

Innovative volume production for III-V Compound Semiconductor LED and Laserchips at OSRAM Opto Semiconductors

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OSRAM Opto Semiconductors is one of the worlds leading LED- and Laser company. In this presentation we will give a short introduction including the LED-market and our company – who we are and what we do. We will further give an overview on our main technology platforms and comment on their special technical and manufacturing challenges: 2 inch GaN-based visible blue and green laser diodes, 4 inch based GaAs- Infrared laser diodes, 6 inch sapphire volume emitters, 6 inch InAlGaP-based red, orange and yellow as well as InGaN-based blue and green surface emitting LEDs.

In order to give also more detailed insights, for each technology platform an example of a special process is given, where we show some key developments which brought those single processes into a mature state suitable for high volume mass production with high quality and yield. Furthermore, we will talk about the increasing importance of industry 4.0 and what this means to our daily production.

Finally we outline some future technology platforms and their applications.