EnergyStar 7.0 Assessment & Feedback

Product Development, Visuals BU
Lenovo appreciates the opportunity to participate and provide feedback in the ENERGY STAR draft revision process by the EPA.

Lenovo is committed to environmental leadership in all of our business activities from operations to product design and recycling solutions. We support EPA’s efforts to protect the environment through energy efficient products and practices.
Lenovo’s Opinion – Add color gamut as a factor in the formula

Lenovo suggests to add color gamut factor in the formula due to below reason:

- Panel power consumption vary for the same size & same resolution, but different color gamut.
  - Higher color gamut have higher power consumption
  - Take below chart as an example, and other size should be same.

- Lenovo understands and agrees with the EPA position on being technology neutral.
- Color is a specification for a display panel, not a specific technology.
- Taking color out of the specification will favor low color gamut displays (lower spec)

<table>
<thead>
<tr>
<th>Panel maker</th>
<th>Panel type</th>
<th>Diagonal Viewable Screen Size (in.)</th>
<th>Resolution</th>
<th>Color Gamut</th>
<th>Panel Power Consumption @200nits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGD</td>
<td>LM238WR1-SLA1</td>
<td>23.8</td>
<td>3840x2160</td>
<td>Adobe RGB</td>
<td>37.5</td>
</tr>
<tr>
<td></td>
<td>LM238WR2-SPA1</td>
<td></td>
<td>3840x2160</td>
<td>sRGB</td>
<td>21.8</td>
</tr>
<tr>
<td>LGD</td>
<td>LM270WQ3-SLA1</td>
<td>27</td>
<td>2560X1440</td>
<td>105.9% NTSC</td>
<td>33.7</td>
</tr>
<tr>
<td>AUO</td>
<td>M270DAN01.1</td>
<td></td>
<td>2560X1440</td>
<td>75% NTSC</td>
<td>23.9</td>
</tr>
</tbody>
</table>

Comparison chart between different color gamut
Lenovo’s Opinion – Add viewing angle as a factor in the formula

Lenovo also suggests to add viewing angle factor in the formula due to below reason:

• Different viewing angle panel has different power consumption for the same size & same resolution.
  • Normally, wider viewing angle panel has higher power consumption

• Lenovo understands and agrees with the EPA position on being technology neutral.

• Wide viewing angle is a specification for a display panel, not a specific technology.

• Taking viewing angle out of the specification will favor narrow viewing angle displays (lower spec)
thank you grazie merci danke grazias 謝謝 спасибо gracias obrigado ありがとう dank takk bedankt dakujem