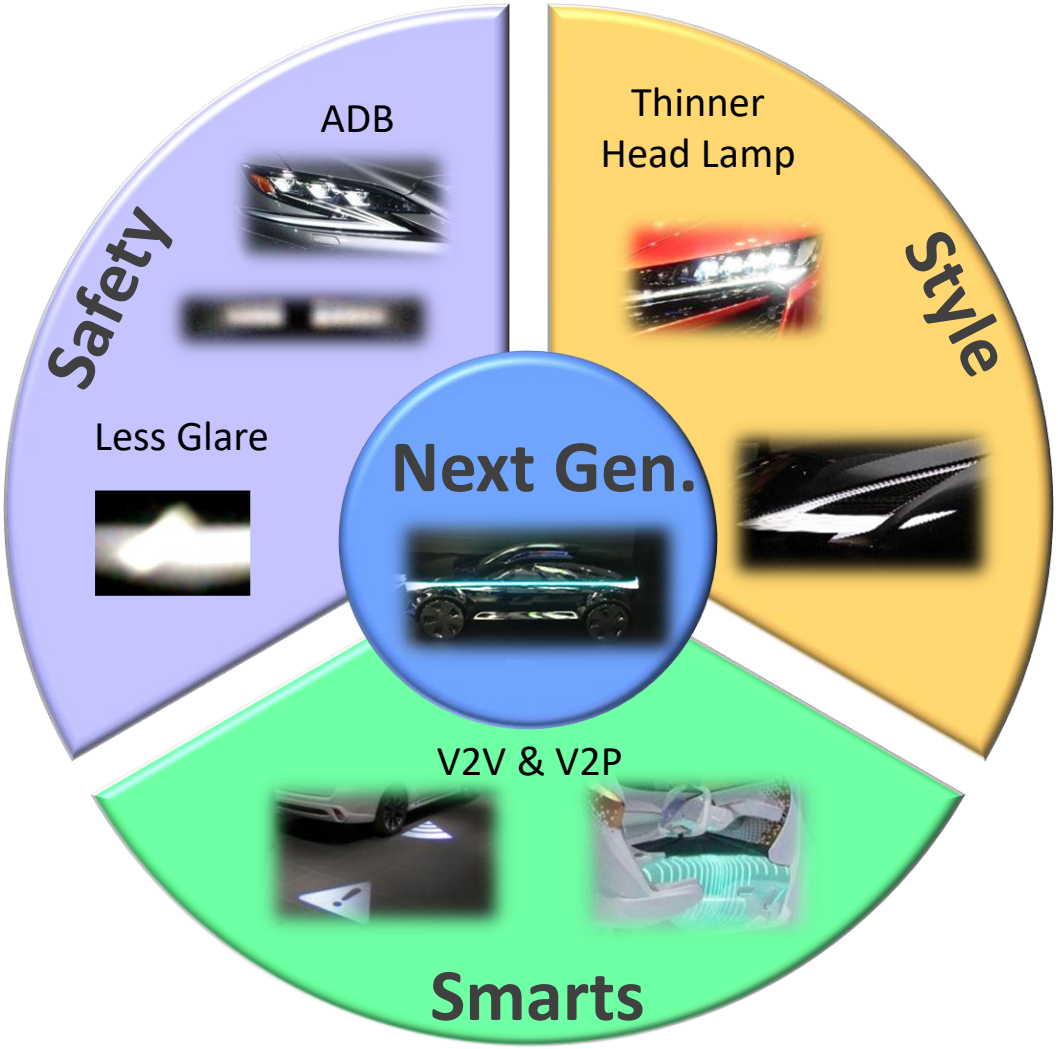
Evolvement of Intelligent Lighting Technology Towards Automotive Safety

DVN US Workshop 2019

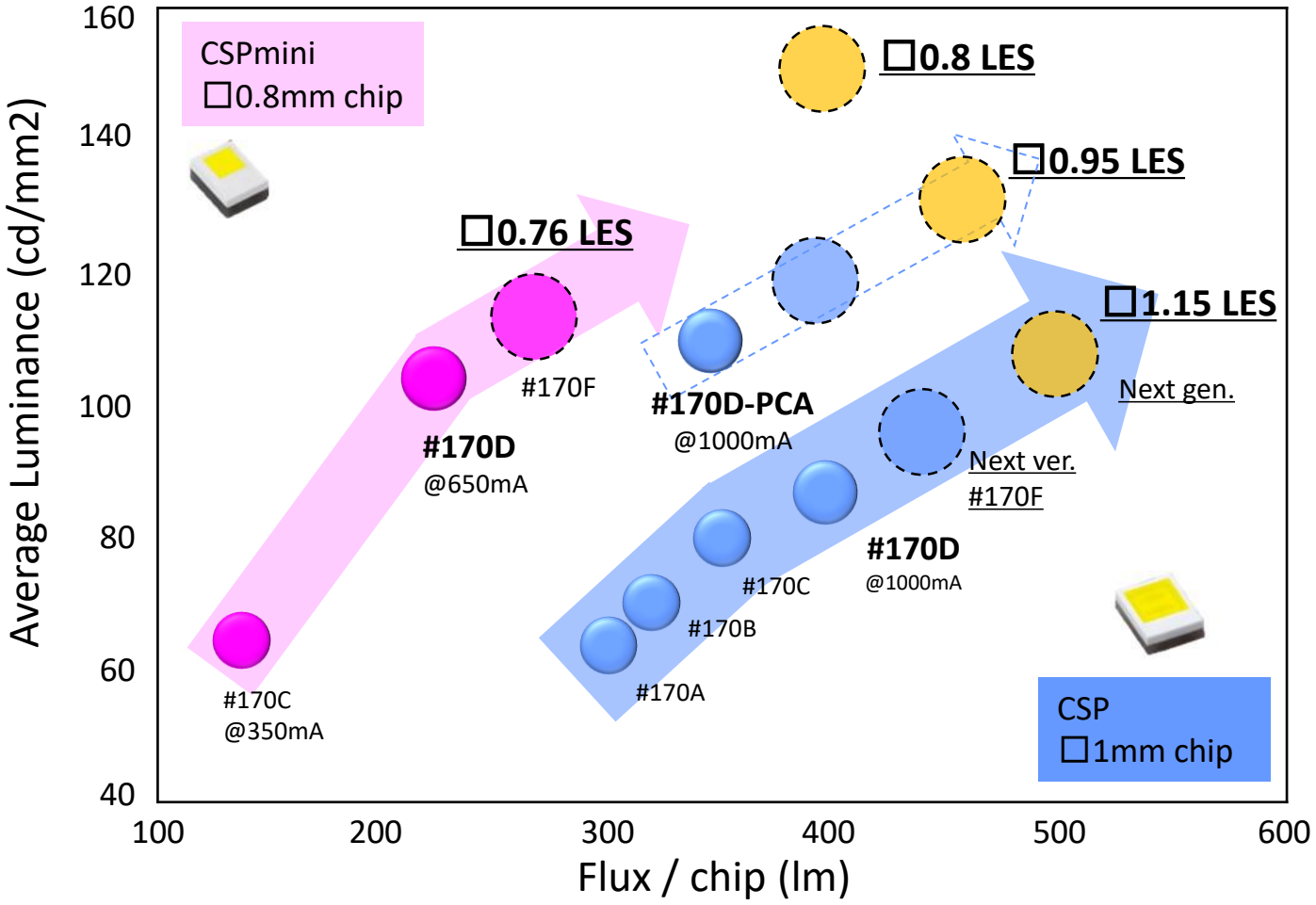
DrivingVisionNews.com
Automotive lighting and driver assistance technologies

Todd Lynema | 16th January 2019

Varying Qualities of Future Lighting



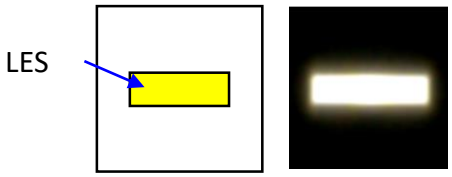
Advancement of Chip Technology

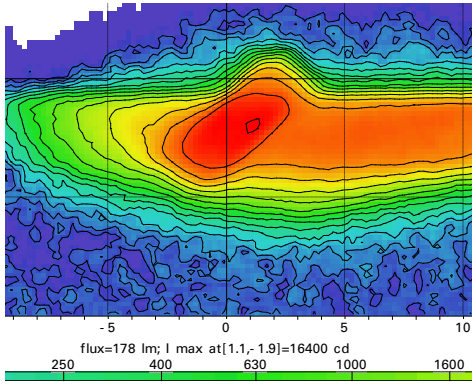


Promotion of Packaging Technology

—Simulation (Focused on Cut-Off line)—

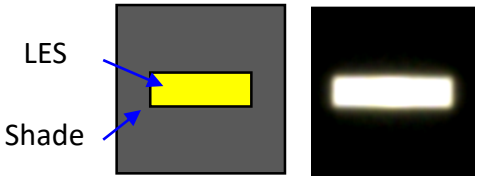
without Shade
(conventional)

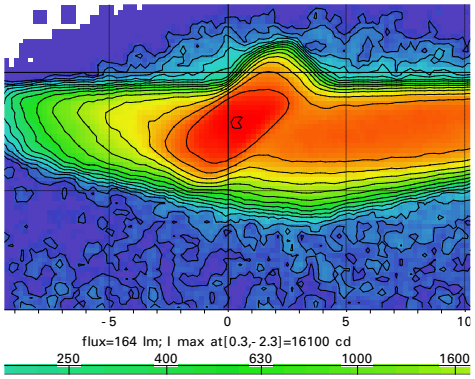




Smooth edge gradient

with Shade

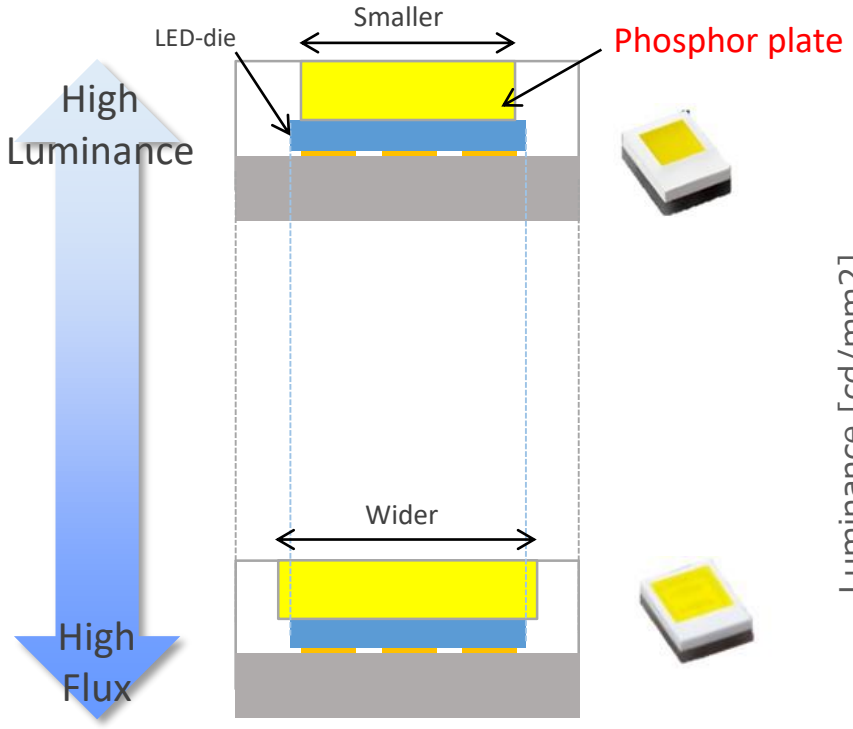


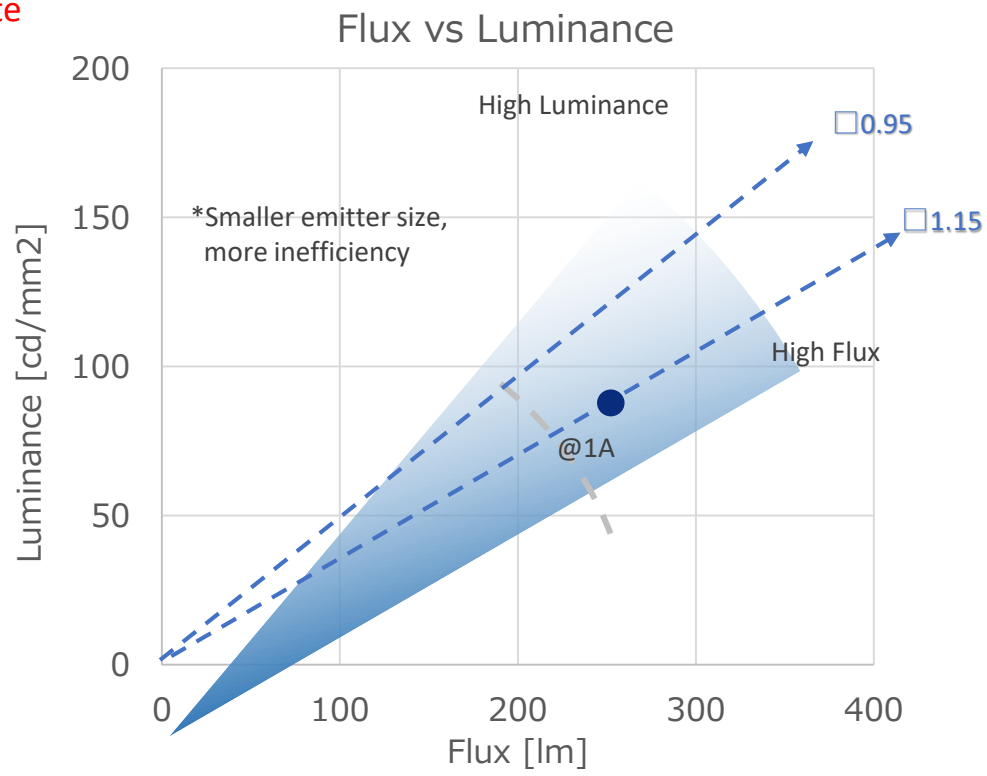


Sharper edge gradient

Sharper Light Edge on LED Reduces Glare of Headlamp

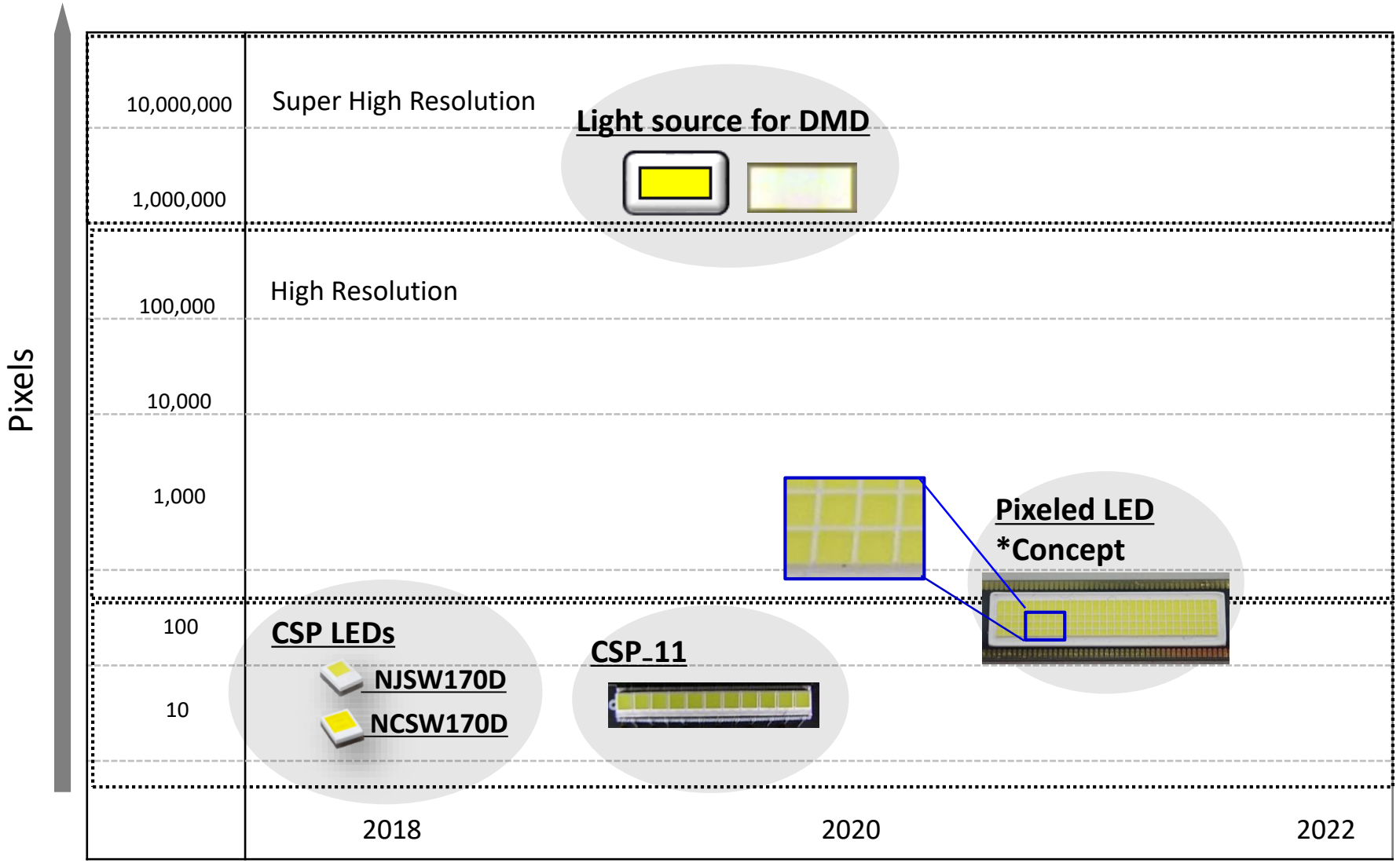
Scalable Emission Window





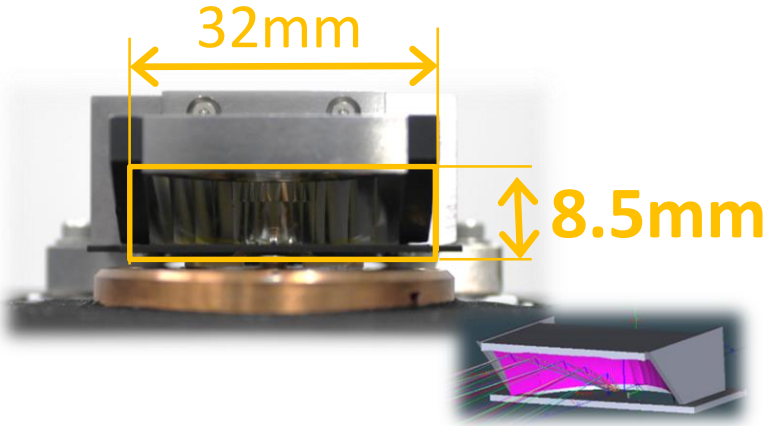
Flexibility of Phosphor Converter – High Flux or High Luminance?

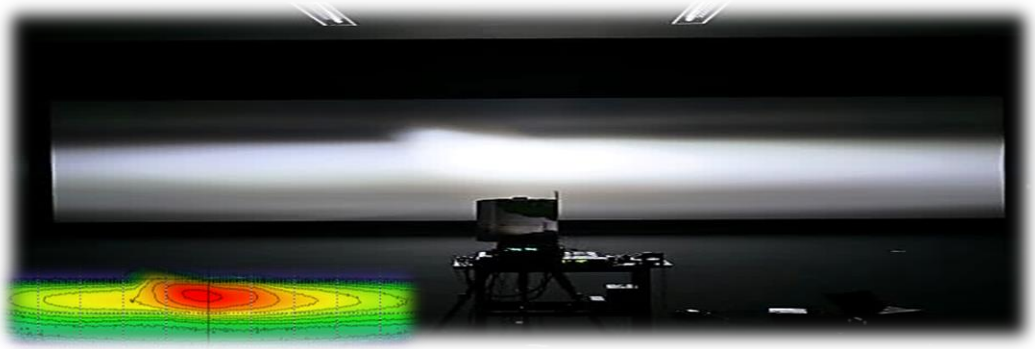
LED Options for ADB Resolution



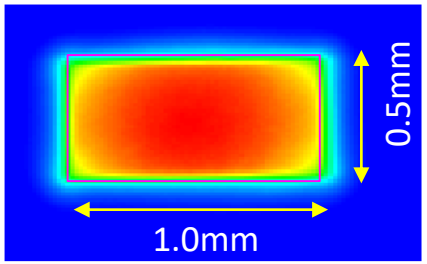
LD Technology for Super Thin Headlamp

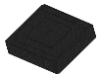
Super Thin Full-Laser Head lamp





- Reflector Type : Full Laser Head Lamp (Low・High 2 Lamp for each)
- Reflector size
  Low : W 32 x D 20 x H 8.5 mm
  High : W 32 x D 18 x H 12 mm

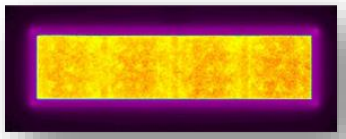


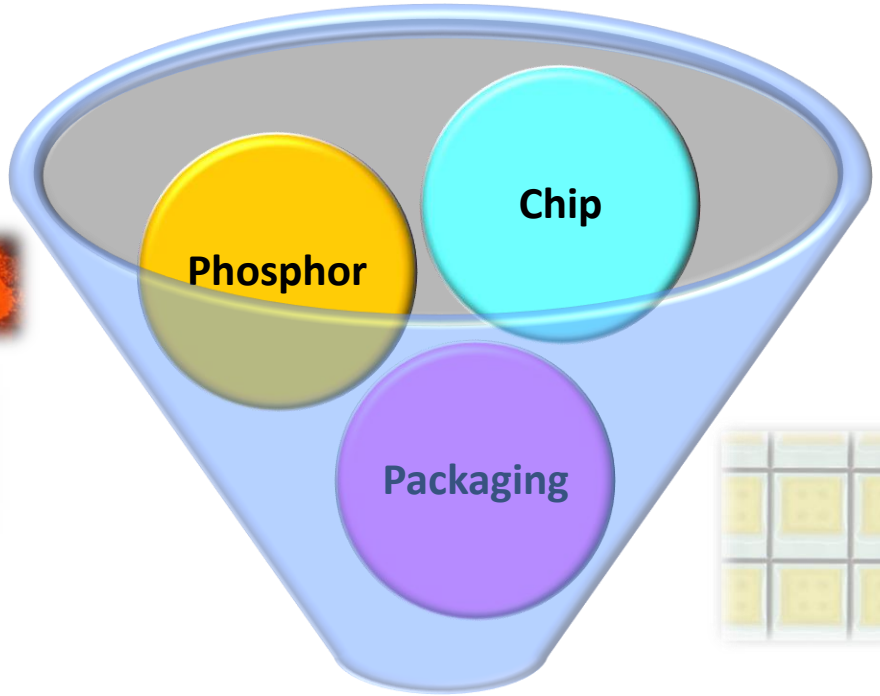


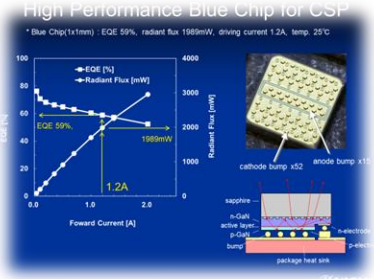
Giga White Gen.2
>1klm@2.3A
Peak 600cd/mm^2

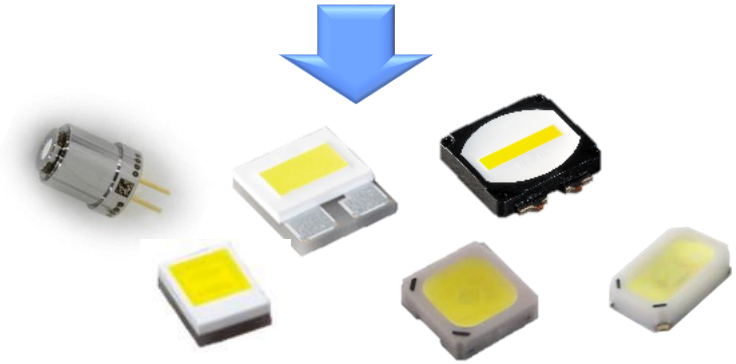
- White Laser : Giga-White (multi-chip)
- 1050 lm, 670cd/mm2, LES 0.5mm x 1.0mm

Improving Core LED Technology









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Thank You!