

Electronic supplementary information (ESI)

Epitaxial lift-off for freestanding InGaN/GaN membrane and vertical blue light-emitting-diode

Jian Jiang,^a Jianqi Dong,^a Baoyu Wang,^a Chenguang He,^b Wei Zhao,^b Zhitao Chen,^b Kang
Zhang,^{b,†} and Xingfu Wang,^{a,†}

^aLaboratory of Nanophotonic Functional Materials and Devices, Institute of Semiconductors and
Technology, South China Normal University, Guangzhou 510651, People's Republic of China.

^bGuangdong Institute of Semiconductor Industrial Technology, Guangdong academy of science,
Guangzhou, 510651, China.

† Corresponding authors.

Email: kangzhang@gdisit.com (K.Z.); xfwang@scnu.edu.cn (X.W.)

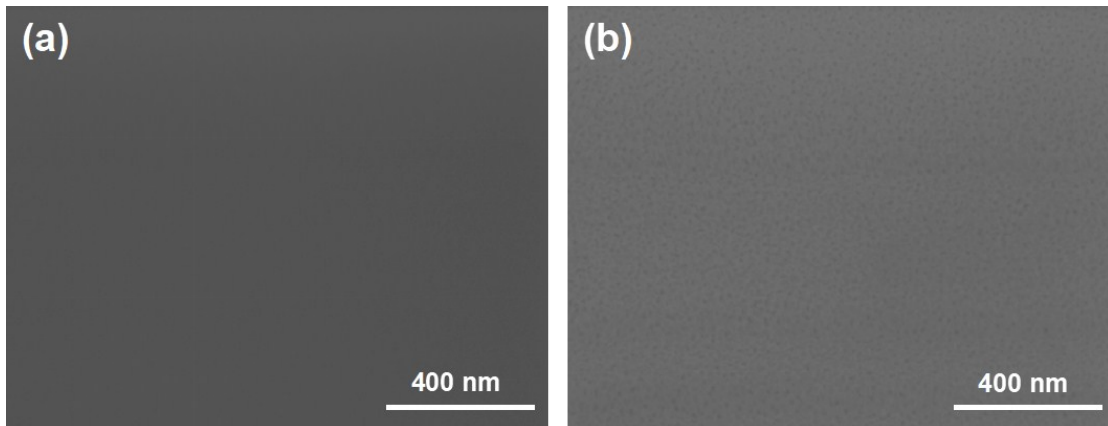


Fig. S1 The corresponding high-resolution SEM images for both the top (a) and bottom (b) surface of the transferred InGaN/GaN membranes LED.

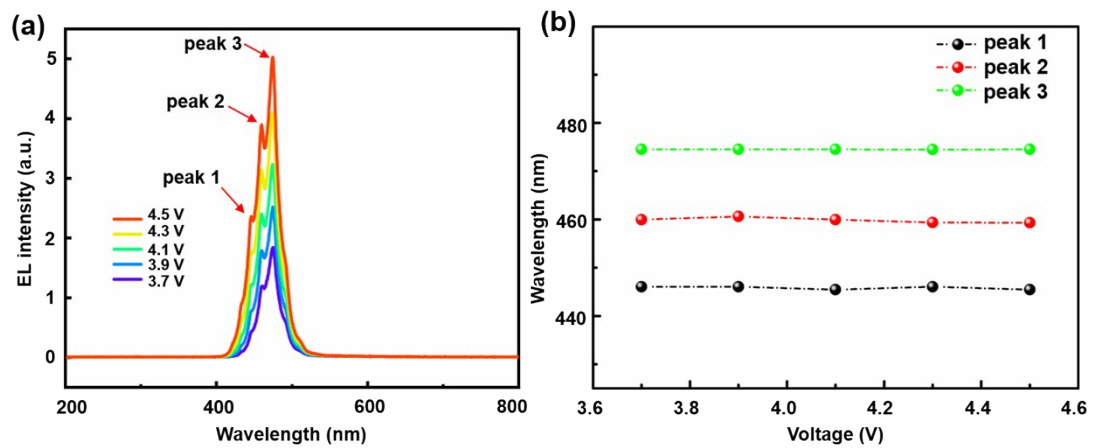


Fig. S2 The EL spectra from another different position of the membranes LED. (a) The EL spectra of freestanding InGaN/GaN membranes LED from another position. (b) The EL peak position changing of InGaN/GaN membranes LED.