



# Phosphor Information Leaflet

## GENERAL

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Name  
 Chemical formula  
 Application areas Tattoo UV ink- Blue

## OPTICAL PROPERTIES

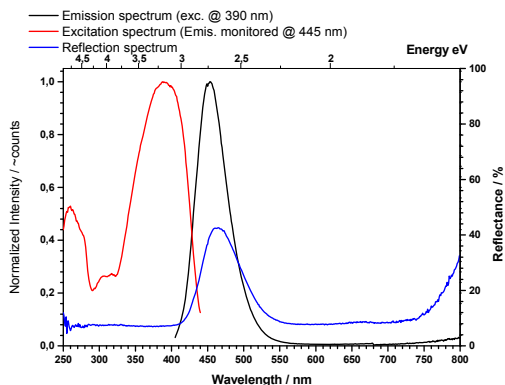
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|   |                        |
|---|------------------------|
| Excitation maxima @ 445 nm              | 388 nm (3.20 eV)       |
| Emission maximum @ 390 nm exc.          | 453 nm (2.74 eV)       |
| Centroid wavelength                     | 466 nm (2.66 eV)       |
| Full width @ half emission maximum      | 51 nm                  |
| Lumen equivalent                        | 72 lm/W <sub>opt</sub> |
| CIE1931 chromaticity coordinates (x, y) | 0.147, 0.066           |
| Band edge of host lattice               | -                      |
| Reflection @ 445 nm                     | 29 %                   |
| Decay time $\tau_{1/e}$                 | 4 ns                   |

## PHYSICAL PROPERTIES

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|                                  |      |
|----------------------------------|------|
| Body colour                      | blue |
| Density                          |      |
| Refractive index (at $\lambda$ ) |      |
| Mineral type                     | -    |
| Crystal system                   | -    |
| Space group (#)                  | -    |



# Phosphor Information Leaflet

## GENERAL

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Name  
Chemical formula  
Application areas Tattoo UV ink-green

## OPTICAL PROPERTIES

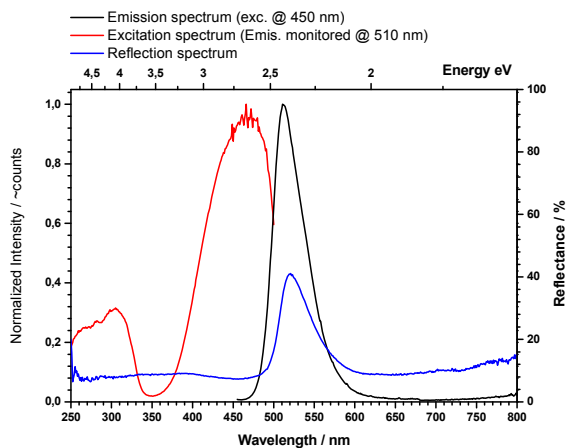
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|   |                         |
|---|-------------------------|
| Excitation maxima @ 510 nm              | 466 nm (2.66 eV)        |
| Emission maximum @ 450 nm exc.          | 512 nm (2.42 eV)        |
| Centroid wavelength                     | 530 nm (2.34 eV)        |
| Full width @ half emission maximum      | 46 nm                   |
| Lumen equivalent                        | 444 lm/W <sub>opt</sub> |
| CIE1931 chromaticity coordinates (x, y) | 0.191; 0.676            |
| Band edge of host lattice               | -                       |
| Reflection @ 510 nm                     | 35 %                    |
| Decay time $\tau_{1/e}$                 | 3 ns                    |

## PHYSICAL PROPERTIES

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|                                  |       |
|----------------------------------|-------|
| Body colour                      | green |
| Density                          |       |
| Refractive index (at $\lambda$ ) |       |
| Mineral type                     | -     |
| Crystal system                   | -     |
| Space group (#)                  | -     |



# Phosphor Information Leaflet

## GENERAL

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Name  
Chemical formula  
Application areas Tattoo UV ink-Magenta

## OPTICAL PROPERTIES

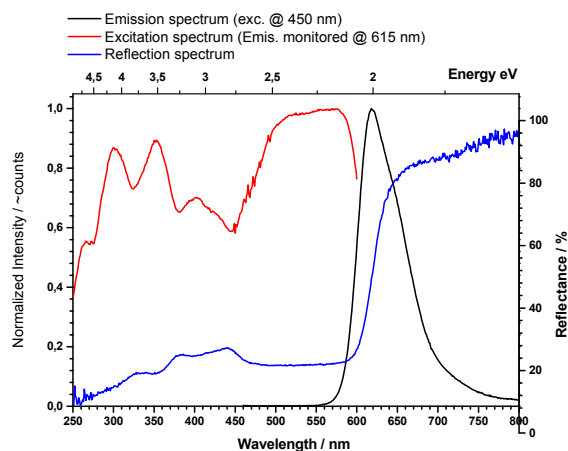
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|   |  |
|---|--|
| Excitation maxima @ 615 nm              | 301 nm (4.12 eV), 352 nm (3.52 eV) ,<br>572 nm (2.17 eV) |
| Emission maximum @ 450 nm exc.          | 619 nm (2.00 eV)   |
| Centroid wavelength                     | 640 nm (1.94 eV)   |
| Full width @ half emission maximum      | 63 nm  |
| Lumen equivalent                        | 189 lm/W <sub>opt</sub>                                  |
| CIE1931 chromaticity coordinates (x, y) | 0.666; 0.332   |
| Band edge of host lattice               | -  |
| Reflection @ 615 nm                     | 34 %   |
| Decay time $\tau_{1/e}$                 | 6 ns   |

## PHYSICAL PROPERTIES

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|                                  |         |
|----------------------------------|---------|
| Body colour                      | magenta |
| Density                          |         |
| Refractive index (at $\lambda$ ) |         |
| Mineral type                     | -       |
| Crystal system                   | -       |
| Space group (#)                  | -       |



# Phosphor Information Leaflet

## GENERAL

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|                   |                     |
|-------------------|---------------------|
| Name              |                     |
| Chemical formula  |                     |
| Application areas | Tattoo UV ink-Ocker |

## OPTICAL PROPERTIES

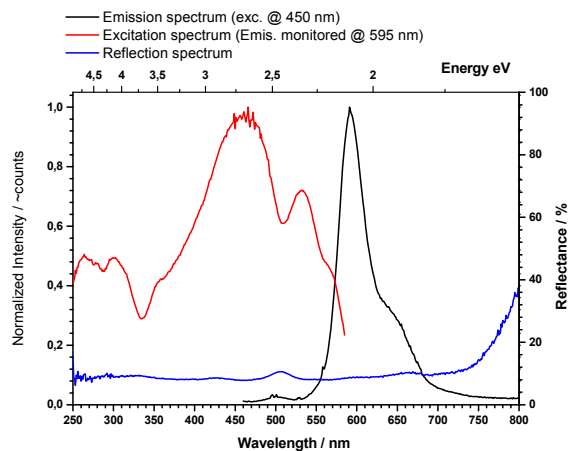
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|   |                         |
|---|-------------------------|
| Excitation maxima @ 595 nm              | 463 nm (2.68 eV),       |
| Emission maximum @ 450 nm exc.          | 591 nm (2,10 eV)        |
| Centroid wavelength                     | 610 nm (2.03 eV)        |
| Full width @ half emission maximum      | 30 nm                   |
| Lumen equivalent                        | 361 lm/W <sub>opt</sub> |
| CIE1931 chromaticity coordinates (x, y) | 0.576; 0.414            |
| Band edge of host lattice               | -                       |
| Reflection @ 595 nm                     | 8 %                     |
| Decay time $\tau_{1/e}$                 | 4 ns                    |

## PHYSICAL PROPERTIES

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|                                  |       |
|----------------------------------|-------|
| Body colour                      | ocher |
| Density                          |       |
| Refractive index (at $\lambda$ ) |       |
| Mineral type                     | -     |
| Crystal system                   | -     |
| Space group (#)                  | -     |



# Phosphor Information Leaflet

## GENERAL

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|                   |                      |
|-------------------|----------------------|
| Name              |                      |
| Chemical formula  |                      |
| Application areas | Tattoo UV ink-Orange |

## OPTICAL PROPERTIES

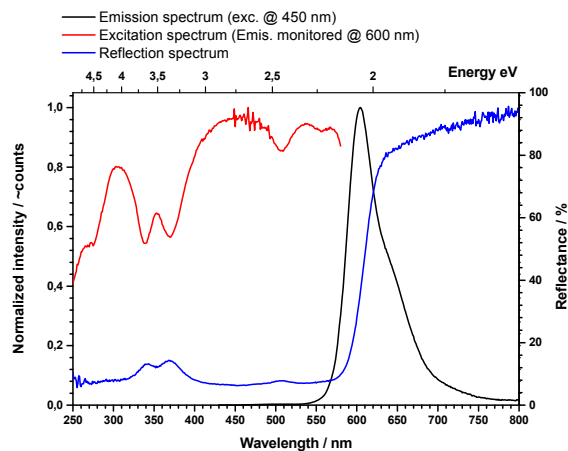
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|   |   |
|---|---|
| Excitation maxima @ 600 nm              | 303 nm (4.09 eV), 352 nm (3.52 eV),<br>449 nm (2.76 eV) |
| Emission maximum @ 450 nm exc.          | 604 nm (2.05 eV)  |
| Centroid wavelength                     | 624 nm (1.99 eV)  |
| Full width @ half emission maximum      | 64 nm   |
| Lumen equivalent                        | 284 lm/W <sub>opt</sub>                                 |
| CIE1931 chromaticity coordinates (x, y) | 0.627; 0.370  |
| Band edge of host lattice               | -   |
| Reflection @ 600 nm                     | 28 %  |
| Decay time $\tau_{1/e}$                 | 5 ns  |

## PHYSICAL PROPERTIES

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|                                  |        |
|----------------------------------|--------|
| Body colour                      | orange |
| Density                          |        |
| Refractive index (at $\lambda$ ) |        |
| Mineral type                     | -      |
| Crystal system                   | -      |
| Space group (#)                  | -      |



# Phosphor Information Leaflet

## GENERAL

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Name

Chemical formula

Application areas

Tattoo UV ink-pink

## OPTICAL PROPERTIES

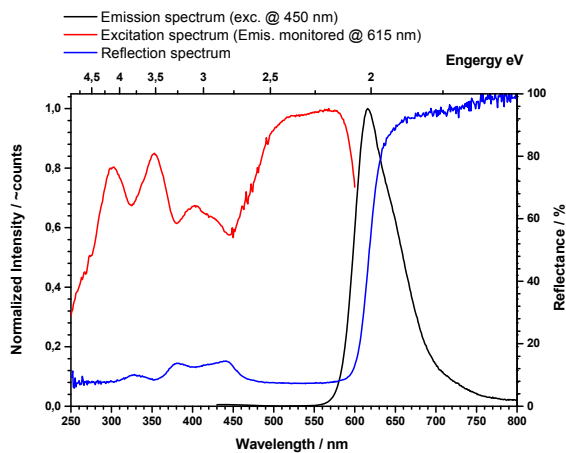
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|   |   |
|---|---|
| Excitation maxima @ 615 nm              | 320 nm (3.88 eV), 343 nm (3.62 eV),<br>578 nm (2.15 eV) |
| Emission maximum @ 450 nm exc.          | 617 nm (2.01 eV)  |
| Centroid wavelength                     | 637 nm (1.95 eV)  |
| Full width @ half emission maximum      | 65 nm   |
| Lumen equivalent                        | 200 lm/W <sub>opt</sub>                                 |
| CIE1931 chromaticity coordinates (x, y) | 0.658; 0.333  |
| Band edge of host lattice               | -   |
| Reflection @ 615 nm                     | 39 %  |
| Decay time $\tau_{1/e}$                 | 6 ns  |

## PHYSICAL PROPERTIES

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|                                  |      |
|----------------------------------|------|
| Body colour                      | pink |
| Density                          |      |
| Refractive index (at $\lambda$ ) |      |
| Mineral type                     | -    |
| Crystal system                   | -    |
| Space group (#)                  | -    |



# Phosphor Information Leaflet

## GENERAL

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Name  
Chemical formula  
Application areas Tattoo UV ink-red

## OPTICAL PROPERTIES

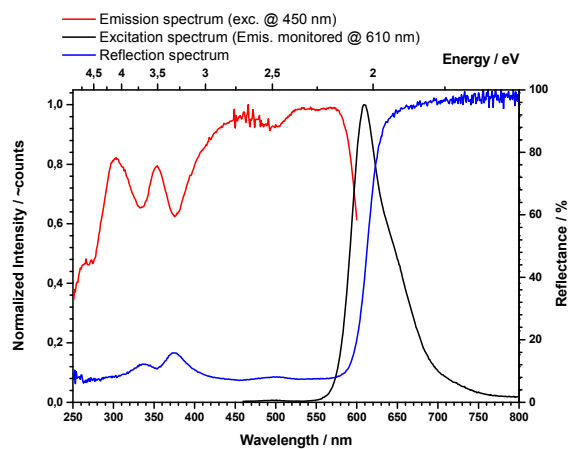
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|   |  |
|---|--|
| Excitation maxima @ 610 nm              | 301 nm (4.12 eV); 353 nm (3.51 eV)<br>571 nm (2.17 eV) |
| Emission maximum @ 450 nm exc.          | 610 nm (2.03 eV)                                       |
| Centroid wavelength                     | 630 nm (1.97 eV)                                       |
| Full width @ half emission maximum      | 55 nm  |
| Lumen equivalent                        | 246 lm/W <sub>opt</sub>                                |
| CIE1931 chromaticity coordinates (x, y) | 0.642; 0.354   |
| Band edge of host lattice               | -  |
| Reflection @ 610 nm                     | 40%  |
| Decay time $\tau_{1/e}$                 | 5 ns   |

## PHYSICAL PROPERTIES

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|                                  |     |
|----------------------------------|-----|
| Body colour                      | red |
| Density                          |     |
| Refractive index (at $\lambda$ ) |     |
| Mineral type                     | -   |
| Crystal system                   | -   |
| Space group (#)                  | -   |



# Phosphor Information Leaflet

## GENERAL

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|                   |                      |
|-------------------|----------------------|
| Name              |                      |
| Chemical formula  |                      |
| Application areas | Tattoo UV ink-yellow |

## OPTICAL PROPERTIES

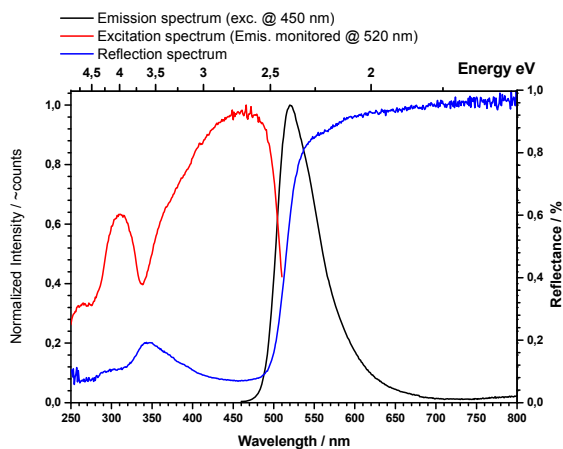
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|   |                                 |
|---|---------------------------------|
| Excitation maxima @ 520 nm              | 310 nm (4 eV); 466 nm (2.66 eV) |
| Emission maximum @ 450 nm exc.          | 520 nm (2.38 eV)                |
| Centroid wavelength                     | 545 nm (2.28 eV)                |
| Full width @ half emission maximum      | 60 nm                           |
| Lumen equivalent                        | 493 lm/W <sub>opt</sub>         |
| CIE1931 chromaticity coordinates (x, y) | 0.286; 0.648                    |
| Band edge of host lattice               | -                               |
| Reflection @ 520 nm                     | 59 %                            |
| Decay time $\tau_{1/e}$                 | 3 ns                            |

## PHYSICAL PROPERTIES

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|                                  |        |
|----------------------------------|--------|
| Body colour                      | yellow |
| Density                          |        |
| Refractive index (at $\lambda$ ) |        |
| Mineral type                     | -      |
| Crystal system                   | -      |
| Space group (#)                  | -      |





# Phosphor Information Leaflet

## GENERAL

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|                   |                     |
|-------------------|---------------------|
| Name              |                     |
| Chemical formula  |                     |
| Application areas | Tattoo UV ink-white |

## OPTICAL PROPERTIES

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|   |                        |
|---|------------------------|
| Excitation maxima @ 450 nm              | 392 nm (3.16 eV)       |
| Emission maximum @ 360 nm exc.          | 447 nm (2.77 eV)       |
| Centroid wavelength                     | 466 nm (2.66 eV)       |
| Full width @ half emission maximum      | 48 nm                  |
| Lumen equivalent                        | 84 lm/W <sub>opt</sub> |
| CIE1931 chromaticity coordinates (x, y) | 0.146; 0.078           |
| Band edge of host lattice               | -                      |
| Reflection @ 450 nm                     | 78 %                   |
| Decay time $\tau_{1/e}$                 | 4 ns                   |

## PHYSICAL PROPERTIES

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|                                  |       |
|----------------------------------|-------|
| Body colour                      | white |
| Density                          |       |
| Refractive index (at $\lambda$ ) |       |
| Mineral type                     | -     |
| Crystal system                   | -     |
| Space group (#)                  | -     |

