

September 20, 2013

Öko-Institut e.V.
Carl-Otto Gensch
P.O. Box 17 71
D - 79017 Freiburg
Germany

Dear Carl-Otto Gensch,

I am writing to express my input to two RoHS exemption requests, 2013-2 and 2013-5 by QD Vision and 3M, respectively. As Founder and President of Touch Display Research Inc., an independent market research firm focused on advanced display technologies, I am uniquely well-positioned as an expert stakeholder.

My firm is a world leader in market research and consulting on touch panels and displays. My background in emerging display technologies includes research reports on touch screens, near-eye displays, flexible displays, OLED displays, OLED lighting, 3D displays, e-paper displays, pocket projectors, quantum dots, gesture control, voice control, and eye control. I have been a featured speaker or session chairperson at over 40 conferences worldwide such as FPD International in Japan, OLED World Summit, OLED Lighting Summit, LOPE-C conference in Europe, SID Business conference, Flexible Electronics & Display conference, SEMICO West, and SEMI Plastic Electronic conferences. My market research today leverages my extensive network in the display market, and I routinely do first person interviews and surveys with the leading technologists in the field.

In your specific questionnaire, you ask questions about OLEDs, a field in which I consider myself expert. In particular, the question arises of power consumption of OLED devices relative to LCDs. To that end, I wish to refer you to my recent article, "OLED TVs are high-power" a summary of which I have attached to this letter. Within, you will see manufacturer data that demonstrates clearly that OLEDs today consume far more electricity than do LCDs of the same size and resolution. In fact, the leading manufacturer of OLEDs worldwide is now shipping an OLED TV set in very low volumes that consumes more than two times (2X) more power than their own LCD sets consume, and up to six times (6X) power if running with all the pixels on and peak brightness. (Despite this performance difference, I am not predicting that OLEDs won't succeed, but rather stating the fact that the OLED TVs which are currently on the market consume considerably more power than the equivalent LCDs).

I hope that this information is useful to you in your ongoing review of the two exemption requests of QD Vision and 3M.

Sincerely,

Jennifer Colegrove, Ph.D.
President, Analyst of
touch screen and emerging display technologies

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Leading market research and consulting on touch panels and displays