

Who are we?

- HGTECH is > \$1B company, SEN: 00098
 - HG Genuine is optical transceiver division
 - Decided a few year ago to move into DCO
 - Just opened new \$100M factory for 400G
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We are an optical transceiver manufacturer

The Rise of the Optical Engine

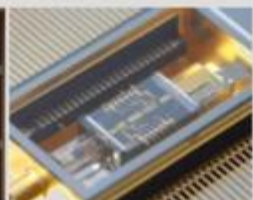
- An Optical Engine is loosely any widget that contains all the difficult (or IP) optical tech so that the next higher level assembly has a lower threshold of difficulty and can be the lower margin part.



Luxtera (SiPh)



Infinera (InP)



LioniX (SiN)



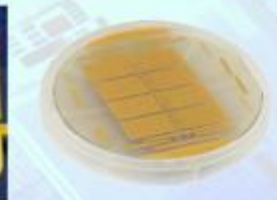
TEEM (glass)



Lightwave Logic
(polymer)



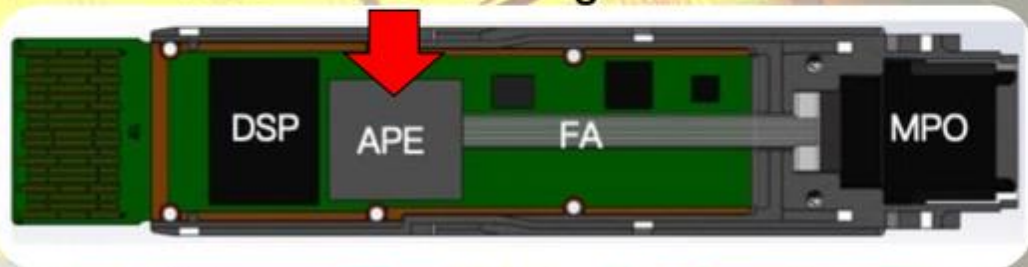
AWG (Silica PLC)



LiNbO3

* [Slideshare](#), [Yole Développement](#), [Silicon Photonics and Photonic Integrated Circuits 2019 Report](#)

Alibaba Photonics Engine



* PIC Magazine, Oct 18 2019, Alibaba Cloud Silicon Photonic Based 400G DR4

A seismic shift in optical transceiver mfg:

- The barrier to entry to making the physical transceiver has been lowered.
- But the barrier to entry to making the optical engine has risen.

Why are we here today speaking to EPIC?

- Design for Manufacturing is the difference between making and losing money.
- At HG Genuine the time between EVT and PVT 3-6 months long.
- I've generated a "make or break" graph from last few years' data.



- 400G is currently pushing the limits of what is doable within the DCO price targets (\$1/Gb/s)
- The companies of EPIC have the technology to make "Beyond 400G" happen.