

BOE proposal for ES8.0 Draft Requirements

Dear Sirs,

We would like to propose some suggestions about ES8.0 Draft after we studied the ES8.0 requirements obtained from Energy Star website.

Firstly, please let us introduce our company ,BOE. We lead the innovation and development of TFT-LCD technologies, and seeks vivid colors, clear definition, wide view angles, thin and light structure, energy-conserving, green, and eco-friendly design, keeping improving people’s superior visual experience. Now our display products are widely applied to Mobile, Notebook, Monitor, TV, new applications and so on. We have established strong partnership with many famous branders such as DELL, HP, Lenovo, SEC, LGE, Acer, ASUS and so on. As for MNT panel, BOE is one main supplier in the world, so ES8.0 requirements are very important for us, we will pay close attention to ES8.0.

For more information, please check the website of our company, <http://www.boe.com/en/>.

Then, our suggestions are as follows, hope they are useful for EPA.

Thank you!

No.	BOE Proposal	Background
1	We suggest that the improvement for >21.5inch could be decreased to 5% by adjusting ES8.0 equation.	1. ES8.0 is calculated 10%~15% stricter than ES7.0 according to equations of ES8.0&ES7.0. 2. Energy efficiency gains of MNT components , such as LED, Film, panel transmittance, have reached a bottleneck.
2	We suggest ≤21.5inch MNT keep ES7.0 requirements instead of ES8.0.	The power consumption of 21.5inch and smaller size MNT is less than 10W,which is very low, and it is hard to decrease.
3	We suggest add equation of Curved MNT like EEP : $0.1 \times E_{TEC_MAX}$.	Transmittance of Curved MNT is about 15% lower than flat MNT increasing the BLU power consumption.
4	We suggest add equation of Gaming MNT (144Hz+) like EEP : $0.5 \times E_{TEC_MAX}$.	1. Logic power consumption of Gaming MNT is about double than normal MNT, 2W →4W, so P_{on} increases 20%~30% 2. Transmittance of Gaming MNT is about 20% lower than normal MNT, so P_{on} increases 15%~20%.
5	We suggest $P_{sleep} = 0.25W \sim 0.3W(\text{Max.})$ which should be well-defined.	We can calculate ES8.0 more exactly if P_{sleep} is specific.

6	We suggest EEP of ES8.0 can be same with ES7.0	Energy Allowance for EPD is decreased too much (15% →5%, 65%→15%) . In order to meet EPD requirements of High PPI & HCG, panel transmittance decrease .						
7	<p>We suggest "r" and "A" can be considered equally in ES8.0 equation by adjusting coefficients - "3.99" & "0.123" For example,</p> <table border="1" data-bbox="317 451 982 670"> <tr> <td data-bbox="317 451 720 565">same A, if r increased, gap between ES7.0 and ES8.0 increased</td> <td data-bbox="720 451 850 565">23.8FHD → 17%</td> <td data-bbox="850 451 982 565">23.8QHD 39%</td> </tr> <tr> <td data-bbox="317 565 720 670">same r, if A increased, gap between ES7.0 and ES8.0 decreased</td> <td data-bbox="720 565 850 670">23.8FHD → 17%</td> <td data-bbox="850 565 982 670">27FHD 9%</td> </tr> </table>	same A, if r increased, gap between ES7.0 and ES8.0 increased	23.8FHD → 17%	23.8QHD 39%	same r, if A increased, gap between ES7.0 and ES8.0 decreased	23.8FHD → 17%	27FHD 9%	High PPI and larger size are promising future trend of MNT, and we think the both features are of equal importance.
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same r, if A increased, gap between ES7.0 and ES8.0 decreased	23.8FHD → 17%	27FHD 9%						

Best Regards.

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