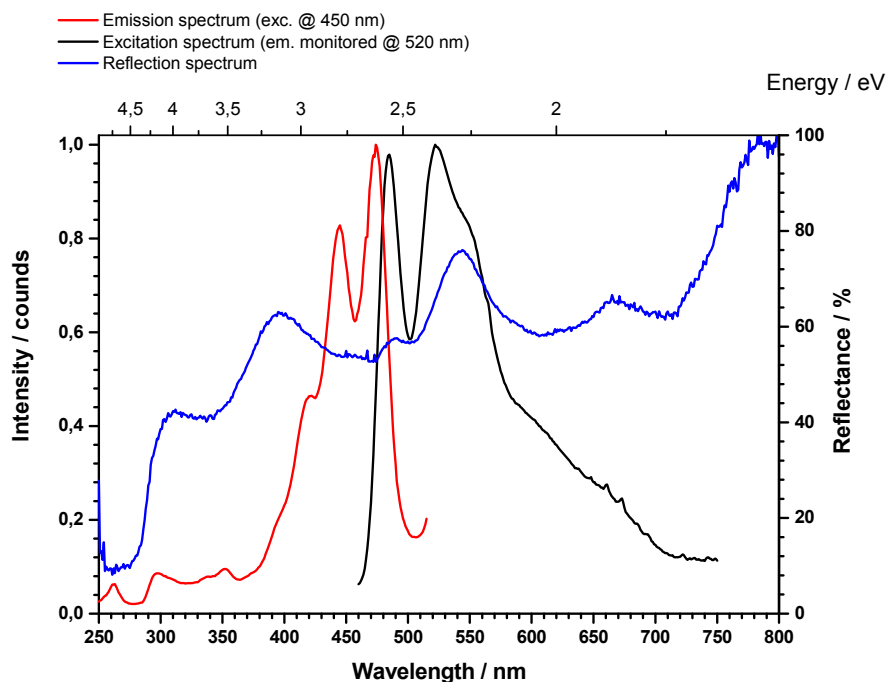
### OPTICAL PROPERTIES

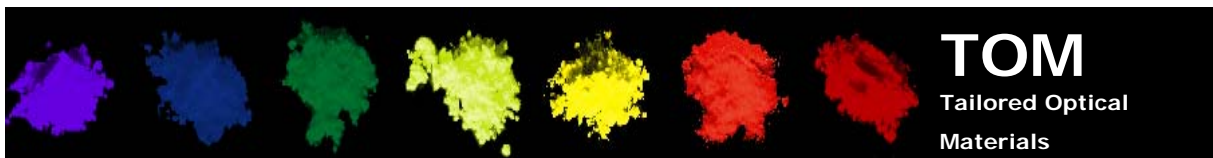
### Diluted in PMMA

Excitation maxima @ 520 nm	445 nm (2.79 eV), 474 nm (2.62 eV)
Emission maximum @ 450 nm exc.	484 nm (2.56 eV), 522 nm (2.38 eV)
Centroid wavelength	557 nm (2.23 eV)
Full width @ half emission maximum	104 nm
Lumen equivalent	351 lm/W <sub>opt.</sub>
CIE1931 chromaticity coordinates (x, y)	0.3289; 0.5035
Band edge of host lattice	
Reflection @450 nm	54 %
Decay time $\tau_{1/e}$	4 ns (79 %); 17 ns (21 %)

### PHYSICAL PROPERTIES

Body colour	green
Density	about 1.4 g/cm <sup>3</sup>
Refractive index	-





## Phosphor Information Leaflet

### GENERAL

Name	Lumogen F Orange 240
Chemical formula	Derivative of Perylene
Application areas	plastics

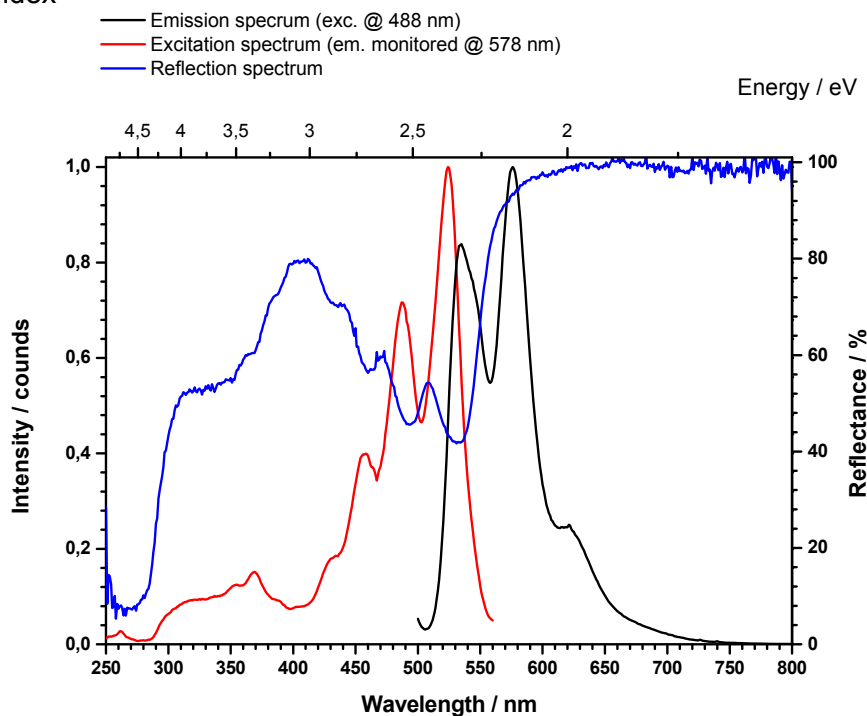
### OPTICAL PROPERTIES

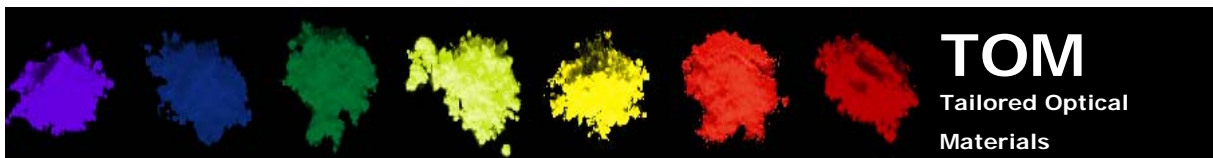
### Diluted in PMMA

Excitation maxima @ 578 nm	487 nm (2.55 eV), 523 nm (2.37 eV)
Emission maximum @ 488 nm exc.	531 nm (2.34 eV), 576 nm (2.15 eV)
Centroid wavelength	562 nm (2.21 eV)
Full width @ half emission maximum	70 nm
Lumen equivalent	489 lm/W <sub>opt.</sub>
CIE1931 chromaticity coordinates (x, y)	0.4134; 0.5304
Band edge of host lattice	
Reflection @ 313 nm	47%
Decay time $\tau_{1/e}$	4 ns (92 %); 16 ns (8%)

### PHYSICAL PROPERTIES

Body colour	orange
Density	about 1.4 g/cm <sup>3</sup>
Refractive index	-





## Phosphor Information Leaflet

### GENERAL

Name	Lumogen F Rosa 285
Chemical formula	Derivative of Perylene
Application areas	plastics

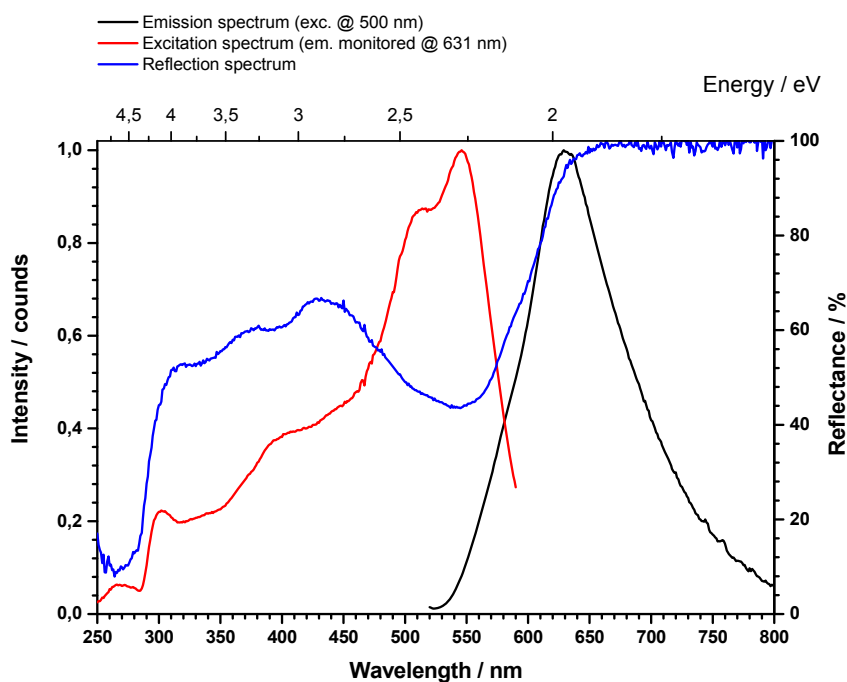
### OPTICAL PROPERTIES

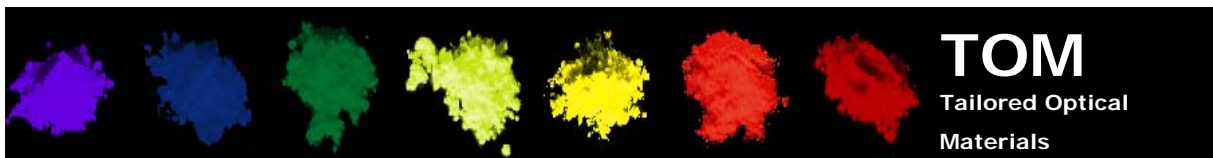
### Diluted in PMMA

Excitation maxima @ 631 nm	546 nm (2.27 eV)
Emission maximum @ 500 nm exc.	631 nm (1.97 eV)
Centroid wavelength	646 nm (1.92 eV)
Full width @ half emission maximum	90 nm
Lumen equivalent	188 lm/W <sub>opt.</sub>
CIE1931 chromaticity coordinates (x, y)	0.6071; 0.3759
Band edge of host lattice	
Reflection @ 500 nm	49 %
Decay time $\tau_{1/e}$	4 ns (45 %); 13 ns (55%)

### PHYSICAL PROPERTIES

Body colour	red
Density	about 1.4 g/cm <sup>3</sup>
Refractive index	-





## Phosphor Information Leaflet

### GENERAL

Name	Lumogen F Rot 305
Chemical formula	Derivative of Perylene
Application areas	plastics

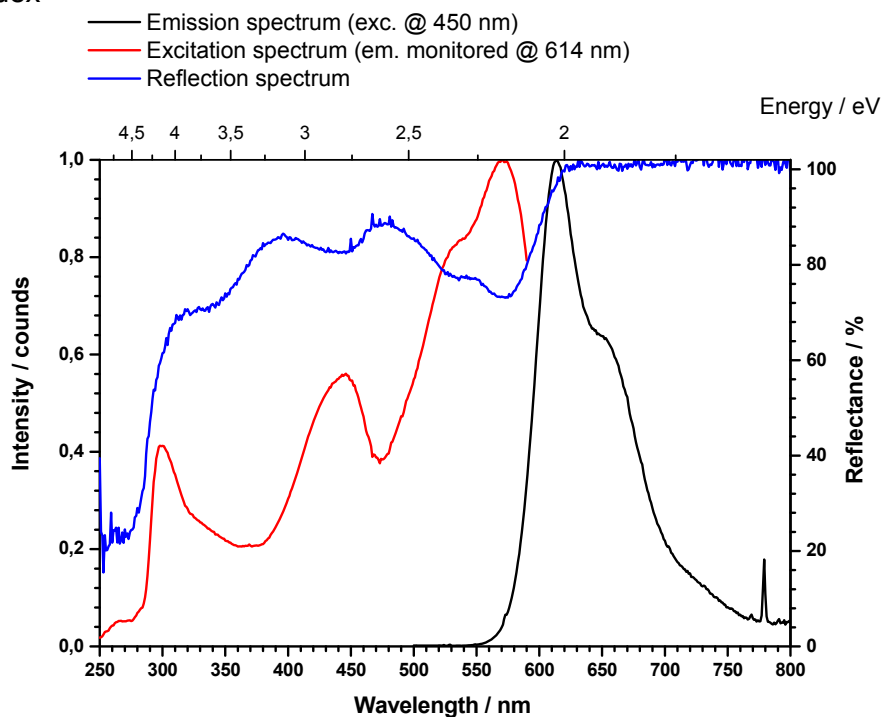
### OPTICAL PROPERTIES

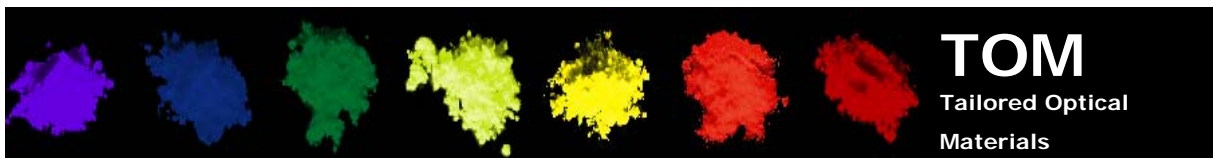
### Diluted in PMMA

Excitation maxima @ 614 nm	298 nm (4.16 eV), 446 nm (2.78 eV), 571 nm (2.17 eV)
Emission maximum @ 450 nm exc.	613 nm (2.02 eV)
Centroid wavelength	646 nm (1.92 eV)
Full width @ half emission maximum	66 nm
Lumen equivalent	182 lm/W <sub>opt.</sub>
CIE1931 chromaticity coordinates (x, y)	0.6559; 0.3405
Band edge of host lattice	
Reflection @ 450 nm	83 %
Decay time $\tau_{1/e}$	3 ns (31 %); 76 ns (69 %)

### PHYSICAL PROPERTIES

Body colour	red
Density	about 1.4 g/cm <sup>3</sup>
Refractive index	-





## Phosphor Information Leaflet

### GENERAL

Name	Lumogen F Violet 570
Chemical formula	Derivative of Naphtalimide
Application areas	plastics

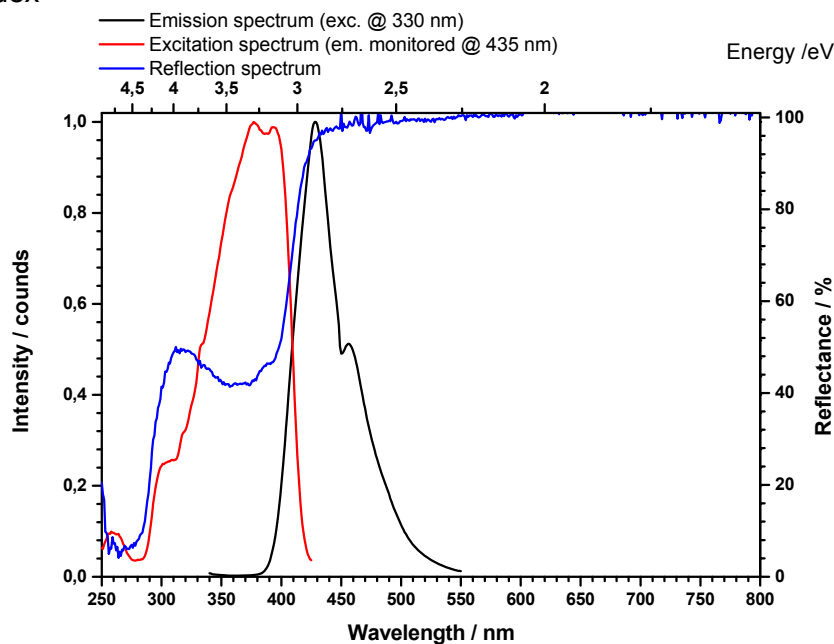
### OPTICAL PROPERTIES

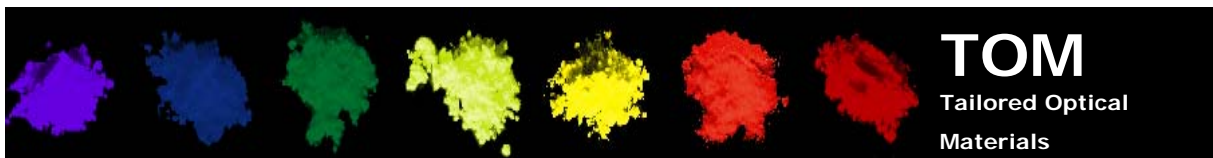
### Diluted in PMMA

Excitation maxima @ 435 nm	377 nm (3.29 eV), 394 nm (3.15 eV)
Emission maximum @ 330 nm exc.	428 nm (2,90 eV)
Centroid wavelength	442 nm (2.81 eV)
Full width @ half emission maximum	42 nm
Lumen equivalent	43 lm/W <sub>opt.</sub>
CIE1931 chromaticity coordinates (x, y)	0.1518; 0.0464
Band edge of host lattice	
Reflection @ 330 nm	46 %
Decay time $\tau_{1/e}$	5 ns (74 %); 8 ns (26 %)

### PHYSICAL PROPERTIES

Body colour	green
Density	about 1.4 g/cm <sup>3</sup>
Refractive index	-





## Phosphor Information Leaflet

### GENERAL

Name	Lumogen F Yellow 083
Chemical formula	Derivative of Perylene
Application areas	plastics

### OPTICAL PROPERTIES

### Diluted in PMMA

Excitation maxima @ 561 nm	445 nm (2.79 eV), 473 nm (2.62 eV)
Emission maximum @ 488 nm exc.	589 nm (2.11 eV)
Centroid wavelength	582 nm (2.13 eV)
Full width @ half emission maximum	120 nm
Lumen equivalent	309 lm/W <sub>opt.</sub>
CIE1931 chromaticity coordinates (x, y)	0.4447; 0.4299
Band edge of host lattice	
Reflection @ 488 nm	57 %
Decay time $\tau_{1/e}$	5 ns (53 %); 20 ns (47 %)

### PHYSICAL PROPERTIES

Body colour	ocher
Density	about 1.4 g/cm <sup>3</sup>
Refractive index	-

