

Supporting Information

Effects of 1,2-Ethanedithiol Concentration on Performance Improvement of Quantum-Dot LEDs

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[1] Comparison of J - V characteristics of QLEDs using semi-log plots

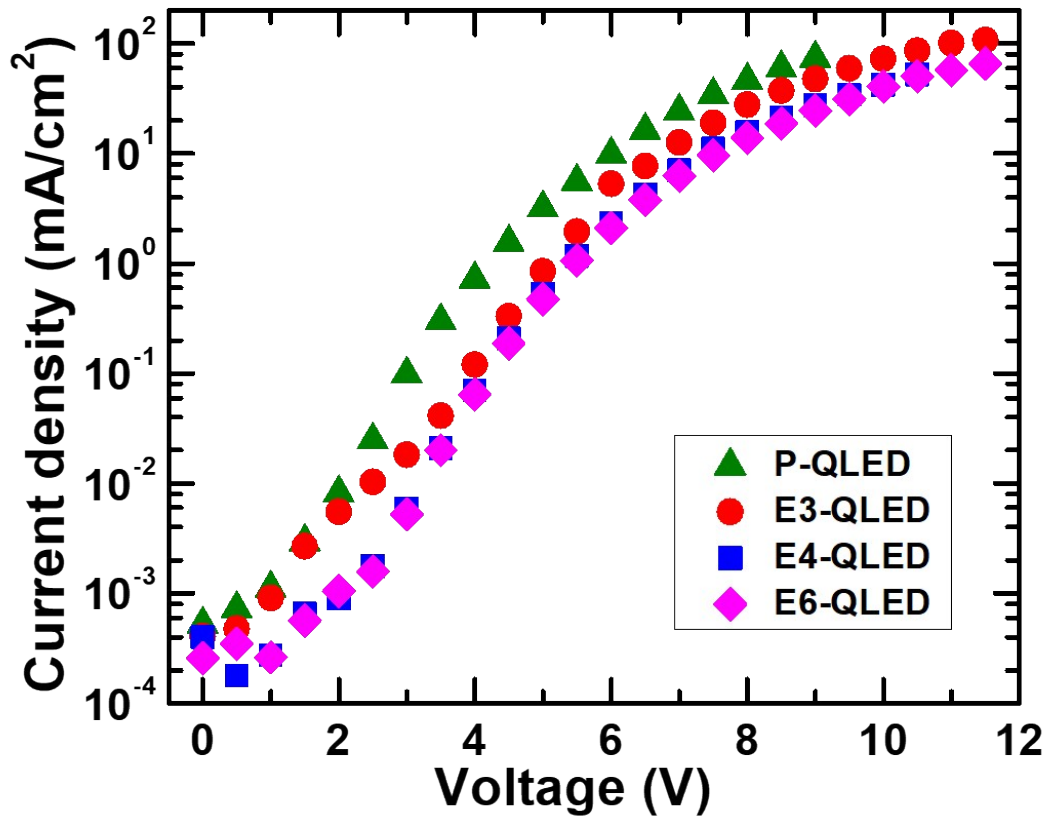


Figure S1. Semi-log plots of measured J - V curves of the device P-QLED and the series of E-QLED devices.

[2] Fitting of J - V characteristics of QLEDs to a two-diode model

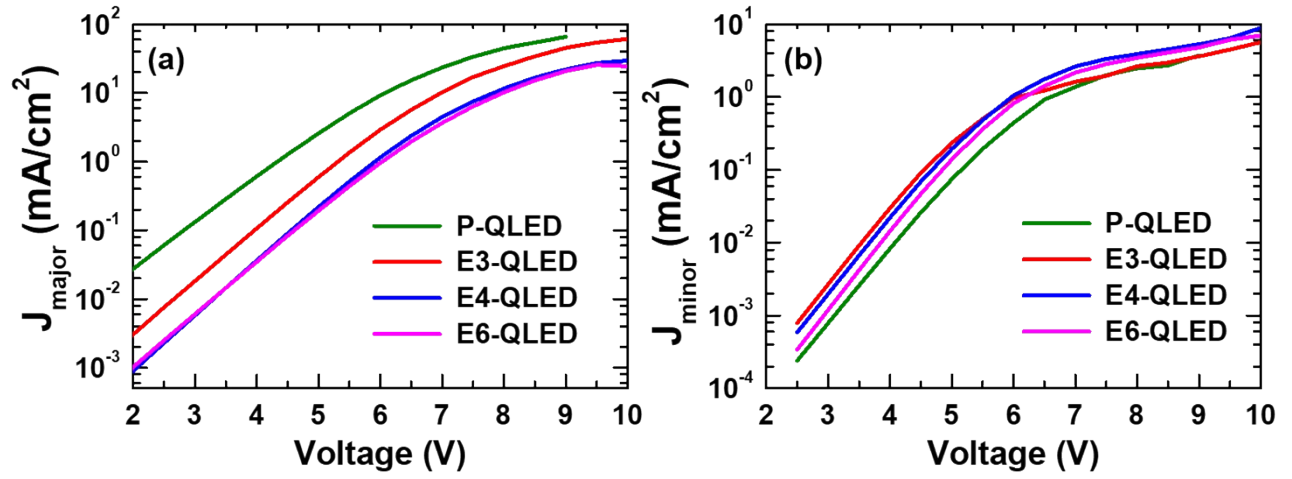


Figure S2. Comparison of the majority– (a) and minority–carrier current densities (b) of the QLED devices, which were calculated using the fitting parameters in Table 1. These J - V curves are identical to those in Figure 3; J_{major} and J_{minor} correspond to majority– and minority–carrier currents, respectively.

[3] Ratios of the minority- and majority-carrier current densities

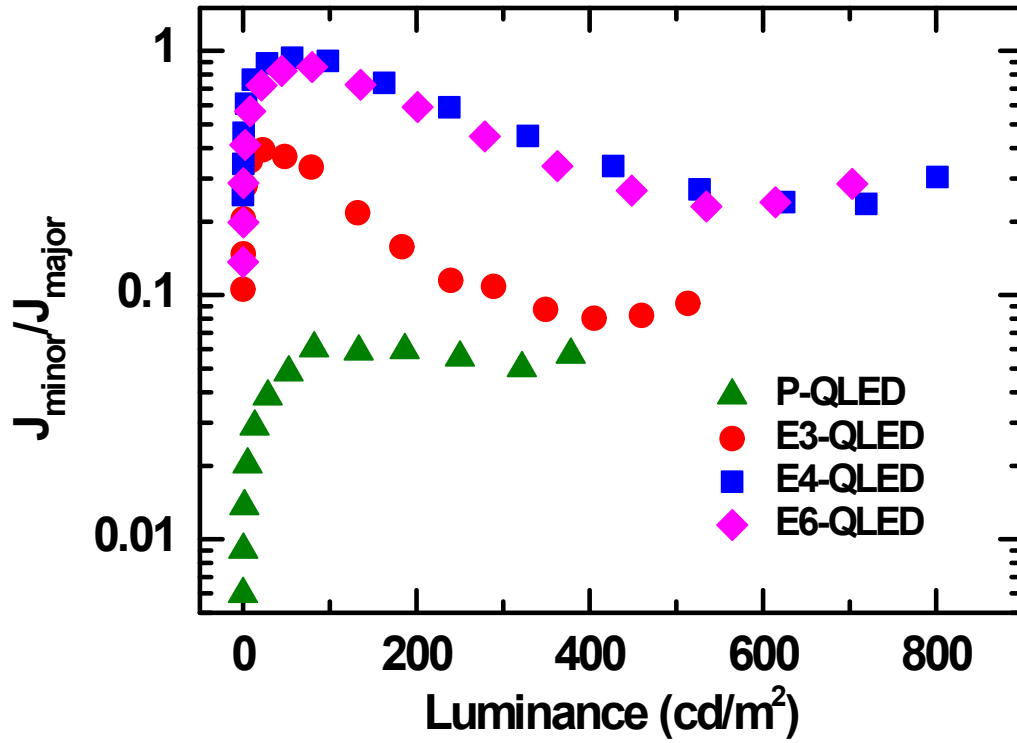


Figure S3. Ratios of the minority- and majority-carrier current densities with respect to luminance. The minority- and majority-carrier current densities are identical to those in Figures 3 (in the main text) and S2.

[4] Quantum efficiency of QLED devices

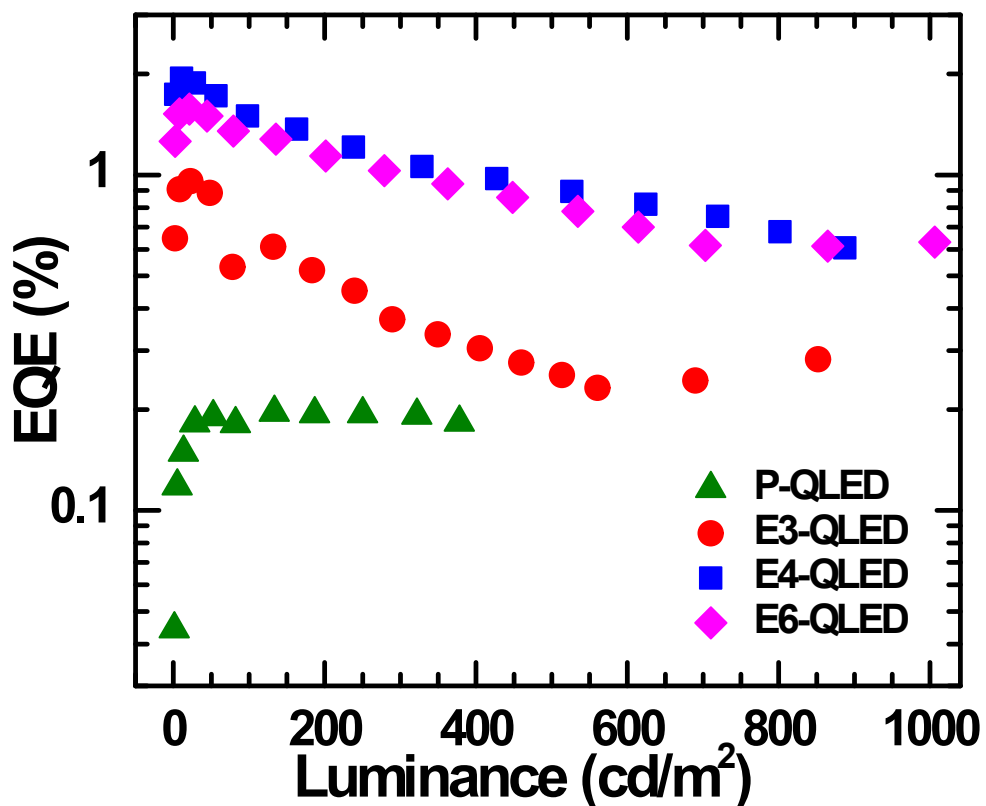


Figure S4. Variations of external quantum efficiency (EQE) with respect to luminance. EQEs of the EDT-treated QLEDs are consistently higher than that of the P-QLED device for entire luminance range. The maximum EQEs of the device E3-, E4- and E6-QLED are 0.9, 1.9, and 1.5%, respectively, while that of the P-QLED is only 0.2 %.