



Leuchtstoffwerk Breitung GmbH

Scintillators

HIGH-PURITY PHOSPHORS FOR SAFE DIAGNOSES





Scintillators in use

X-ray phosphors, also known as scintillation phosphors or scintillators, convert ionising radiation into UV radiation or visible light. This property is mainly used in medical technology, but also in safety technology for imaging processes. Our robust scintillators have also proven their worth in material testing and raw material exploration.

We produce high-purity X-ray phosphors based on praseodymium and cerium-doped gadolinium oxysulphides. These products are used in the production of scintillator ceramics for computed tomography. This demanding application in medical diagnostics results in particularly high requirements for the consistent quality and reliability of each individual batch.

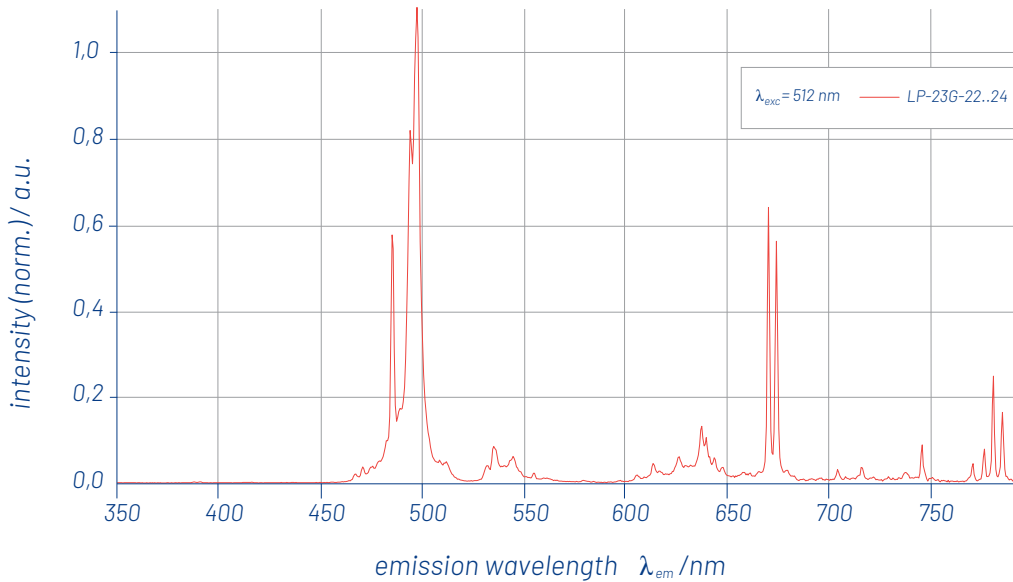


All X-ray phosphors are manufactured according to especially strict protocols in a separate building at Leuchtstoffwerk Breitung in order to avoid cross-contamination with other chemicals or phosphors.

Let us personally assist you in choosing the right X-ray phosphors for your requirements.

General information

Name: Gadolinium oxysulphides doped with praseodymium and cerium
Application: Phosphor for converting X-rays into visible light



Physical properties

Pigment: White
 Specific density: 7.3 g/cm³
 Crystal structure: trigonal, $P\bar{3}m1$ (SG 164)
 Material system: Oxysulphides

Optical properties

Emission colour (512 nm): Yellowish green
 Typical peak wavelength: 512 nm
 Typical mean half-value width: < 6 nm

ARTICLE NO.	DESIGNATION	FORMULA	PARTICLE SIZE (d ₅₀)	COLOUR SPACE $\lambda_{exc} = 254 \text{ nm}$	
				x	y
3203040	LP-R23G-22-00	Gd ₂ O ₂ S: Pr, Ce	≤ 3.2 μm	0.20	0.63
3203050	LP-R23G-23-00	Gd ₂ O ₂ S: Pr, Ce	6 - 9 μm	0.20	0.63
3203060	LP-R23G-24-00	Gd ₂ O ₂ S: Pr, Ce	12 - 16 μm	0.20	0.63

We will be happy to adapt our products to our customers' specific application requirements.

Code of Conduct

Medical technology

innovation

X-ray-VIS luminescences

environment

tradition

customer satisfaction

imaging techniques

material testing



tailor-made

scintillators

raw material exploration

high-tech

computed tomography

X-Ray-VIS converter

highest quality

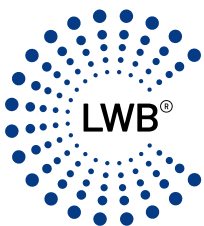
synergies

safety technology

X-rays

Treibacher Industrie AG

Made in Breitung



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DIN EN ISO 9001
DIN EN ISO 14001
DIN EN ISO 50001