

ICEL Technical Statement No 2

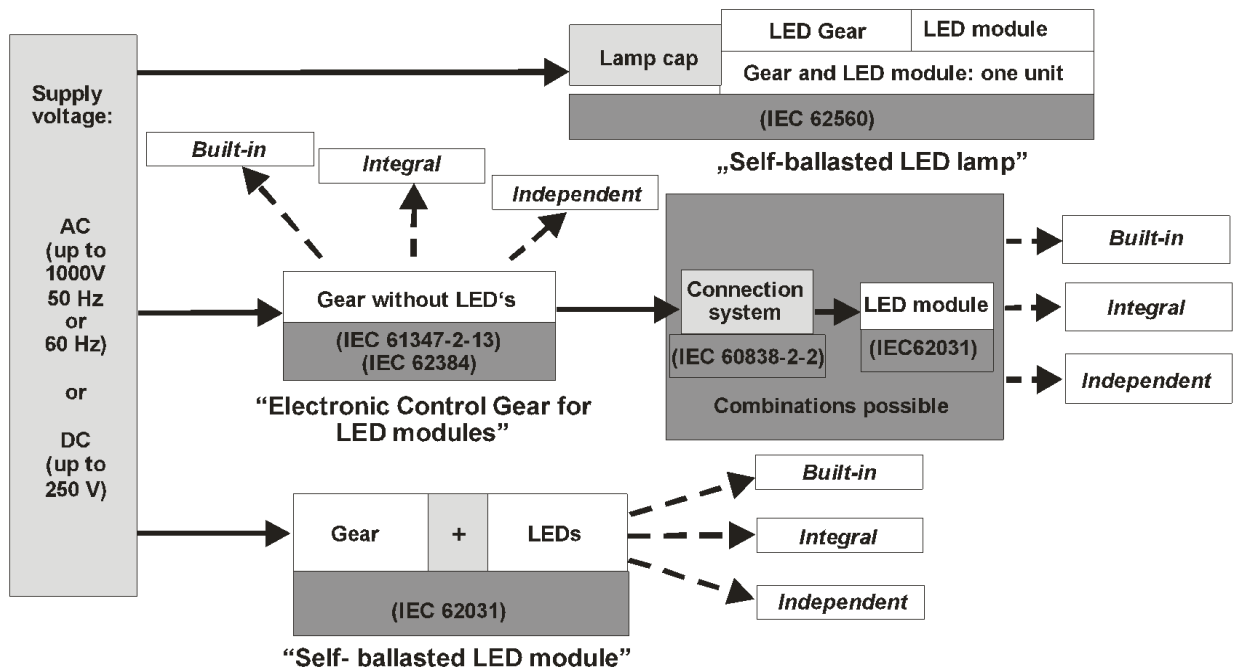
Standards & Guidance

Key Standards for Production, Testing & Measurement of LED Based Luminaires

IEC TC 34 (Lighting)

Split into Sub committees (Lamps, Caps & Control Gear)
CIE Div 2 2007 Publication CIE127 (Methods of measurement)
CIE Div 6 / IEC62471 Photobiological safety / Optical radiation

Overview of systems composed of LED modules and control gear



TECHNICAL STATEMENT

IEC60598	Luminaire requirements
IEC62031: 09/2008	LED Modules for General Lighting – Safety Specifications
ECXXXXX	LED Module for General Lighting - Performance
IEC62560:	Lamps - Safety standard for self-ballasted LED lamps
IECXXXXX	Lamps – Self Ballasted LED - Lamps for general lighting service > 50V -Performance): 34A/1318/PAS - replaces PRESCO(RTK)075 17th version and also issued as NP
IEC61341	Measurement – Intensity & Angle)
IEC61231	ILCOS
IEC62504	LED Terms & Definitions
IEC60061	Lamp Caps
IEC60838-2-2	Connectors for LED-modules
IEC61347	Control Gear & AC-DC Systems– Safety
IEC62384	Control Gear – Performance
IEC60825	Lasers - lamp safety more appropriate now?) However, LEDs have now been removed in the updated IEC 60825-1:2007. To accommodate this removal, the IEC published in 2006 a lamp and LED standard (IEC 62471:2006) that was harmonised with (and indeed, directly based upon) CIES 009:2002 lamp safety standard. This relatively new IEC standard is already undergoing revision to better reflect the needs of LED source hazard assessment and labelling, and the updated version is expected to be completed by the end of November 2008.
CIES009: see above to determine risk of product	
IEC62560	>50V Lamp Safety Specs

Standards under Development

PRESCO

Pr. IEC 62560

- Self-ballasted LED-lamps for general lighting services > 50V
- Safety specifications (Safety): doc. 34A/1281/CD and 34A/1292/CC

Performance for LED module and LED self ballast lamp (RTK/075)

COMEX

IEC 61347-2-13/prA1 Marking, revision of output voltage limits: COMEX (NW) 083 A and COMEX (RTK) 087, point 8.

IEC 62384/prA1 Revision of figure A – Test circuit for current during the starting process: 34C/835/CD

Other Standards Linked with LEDs, under Development

- IEC /TR 61341/pr A1** Method of measurement of centre beam intensity and beam angle(s) of reflector lamps– including LED: 34A/1264 /DC and 34A/1277/INF (PRESCO)
- IEC/TR-62504** Terms and definitions for LEDs and LED modules in general lighting: 34 A/1287/CD (PRESCO)
- IEC /TR 61231/pr A1** International lamp coding system (ILCOS): 34A/1265/DC e 34A/1278/INF (PRESCO)
- IEC 62386-207_** Digital addressable lighting interface - Part 207: Particular requirements for control gears; led modules (device type 6): 34C/806/CDV e 34C/829 /RVC (COMEX).

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Key Standards for the Application of LED Based Luminaires (Excluding Emergency Lighting)

- EN 12464** Light and lighting - Lighting of work places is published in 2 parts: Part 1: Indoor work places; Part 2: Outdoor work places

CIBSE Society of Light & Lighting - Code for Lighting 2006

CIBSE Society of Light & Lighting – Lighting Guide 2 - Lighting for Hospitals & Healthcare Buildings

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