

## Minutes of the Meeting of Labelling of LEDsubgroup – BEE, New Delhi – 14 July, 2014

In continuation to the sub group meeting for Labelling of LED lamps held on June 4, 2014, Technical Committee was called on July 14, 2014 at BEE office to further explore the labeling for LED lamps under the chairs of Dr. Ashok Kumar and Shri Saurabh Diddi, Energy Economists, BEE. Dr. Ashok Kumar welcomed the guests and briefed the proceedings of last meeting.

Following were the points of discussion during the meeting:

- A. Outreach Program for promotion of LED lamps.-
  - B. Introduction of comparative labeling program for LEDs
  - C. Finalizing the guidelines for procurement of LEDs by various agencies.
- A. Outreach Program for promotion of LED lamps.-

The members present were briefed on the proposed outreach strategy. The creative finalized in the last meeting was also shared. It was unanimously agreed by the participants that the line of action given in the creative may be changed from **“Replace every bulb (ICL/CFL)” to “Switch over to LED lamps”**. The campaign with this creative will be started in Delhi and subsequently to other metro cities. However in the second stage, the creative may be made with little more technical information, comparison with ICLs and CFLs etc.
- B. Introducing the comparative labeling program for LEDs –

Shri Saurabh Diddi informed that BEE would like to introduce the labeling in LED lamps. He explained three possible options on which the committee may like to agree upon. The Options were 1) Endorsement Label, 2) Comparative Label i.e. star rating 3) Super-Efficient label as one standalone options or the combination of comparative and super-efficient labels. After due deliberations, **committee agreed for introduction of the comparative labeling for LED lamps** in such a way that most of LED lamps will fall in star 1 to 3 category as LED industry is . SO rapidly evolving. SO 4 star & 5 star category of LEDs will be kept to high efficiency LED lamps which may/may not exist as on date. Whenever we have high participation in 4 star & 5 star category, BEE will initiate the SEEP programme for LEDs

The technical committee members especially the ELCOMA representative was requested to provide to BEE the data like list of LED manufacturers, wattage, Lumens output and the pricing of the LEDs.
- C. Finalizing the guidelines for procurement of LEDs by various agencies –

To facilitate the procurement of LEDs by various project implementers such as SDAs, EESL, ULBs etc., a draft guideline with key technical specifications was presented before the committee. The committee went for extensive deliberations and agreed agreed for the parameters, enclosed as Annexure I

The participants were of opinion that this technical committee may be expanded further with more representation from manufacturers. The names suggested are as below:

- Representing laboratories, In addition to NPL and CPRI, VL Manesar can also be included in the technical committee
- Amongst manufacturers, additional names suggested are, Phillips, Osram, Lumileds, NTL, HPL, and Nichia.

Meeting ended with vote of thanks to chair.

Encl :

- List of participants
- LED specifications
- Revised and approved Creative

## **Technical Specifications for Omnidirectional LED Lamps** **for general lighting services**

S.No	Proposed					
	Parameters	Cool White (CW)			Applicable IS	
1.	Light Source	LED Chip			LM 80 / 16106	
2.	LED Module	COB / SMD			16103 ( Part (i) and (ii) )	
3.	Lamp Wattage (max.)	100W ILB → 10 W LED 60W ILB → 7W LED 40W ILB → 5W LED			16102-1 and 16102 -2	
4.	CCT	Color Indication	CCT	x	y	16102 -2
		F 6500	6 400	0.313	0.337	
		F 5700	5 700	0.329	0.342	
		F 5000	5 000	0.346	0.359	
		F 4000	4 000	0.380	0.380	
		F 3500	3 500	0.409	0.394	
		F 3000	3 000	0.440	0.403	
		F 2700	2 700	0.463	0.420	
		P 2700	2 700	0.458	0.410	
	F = values from IS 2418 (Part 2) and IS 15687(Part 1)  P = Value close to Planckian curve					
5.	Base/Lamp Cap	B22 and E - 27			16102 - 1	
6.	Lamp Efficacy (lm/w)	Minimum 80/w			16102-2 and 16106	
7.	CRI	Minimum CRI of 70 for CWL Minimum CRI of 80 for WWL			16102-2 and 16106	
8.	LED Solder Temp.	Maximum 85°C at 27±1°C			16102-1	

9.	Total Harmonics Distortion	Maximum 15 %	16102-2
10.	Lumen Maintenance at 85°C	Lumen maintenance at about 1000 or 2000 hrs to be established using the plot from IS 16102-2	16102-2
11.	Power Factor	Minimum 0.9	16102-2
12.	Life Hours	25,000	16102-2 and 16106
13.	Rated Voltage	100-300 V	16102-2
14.	Surge (Voltage)	Up-to 2kV	IEC 61547
15.	Working Temp.	10 – 50°C	
16.	Working Humidity	10% - 90% RH	
17.	Driver Efficiency	> 85%	
18.	Marking	Table 1	16102-2
19.	Safety	Photo biological safety test	IS16108-1

## Attendance Sheet

LED Sub Group Meeting held on 14/7/2014 at BEE office

SN	Name	Designation	Organisation
1	Dr. Sukhvir Singh	Scientist B	BIS
2	Shri Deepak Gupta	GM (LED)	Halonix
3	Shri Shyam Sujan	Secretary General	ELCOMA
4	Dr. Ashok Kumar	Energy Economist	BEE
5	Shri Saurabh Diddi	Energy Economist	BEE
6	Shri Ajay Tripathi	Media Manager	BEE
7	Shri Rajshekhar Mandi	Engineering Officer	CPRI
8	Shri A Saleem	Director (QA)	DGS&D
9	Shri Salil Kulshrestha	GM (R&D)	Eon Electric
10	Shri V P Mahendru	Director (CMD)	Eon Electric
11	Shri P K Mukherji	Sr.Technical Consultant	CLASP
12	Shri A Seen Gupta	Asst. Energy Economist	BEE