



μLink
Datacom

High-performance nanowire microLED arrays enabling next-generation optical interconnect engines

FlexiNOVA and Native technologies enable multiple optical interconnect architecture options

microLED arrays integrated into optical engines for pluggable transceiver and co-packaged optics (CPO) applications



High Density Tb/s/mm² microLED VLC system

Main Features

- High microLED density achieved thanks to 3D nanowire reduced pitch
- Superior bandwidth enabled with GaN M-plane emission
- GaN based microLED reliability

10 Tbps/mm² | 200mm | CPO / AOC



Key advantages



Drop-in Integration

Si substrate enables seamless wafer-to-wafer bonding and efficient optical coupling with no performance trade-off



Ultra-high Density

Up to 10 Tbps/mm² - massive bandwidth in minimal footprint for AI datacenter optical engines



3D Nanowire Architecture

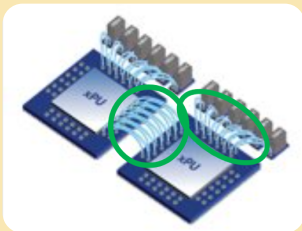
Non-polar GaN nanowires on 200mm Si wafers eliminate piezoelectric field, boosting carrier overlap and modulation speed



Lowest pJ/bit

Faster radiative recombination at lower current density → best-in-class energy efficiency per transmitted bit

Target Applications



Chip-to-Chip
Reach: <1 m



Active Optical Cables
Reach: <10 m



AI Datacenter CPO
Reach: On-Chip

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