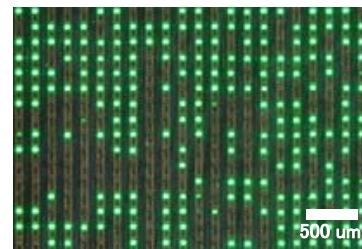


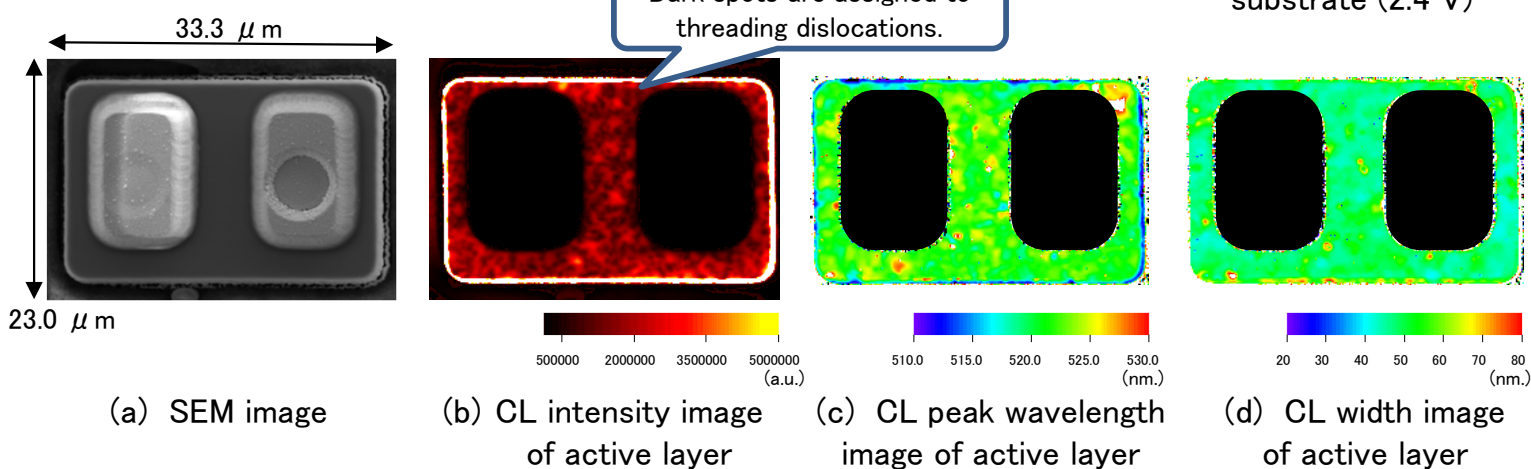
Defect analysis of micro-LED with sub- μm level

Cathodoluminescence (CL) is a unique technique that combines electron microscopy and spectroscopic analysis. CL can evaluate point defects of semiconductor chips with high sensitivity and high spatial resolution. CL is a very effective method for evaluating micro-sized LEDs.

Micro-LED display is a self-emitting display technology where each subpixel is an individual LED chip, and it plays an increasingly important role in the new generation of display technology. Although micro-LEDs are small in size and analysis methods are limited, CL analysis is a very useful method that can provide a lot of information about properties.

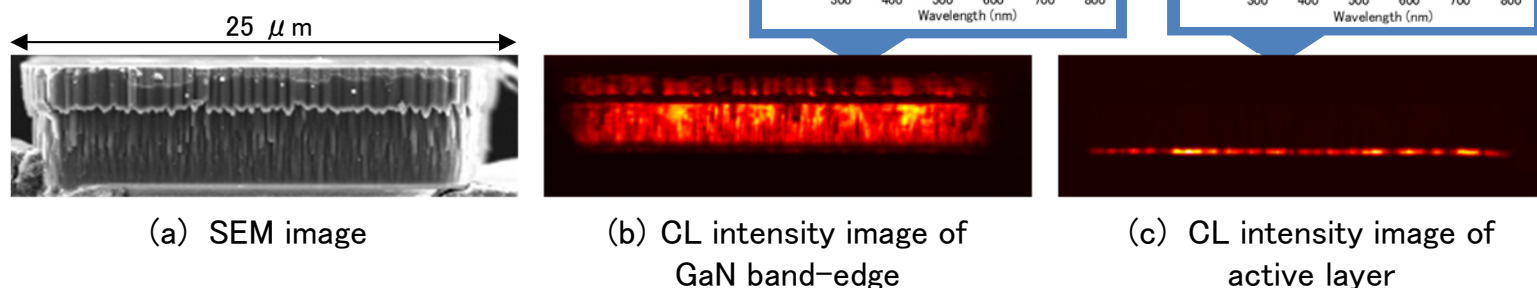


Plan-view SEM-CL analysis



- ✓ CL intensity is related to defects.
- ✓ CL peak wavelength is mainly related to stress.
- ✓ CL width is related to crystallinity.

Cross-sectional SEM-CL analysis



- ✓ CL has the feature of high spatial resolution, which enables to obtain information such as defects in each layer.

CL analysis can contribute to improving your R&D, reliability, and productivity.