

ABSTRACT OF THE DISCLOSURE

The present invention is an apparatus for delivering high purity gallium trichloride in the vapor phase to a gallium nitride reactor, comprising: a source of carrier gas at an elevated pressure; a purifier to remove moisture from the carrier gas; a heater capable of heating the carrier gas to at least 80°C; a container having a supply of gallium trichloride, a valve controlled inlet for the carrier gas having a dip tube with an outlet below the level of the gallium trichloride, a valve controlled outlet for removing the carrier gas and entrained gallium trichloride; a heater capable of heating sufficient to melt the gallium trichloride; a delivery line connected to the valve controlled outlet for carrying the entrained gallium trichloride to a reaction zone for gallium nitride. A process is also described for the apparatus.

15

20 6922ZP USA.DOC