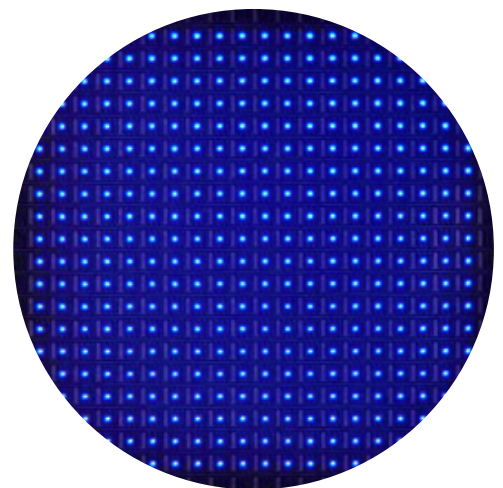




**Unique solution enabling
cost-competitive
microLED**

FlexiNOVA Blue microLED

Patented High-Voltage
architecture designed for
mass production



**Versatile chip design,
chip size & chip voltage**

*15x30 μm^2 6V
FlexiNOVA microLEDs
assembled on a 400 μm
pitch backplane*

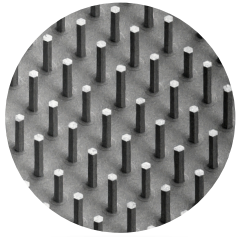
Main FlexiNOVA Features

Technology Platform

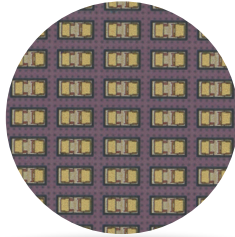
- Chip sizes range from $15 \times 30 \mu\text{m}^2$ to $3.5 \times 3.5 \mu\text{m}^2$
- Up to 1.1 Billion chips per 8-inch wafer
- Record External Quantum Efficiency (EQE) down to 3.5 μm
- Constant efficiency with chip size reduction
- Multiple operation voltages (3V / 6V / 9V)
- Adaptive COC design (consult us)

FN1530F6 Chip Characteristics

- LED technology: 8" GaN on Silicon
- LED size: 15 $\mu\text{m} \times 30\mu\text{m}$
- Package: 2 pads flip chip
- Color: Blue, 460nm
- Peak efficiency: @0.1 A / cm^2
- Low wavelength dispersion
- RoHS compliant



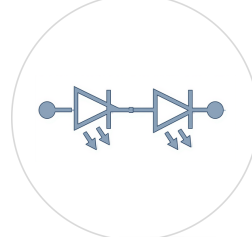
Unique nanowire microLED
high EQE, down to 3.5 μm
chip size



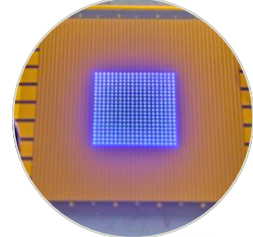
15x30 μm^2 microLEDs
on 200 mm donor wafer
(COW)



15 $\mu\text{m} \times 30 \mu\text{m}$ Chip
SEM view



microLEDs serial
connexion in the chip
body



400 μm pitch glass
backplane 20x20 chips
array - 0.8 mm^2

Distinctive advantages



High-voltage for efficiency Boost :

The nanowire structure enables serial connection of LEDs in the chip, allowing high-voltage operation and power loss reduction



Cost effective breakthrough:

- Ultra-high chip density on large wafers
- Made from standard semiconductor processing on Silicon wafers
- Ultra narrow dicing streets achieved through advanced etching processes

Applications



Mid-size displays



Large displays / high
resolution



Build your own solution !
FlexiNOVA enables to tailor microLED for your
display needs

For more information or to place an order,
contact us → Product@aledia.com