

Information about the content

Scope:	Plansee SE	Prepared/Updated:	Abenthung Peter
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This specification covers WLZ-rods (W – 2,5 weight% La₂O₃ and 0,07 weight% ZrO₂), produced in the diameter range of 6,0 – 25,0 mm. The primary field of application is the lighting industry.

1 Dimensions and tolerances

Diameter [mm]	Ø-tolerance [mm]	
	Swaged / forged	Centerless ground
6,0 – 16,0	± 0,30	± 0,02
16,01 – 25,0		± 0,03

Production length [mm]	Straightness [mm] / 1 meter length	
	Cleaned	Ground
> 300	< 2,5	< 1,0

2 Physical and mechanical product properties

Density	Ø 6,0 – 14,0 mm	> 18,20 g/cm ³
	Ø 14,1 – 25,0 mm	> 18,15 g/cm ³
Grain size (ASTM E112)	All dimensions	8 and finer
Non destructive test	All dimensions	Eddy current test
	≥ 15 mm	Ultrasonic test
	Visual inspection	



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3 Chemical composition

Main and minor components	Plansee		EU-Directive
	Typical	Min. content [%] Guaranteed	RoHS ^{a)}
W	Balance		-
La₂O₃ (La)	2,3 – 2,7 % (1,96 – 2,30 %)		-
ZrO₂ (Zr)	0,05 – 0,09 % (0,04 – 0,07 %)		-
Impurities	Max. values [µg/g]		Max. values [µg/g]
	Typical	Guaranteed	
Al	1	15	-
Cr	3	20	-
Cu	1	10	-
Fe	8	30	-
K	1	10	-
Mo	12	100	-
Ni	2	20	-
Si	1	20	-
C	6	30	-
H	-	5	-
N	1	5	-
Cd	1	5	100
Hg ^{b)}	-	1	1000
Pb	1	5	1000
Cr (VI)			1000
Organic impurities (e.g. PBB, PBDE, PFOS, PFOA)	- ^{**)}	- ^{**)}	1000

a) EU-directives 2015/863/EU, 2011/65/EU and 2000/53/EC

b) Initial value

^{**)} The presence of Cr (VI) and organic impurities can definitely be excluded because of the production process (multiple heat treatments at temperatures above 1000 °C in H₂-atmosphere).

The chemical composition is checked by means of random sampling. The sampling inspection plan, analysis and evaluation methods are determined in the internal instruction PSE-020-WI-003. The application of the measured values for the chemical analysis is defined in PSE-680-WI-001.

Remarks: The specified physical and chemical characteristics are disclosed not regarding measurement accuracy.



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4 Packaging, labelling, storage and certification

4.1 Packaging, labelling and storage

Standard individual packing: rods are either bundled ($\varnothing < 6$ mm) or packed individually.

Each package will be provided with a label with the following information:

Producer's name:	Plansee
Plansee order number:	
Lot number:	
Material number:	
Material:	WLZ
Dimension:	Rod diameter and length
Surface:	
Quantity:	Total quantity in m or kg
Date:	

The material must be kept in a dry place and protected from mechanical damage. It is best to keep the material in the original packing until used.

Special packing: (extra costs will be invoiced)

Special packing should be used if the material is stored under unusual conditions or aggressive atmosphere (e.g. sea air, ...).

4.2 Inspection documents

Following inspection documents will be supplied upon customer request according to EN 10 204:

Test report 2.2

Plansee confirms with this test report that the delivered product meets the specification and gives details of the material properties according to ongoing production surveillance, not directly related to the particular production batch.

Inspection certificate 3.1 (extra costs will be invoiced)

An inspection officer from Plansee confirms with this inspection certificate that the delivered product meets the specification and gives test results related to the particular production batch.



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PRODUCT SPECIFICATION

5 Order instructions

Please quote following information when ordering:

- Product description
- Quality (the number of this specification must be mentioned)
- Surface condition
- Dimension
- Quantity in m or kg
- Required certificate and content in case of a 3.1 inspection certificate
- *For special packing:* Specification of packaging

For further information on our delivery possibilities, please look into our <http://www.plansee.com>

6 Referenced standards

The standards applied for the test methods are listed in the Plansee standard InfoBase and are made available upon request.

Changes to last version:

Replacement for PS-MPR-164

- **Regular content review** conducted by Thomas Friedrich on 30.04.2021 no changes of content
- New Document numbering key
- New Document layout
- Section 2: Visual inspection added
- Section 3: La- and Zr content added
- Section 3: RoHS Directive appellation updated
- Section 4.2: Description of Test Report / Inspection Certificate eliminated



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