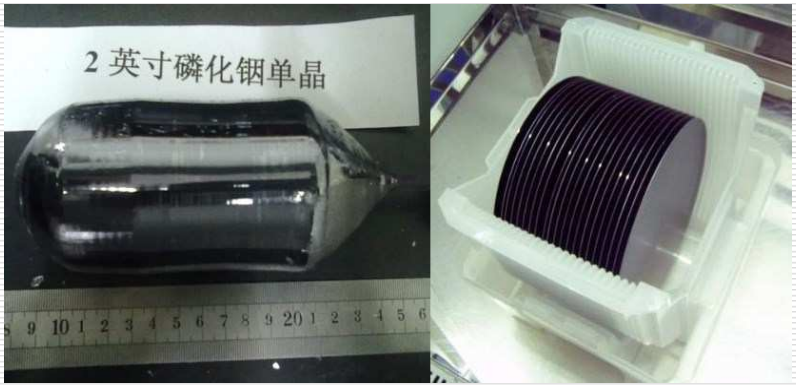
InP Product

- The indium arsenide ingot, the indium arsenide wafer, and the basic indium phosphide (InP) are a group III-V compound semiconductor material obtained by combining a group III element indium (In) and a group V element phosphorus (P).

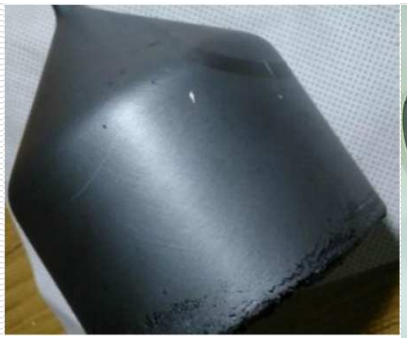
- Silver-gray with metallic luster
- Melting point 1062℃。
- Density4.787g/cm^3
- Microhardness is 435±20/mm
- Band gap width 1.34eV (300K)

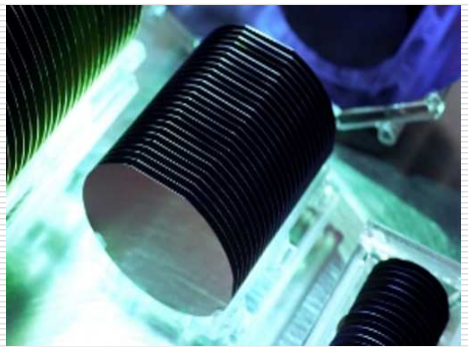


InP is used to prepare high-frequency devices such as InP-based laser diodes (LDs), light-emitting diodes (LEDs) and photodetectors, and high electron mobility transistors (HEMTs) and heterojunction bipolar transistors (HBTs) in optical communications.

InP Product

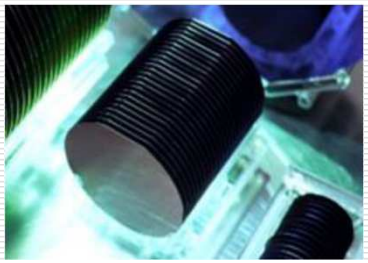
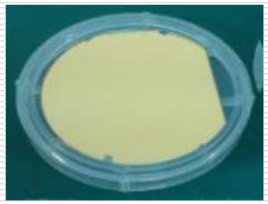
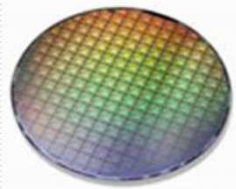
Indium Phosphide substrate wafer with low dislocation density and high quality



Application:

lasers and detectors for optical fibre communication、OEIC 、microwave devices and MMIC, etc.

InP Product

Dopant	Diameter (inch)	Type	Carrier Con(cm-3)	Mobility ($cm^2/V.s$)	Resistivity (Ω.cm)	EPD (cm^{-2})
Undoped InP	2-4	N	$(0.8-2)\times10^{16}$	$(3.5-4)\times10^3$		< 500 < 1000
S-InP	2-4	N	$(0.8-3)\times10^{18}$ $(4-8)\times10^{18}$	$(2.0-2.4)\times10^3$ $(1.0-1.6)\times10^3$		< 500 < 1000 < 5000
Zn-InP	2-4	P	$(0.6-2)\times10^{18}$ $(3-6)\times10^{18}$	70-90 50-70		< 500 < 1000
Fe-InP	2-4	半絶縁	10^7-10^8	≥2000	10^7-10^8	< 500 < 2000 < 5000

Single side polished¥double side polished, EPI-Ready,（100）, standard thickness

InP Product

Wafer Specification			
items	2″	3″	4″
Dia (mm)	50.5±0.5	76.2±0.5	100.0±0.5
Thickness (um)	350±25	600±25	600±25
Orientation	(100)/(111)	(100)/(111)	(100)/(111)
Deviation	±0.5°	±0.5°	±0.5°
Major (mm)	16±2	22±2	32.5±2
Minor (mm)	8±1	11±1	18±1
TTV (um)	<10	<10	<15
Bow (um)	<10	<10	<15
Warp (um)	<15	<15	<15

InP Application

FIG.1

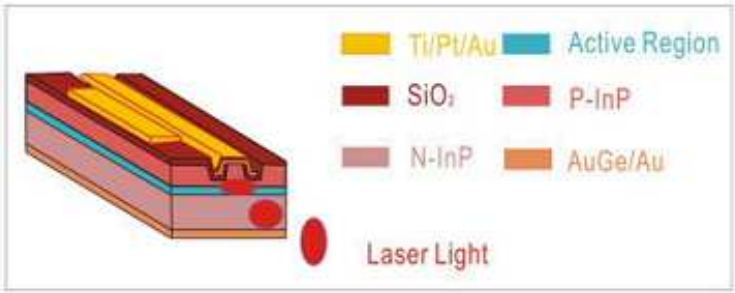
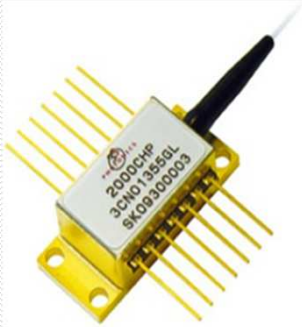


FIG.2



磷化铟基激光器