

# ISO/TR 9241-310:2010-06 (E)

## Ergonomics of human-system interaction - Part 310: Visibility, aesthetics and ergonomics of pixel defects

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		vi
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Terms and definitions .....</b>	<b>1</b>
<b>3</b>	<b>Review of research .....</b>	<b>3</b>
3.1	Detection of spots .....	3
3.2	Visibility of pixel defects .....	16
3.3	Aesthetical acceptability of pixel defects .....	20
3.4	Ergonomics limits related to pixel defect .....	20
<b>4</b>	<b>Review of standards .....</b>	<b>23</b>
4.1	ISO 13406-2, Ergonomic requirements for work with visual displays based on flat panels - Part 2: Ergonomic requirements for flat panel displays .....	23
4.2	ISO 9241 300-series .....	26
4.3	International Electrotechnical Commission (IEC) .....	28
4.4	Video Electronics Standards Association (VESA) Flat Panel Display Measurements (FPDM) .....	28
<b>5</b>	<b>Review of industry practice .....</b>	<b>28</b>
5.1	General .....	28
5.2	Technical specification .....	29
5.3	Specification for end customers .....	29
5.4	Outgoing inspection .....	29
5.5	Incoming inspection .....	30
<b>6</b>	<b>Illustrations and descriptions of pixel defects .....</b>	<b>30</b>
<b>Annex A (informative) Overview of the ISO 9241 series .....</b>		<b>35</b>
<b>Annex B (informative) Pixel defect industry and market status 2005 .....</b>		<b>36</b>
<b>Annex C (informative) A draft of a model for acceptable pixel level .....</b>		<b>37</b>
<b>Annex D (informative) Draft recommendations .....</b>		<b>42</b>
<b>Bibliography .....</b>		<b>49</b>