Rzeczpospolita Polska

VIGO PHOTONICS

NCBR Narodowe Centrum Badań i Rozwoju

Att. No. 1

ORDER DESCRIPTION

1. Object of the contract

The subject of the order is the supply of:

No	Product name	Pcs.
PART I		
1	TMIn - OEG - Trimethylindium – 1000 g	2 pcs.
PART II		
2	Arsine AsH3 - bottle 50l, 27 kg	1 pcs.
3	Phosphine PH3 - bottle 50l, 22 kg	1 pcs

2. Parameters

Product name	Parameter	Specification
PART I		
TMIn - OEG - Trimethylindium - 1000gr	Opto electronic-grade	
	Metal purity:	- Indium (unit: %): • Specification > 99,9999 - Oxygen (unit:PPM, NMR) • Specification < 1
	Metal impurities (ICP) (unit: PPM): Aluminium (Al), Antimony (Sb), Arsenic (As), Bismuth (Bi), Chromium (Cr), Copper (Cu), Gallium (Ga), Germanium (Ge), Iron (Fe), Lead (Pb), Magnesium (Mg), Manganese (Mn), Selenium (Se), Phosphorous (P), Silicon (Si), Sulfur (S), Tellurium (Te), Tin (Sn), Zinc (Zn)	• Specification < 0,1
	Metal impurities (indications based on: Inductively excited plasma coupled mass spectrometry) (unit: PPM): Cadmium (Cd), Mercury (Hg)	• Specification < 0,01
	Bubbler	• with bypass valve

Product name	Parameter	Specification
PART II		
	Grade:	≥ 99.99995%

Arsine AsH3 - bottle 50l, 27 kg	Valve Connection	• Din 1 or Diss 632 Pneumatic
	Impurities: Cadmium (Cd), Calcium (Ca), Chromium (Cr), Cobalt (Co), Copper (Cu), Gallium (Ga), Germanium (Ge), Lead (Pb), Magnesium (Mg), Molybdenum (Mo), Nickel (Ni), Silicon (Si), Sodium (Na), Tin (Sn), Zinc (Zn),	• ≤10 ppbw
	Impurities: Germane (GeH4), Silane (SiH4)	• ≤50 ppbv
	Impurities: Carbon Dioxide (CO2), Oxygen (O2)	• ≤ 25 ppbv
	Impurities: Carbon Monoxide (CO), Carbonyl Sulfide (COS), Hydrogen Sulfide (H2S), Nitrogen (N2), Argon (Ar)	• ≤50 ppbv
	Impurities: Ethane (C2H6), Methane (CH4), Water (H2O),	• ≤100 ppbv
Phosphine PH3 - bottle 50l, 22 kg	Grade:	• ≥ 99.9995%
	Valve Connection	• DIN 1 or Diss 632 Pneumatic
	Impurities: Carbon Dioxide (CO_2)	• ≤ 0,05 ppmv
	Impurities: Water (H_2O),	• ≤ 0,14 ppmv
	Impurities: Arsine (AsH_3), Carbon Monoxide (CO), Ethane (C_2H_6), Ethylene (C_2H_4), Methane (CH_4), Oxygen (O_2), Argon (Ar)	• ≤ 0,1 ppmv
	Impurities: Hydrogen (H_2)	• ≤5 ppmv
	Impurities: Nitrogen (N_2)	• ≤ 0.12 ppmv