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**Ministry of Electronics and Information technology**  
**IPHW Division**

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**Circular**

**Subject: Revised series guidelines for luminaires and lighting systems-reg**

The standards IS 16102(Part 1):2012 and IS 10322 series have been revised as IS 16102(Part 1):2026 and IS 10322 : 2026 series. Accordingly, the revised guidelines for formation of series of products falling under the aforesaid standard are as under:

**1. Definition of Product Family**

A product family can be defined by the maximum configuration of components / sub-assemblies plus a description of how the models are constructed from the maximum configuration using these components and sub-assemblies. All models which are included in the family typically have common design, construction, parts, or assemblies essential to ensure conformity with applicable requirements. If a product standard does not define a product family, this definition takes over.

**2. Maximum Number of Models in a Series**

- A maximum of 10 models can be included in a series for all product categories, unless a higher limit is specifically prescribed for a particular product category.
- For Item No. 22 Fixed General Purpose LED Luminaires, in case of fancy lights/ Chandeliers, a series may consist of 50 models.
- For Item No. 21, Item No. 32-37 and Item No. 46 notified in CRO, a series may consist of upto 20 models.
- Unless specified otherwise, one sample may be tested for each series.
- The worst-case configuration from Safety Design consideration must be selected for testing in all cases.

### **3. Series guidelines for Standard: IS 16102 (Part 1): 2026**

#### **4. Item No. 21: Self-Ballasted LED Lamps for General Lighting Services**

Up to a *range of rated power rating* will be accommodated in the series, provided

- Same rated input voltage
- Same rating of ballast (LED Control Gear) / Driver Circuit
- Same mains PCB design and layout  
(If mains and secondary are on the same PCB, the mains' part of the PCB should have same design and layout)
- Same cap design
- Same IP rating
- Battery/ Cell across all models in a series shall be of same chemistry (e.g., Li-ion and Ni configurations cannot be grouped). The PCB layout and design of the charging and battery protection circuit shall be the same across all models in the series. Models with different battery capacities may be used in a series, provided the lead / representative model is tested with the highest battery capacity.

### **5. Series guidelines for Standard: IS 10322: 2026**

#### **5.1. Common Criteria Applicable to All Products in a Series**

Up to a range of rated power will be allowed in the series, provided

- Same class of construction
- The electronic control gear to be used with the luminaries should be of:
  - the same type (i.e. AC powered or DC powered or Adaptor powered or information technology communication cable powered or PoE powered)
  - should have the AC/ DC rated input voltage greater than or equal to that of the luminaire
  - Adaptor should have a valid R. Number (registration information to be provided)
- Same AC/DC rated input voltage of luminaire. (In case of independent electronic control gear),

Or

Same AC/DC rated input voltage of luminaire (in case of integral type Electronic Control Gear)

Or

Same rated input voltage/rated current of luminaire (if without Electronic Control Gear)

- Same material for enclosure.
- Same IP rating
- Different types of luminaires to be in separate series eg. Fixed, portable, track mounted, semi-luminaire. They should have same connection mechanism
- Same class of insulation with respect to voltage isolation architecture (SELV / PELV / Non-SELV).
- Same type of energy storage technology (Standard Chemical Battery / Electric Double-Layer Capacitor (EDLC)).
- Battery/ Cell across all models in a series shall be of same chemistry (e.g., Li-ion and Ni configurations cannot be grouped). The PCB layout and design of the charging and battery protection circuit shall be the same across all models in the series. Models with different battery capacities may be used in a series, provided the lead / representative model is tested with the highest battery capacity.
- Same nominal voltage of energy storage (for batteries or EDLCs).
- Luminaires with and without replaceable batteries to be in separate series
- Luminaires with and without rechargeable batteries to be in separate series.

## **5.2. Other Criteria (wherever applicable) for series formulation**

- Luminaire with mains socket outlet and without mains socket outlet should be in separate series (eg. Fixed general purpose, recessed LED luminaires etc.)
- Same mechanical thermal management type (Passive Cooling / Active Cooling with fast rotating parts) (eg. Fixed general purpose, recessed LED luminaires etc.)
- Same ambient temperature rating, if other than 25 degrees C (eg. LED luminaires for road and street lighting, LED flood lights)
- Same Impulse Withstand Overvoltage Category: Category II / Category III variations cannot be grouped together (eg. LED luminaires for road and street lighting, LED flood lights etc)
- Same output voltage & current rating of adapter complying to IS 302 (eg. Emergency lighting)

### 5.3. Note For Fixed General Purpose LED Luminaires (fancy lights)

- Three samples covering highest, interim and lowest ratings of the range are tested
- In addition, in the same series, wherever applicable, samples of three different weights (highest, interim and lowest values) are checked only for the requirements related to suspension/fixing etc. As per the relevant standards IS 10322 (Part 5/Section 1)
- For considering a model of fancy light/chandelier, the safety design of housing containing and including electrical part upto driver, if available, only shall be considered.
- Since model no. are generally not assigned in this industry Segment, and fancy parts keep on changing frequently, a pictorial view of each electrical fitting (not decorative/fancy part) covered in the series shall be placed in the test report. This would not require submission of actual samples to the labs but could be submitted through documentary evidence.

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To

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