

## TC2-46 LED Intensity Standard Meeting July, 2003

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### ❖ Major Issues

- Dealing with Tolerances
- Uncertainty Calculations
- Test Geometry Variations
- LED Test Conditions
- Generalize Detector Sections
- Detector Calibration

### ❖ Next Steps

- Get remaining inputs
- Review by editor
- Work toward a TC ballot

## ❖ Tolerances – Appendix A

- Put all tolerances in Appendix instead of main document. (Decided at last meeting.)
- Tolerances are now only “recommended” for equipment used measure CIE LED Intensity.

## ❖ Uncertainty Calculations - section 4.7

- Section reduced to a small section and table stating that an uncertainty analysis should be done. (Inputs from last meeting.)
- Table included which has only uncertainty components and not sensitivity components.

## ❖ Test Geometry - section 4.3

- Removed Optical and Peak Axis from geometry definitions. (Decided at last meeting.)
- Only Axis is the Mechanical Axis definition.
- Requirements section only allows Mechanical axis now.
- Expanded section to mention surface mount LEDs and leaded LEDs and how to get mechanical axis on them.

## ❖ LED Test Conditions - section 4.1.2

- Created two separate sections for Current drive and Temperature conditions since both are important particularly for new high power LEDs.
- Expanded Drive section to include steady state AC, DC drive and Single Pulse modes.
- Temperature and Drive conditions need to be stated along with results for them to be meaningful.

❖ Generalize Detector Sections Defs. 3.2.3 ,Reqs.4.2

- Generalized so that single element detectors and spectroradiometers are equally represented.
- Expanded definitions section to include:
  - “Detector System”
  - “Detector Optics”
  - “Light Detector”
  - “Spectroradiometer detector”
- Requirements section 4.2 now called “Detector System” requirements.
- Added detector section on “Spectroradiometer Detectors” with detector optics drawing.
- Changed from “Photometer(Radiometer) Head” to “Detector System” or “Detector Optics” in the document text.

## ❖ Detector Calibrations - section 4.2.6 , 4.2.7

- Removed “Flux based” calibration method since it is not a recommended calibration method.  
(Decided at last meeting.)
- Added section on Spectroradiometer Calibrations
  - Line and Spectral calibration.
  - Absolute calibration with LED standard or illuminance standard.
- Added 4.2.7 that states that ambient conditions of detector systems for calibration and use must be the same and within manufacturer specs.
- Added a definition of “Standard LED” sec 3.6.1
  - Section 5.3 describes use of Standard LEDs as well as detector calibration sections.

❖ Next Steps for the standard based on CIE codes.

- Need to get final inputs and reasonable agreement on the document.
  - Please send inputs by email to chairman.
  - Use email reflector to discuss further changes with entire group if needed.
- Have document sent to Division editor.
- Do a TC ballot members after edits.