



IEC TC 34 Meetings

LED PROJECT PANELS

LED WORKSHOP

CFLi Panel

Dornbirn, 12-16 June 2012





IEC – *lites.asia* representatives

Rachman Mustar

National Standardization Body of Indonesia

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Philippine National Committee of the IEC

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Bureau of Indian Standards



IEC TC 34

- *lites.asia* members attended the:
- TC 34 Project Team and LED Workshop Meeting
 - LED Luminaire Performance
 - LED Workshop
 - LED Terms and Definitions

Owen Manley also attended as IEC Tc34 member and chaired the CFLi panel meeting 19/20 June.

IEC standards development process

STAGE	DOCUMENT	TIMING	CODE
Preliminary	Preliminary Work Item	-	PW1
Proposal	New Work Item Proposal	-	NP
Preparatory	Working Draft(s)	6 months	WD
Committee	Committee Draft(s)	12 months	CD
Enquiry	Enquiry Draft	24 months	CDV
Approval	Final Draft International Std.	33 months	FDIS
Publication	International Standard	36 months	-

LUMEX LED luminaire performance project team meeting

- IEC 62722-2-1 LED Luminaire Performance Standard
 - The draft CD was approved to progress to CD with 2 months commenting period.
- Principal Component Reliability Testing
 - Professor of Delft University gave a lecture on reliability in LED Products. He introduced and explain the usefulness of accelerated testing for replacing the 6000 hr measurement of the assembled final product.
 - An NP for a TS on Principal Component Reliability Testing for LED Products was proposed. A Project Team is to be organized.

LUMEX LED luminaire performance continued...

- IEC 62722-1 Luminaire Performance – Part 1 General Requirement
 - This standard is applicable to all Luminaires. Commenting period is ongoing.
- IEC 62717 LED Module for General Lighting – Performance Standard
 - There was no detail reports made since the commenting period is on- going. The next discussion will include reliability, power factor dimming, and colour formality.

PRESCO LED light sources panel meeting

- IEC 62717 – Performance Standard for LED Modules
 - Discussion were made on proposals relating to test temperature differences, the steepness of the temperature gradient in relation to the design of the LED Modules.
 - New test proposed is likely to introduce new failure mode not covered by original procedure.
 - Way forward: Await all comments to the CD, draft observations, seek agreement with PRESCO and issue a CDV. Also to include reliability provisions if reduction from 6000 hr testing to approximately 1000 hr testing is possible.

PRESCO LED light sources continued...

- IEC 62707-1 LED Binning – Part 1 General Requirements and White Grid
 - The CDV is still open for vote and comment.
- IEC 62612 – Performance Standard for self ballasted LED Lamps by voltage > 50v
 - Changes were made on extended temperature ranges, compliance criteria, terms and definitions, Agreed to align requirements with LED module performance standard IEC 62717 and IEC 62612.
 - Panel accepted changes, issue of an RVC and a draft FDIS will be prepared for the next PRESCO meeting.

PRESCO LED light sources continued...

- IEC 62663-2 – Non-self-ballasted LED Lamps – Part 2 Performance Requirement
 - Proposal made on the merging of performance standard for LED light sources (main voltage lamps, ELV lamps and modules) to reduce maintenance efforts. Merging can also be made across technologies (CFLi and mains-voltage self-ballasted).
 - It was agreed to revise the RVN and the draft CD to reflect the current considerations made with other performance standards.

PRESCO LED light sources continued...

- IEC 62722-2-1 – LED Luminaire Performance Requirement
 - Reliability of components is a major item in this project.
 - Work is underway with the European Lamp Manufacturers and an NP is expected to result from these collaboration.
 - Further discussion at Beijing in September 2012.
- IEC 62560 – Self-ballasted LED lamps for GLS > 50V Safety
 - Amendment on rim mounting and torque test. Proposal made on mechanical strength.
 - It was agreed to include “in case of doubt” and “if lamp instruction does not allow” in the updated proposal.
 - Considerable discussion on dimming. Agreed to follow CFLi

PRESCO LED light sources continued...

- IEC 62031 – Safety Standards for LED Modules
 - Amendment 1: FDIS awaited on heat management and marking simplification.
 - Amendment 2: Photobiological Safety – to consider observations on creepage distance and clearance.
 - Prepare a CDV as requested by PRESCO.
 - For consumers - replaceability of LED Modules from different manufacturers; current, voltage, geometry and heat management will need to be the same.
 - To draft a letter to Zhaga explaining concerns with the possible undue treatment of the heat conducting foil or paste.
 - Note Zhaga met in Dornbirn 27/27 June.

PRESCO LED light sources continued...

- IEC/PAS 6XXXX – LED Testing and Prediction of Lumen Maintenance
 - The aims and advantage of TM-21 and Border Function Approach was introduced and discussed at length.
 - A small specialist panel was established to show the way forward members of this small panel were identified.
 - Proposed Scope: Draft standard for the testing and prediction of Lumen Maintenance of LED packages.
- IEC 62663-1 – Non-self-ballasted LED Lamps – Part 1: Safety Requirements
 - A draft CDV is being prepared to be sent to central office.

PRESCO LED light sources continued...

- IEC 62776 Double-capped LED Lamps – Safety Requirements
 - Discussion and considerations of comments continued for 34A/1534/RVN using document PRESCO (RTK) 178D.
 - Additional written input concerning the test method to choose is for consideration during the next PRESCO meeting.
 - Panel recommends a CDV which will be drafted for PRESCO consideration.

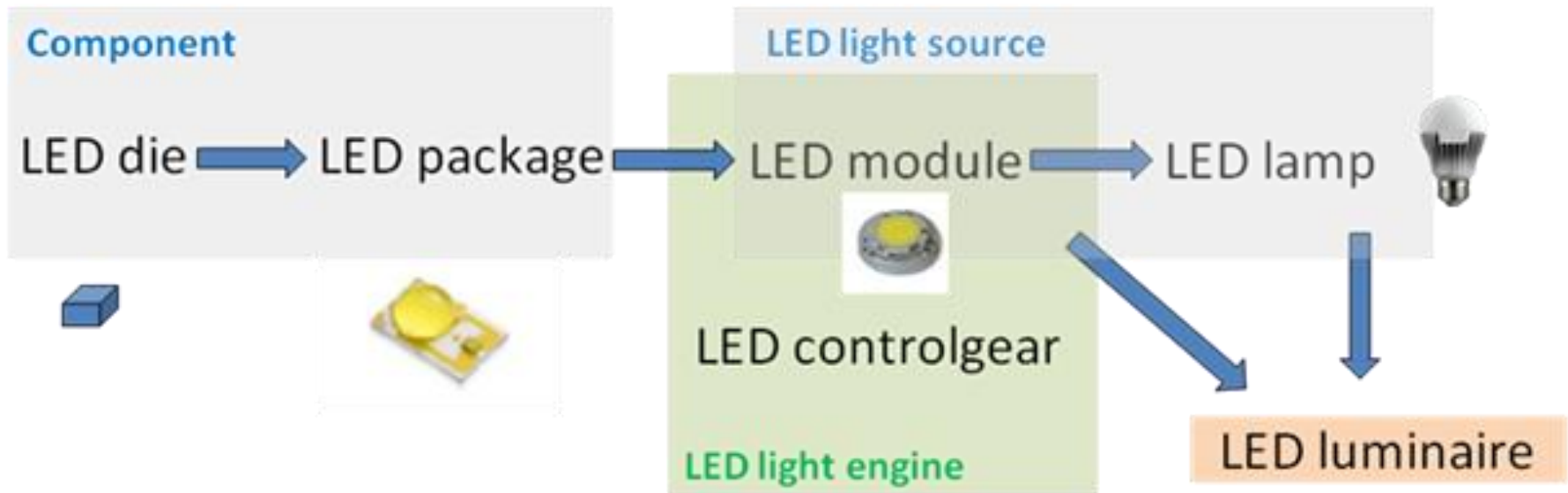
TC 34 LED terms and definitions project team meeting

- Anode and Cathode term was added as proposed.
- Product Tree Structure was considered (see drawings).
- LED Light Engine – there are different definitions from Zhaga and ANSI and in present draft IEC 62504. It was agreed to delete the term and definition of LED light engine from the main body of the standard and shift the term without definitions, but giving reference to its source, into a new annex together with a drawing.
- Light Source – electrical device which produces essentially visible radiation.

TC 34 LED terms and definitions continued...

- ❑ LED Luminaire Integral – LED Luminaire which cannot be dismantled without being permanently damage.
- ❑ Tp Temperature – Will coordinate with USA to get information on definitions.
- ❑ Final IEC TS draft document – IEC Central office gave information that instead of a TS it should be a full standard.
- ❑ Way forward: NP+CD are expected to be edited as early as possible to allow commenting before PRESCO meeting in September 2012. Action: IEC P member countries to vote on the NP and nominate experts.
- ❑ Next meeting to be held in Milan/Italy in January 2013.

TC 34 LED terms and definitions continued...



IEC LED lighting standards /documents for comments/voting

NUMBER	TITLE/SUBJECT	DEADLINE
IEC 60598-1	Luminaire Provided with LED Delivered without Ballast	July, 20, 2012
PNW 34A/1582	Self-Ballasted LED Lamps for GLS with Supply Voltage not exceeding 50v rms or 120v ripple free dc – Safety Specification	September 7, 2012
IEC 61347-2-13 Ed 2	Lamp Control Gear Part 2-13: Particular Requirement for dc or ac supplied electronic control gear for LED Modules	November 9, 2012
IEC 62442-3 Ed 10	Energy Performance of Lamp Control gear Part 3: Control gear for Halogen Lamps and LED Modules: Method of Measurement to determine the Efficiency of the Control gear	November 23, 2012

CFLi – 60969 Performance

- 2 day meeting. Owen Manley as Chair.
- Day 1. Considered all outstanding or action items.
Considerable discussion on life, in-rush current, dimming.
- Day 2. Generated next CD document and discussed tiers
- For 60969 agreed:
 - Issue RVC of agreed changes
 - Issue draft CD circulate to panel member for 2 week check.
 - Issue agreed draft CD to IEC CO for 3 month comment.
 - Review all comment and develop next draft (CDV) in Jan.

CFLi – 60969 Performance tiers

- Day 2. Considered document PRESCO(BD)001 as technical report or specification on performance tiers.
- Considerable discussion with constructive review
- Agreed:
 - Review draft - correct a few items
 - Issue PRESCO(OM)XX doc to Panel and PRESCO for discussion at Beijing. Panel recommended David Boughey to attend.

Next meetings ...

- ❑ PRESCO, EPC, COMEX, LUMEX will meet in Beijing on 24 - 26 September 2012
- ❑ nltc propose a IEC/China liaison meeting on Friday 27 September.
- ❑ Further workshop and panel meetings are scheduled for Milan/Italy in mid January 2013
- ❑ The USNC is considering hosting the June 2013 meeting

Thank you for your attention...

- If you have any questions or feedback on this presentation please email:
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