

Independent interchangeability of LED modules and drivers

March 2014

Full interchangeability

- Zhaga has decided that it will aim to enable LED modules and LED drivers that are independently interchangeable.
 - This is in addition to Zhaga's stated aim to enable interchangeability of LED light engines (LLEs).
- For LLEs comprising LED modules and separate drivers, it will become possible to interchange LED modules from different suppliers without also using a different driver, or vice versa.

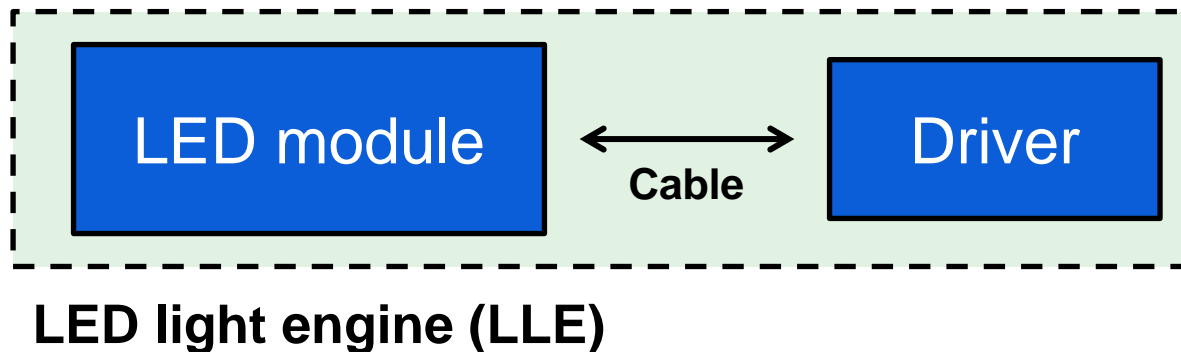
Interchangeable LLEs

- At present, Zhaga interface specifications (Books) define interchangeable LED light engines (LLEs)
- Some LLEs contain an integrated driver
- Some LLEs consist of one or more LED modules together with a separate driver



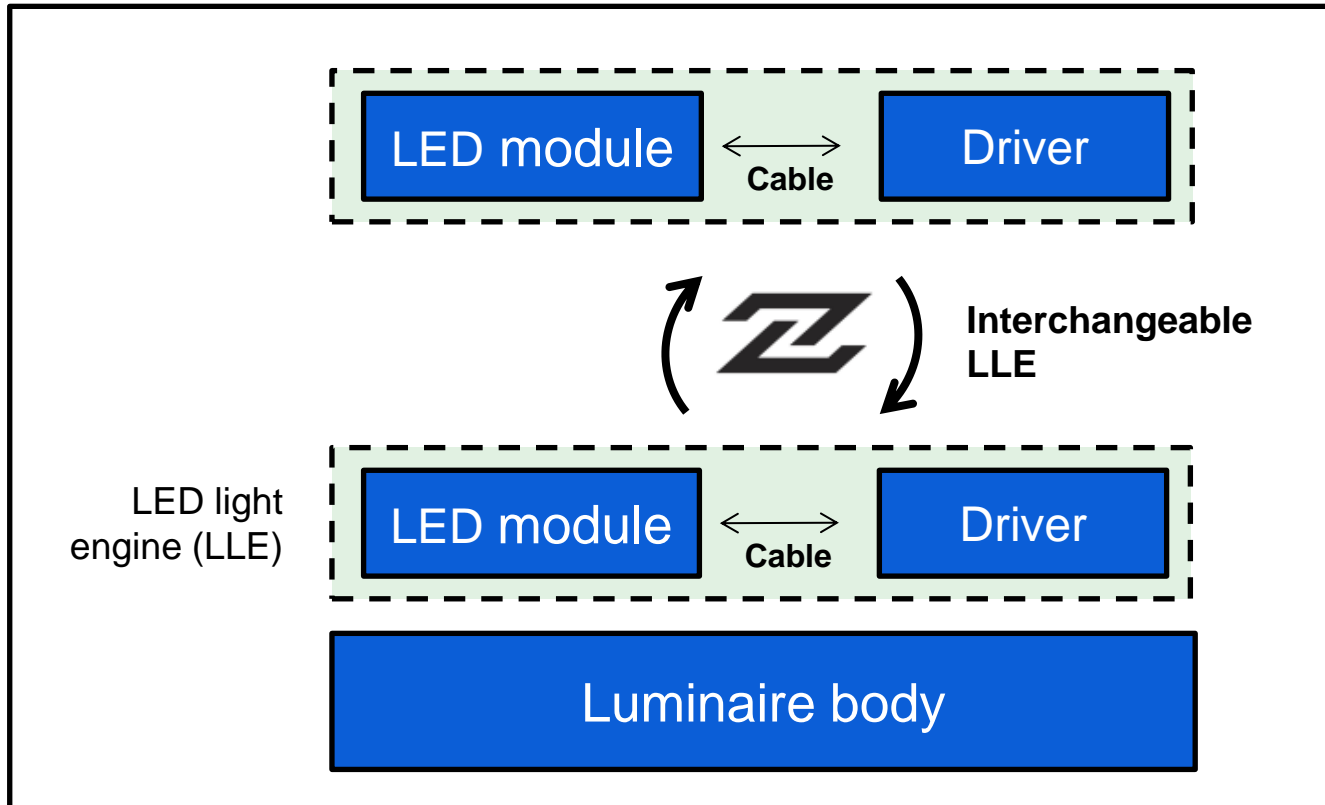
LLEs with separate drivers

- Currently, Zhaga does not define the electrical interface between the module(s) and driver
- Defining this interface could limit design innovation for modules and drivers
- In Zhaga Books, the LLE is treated as a single unit:



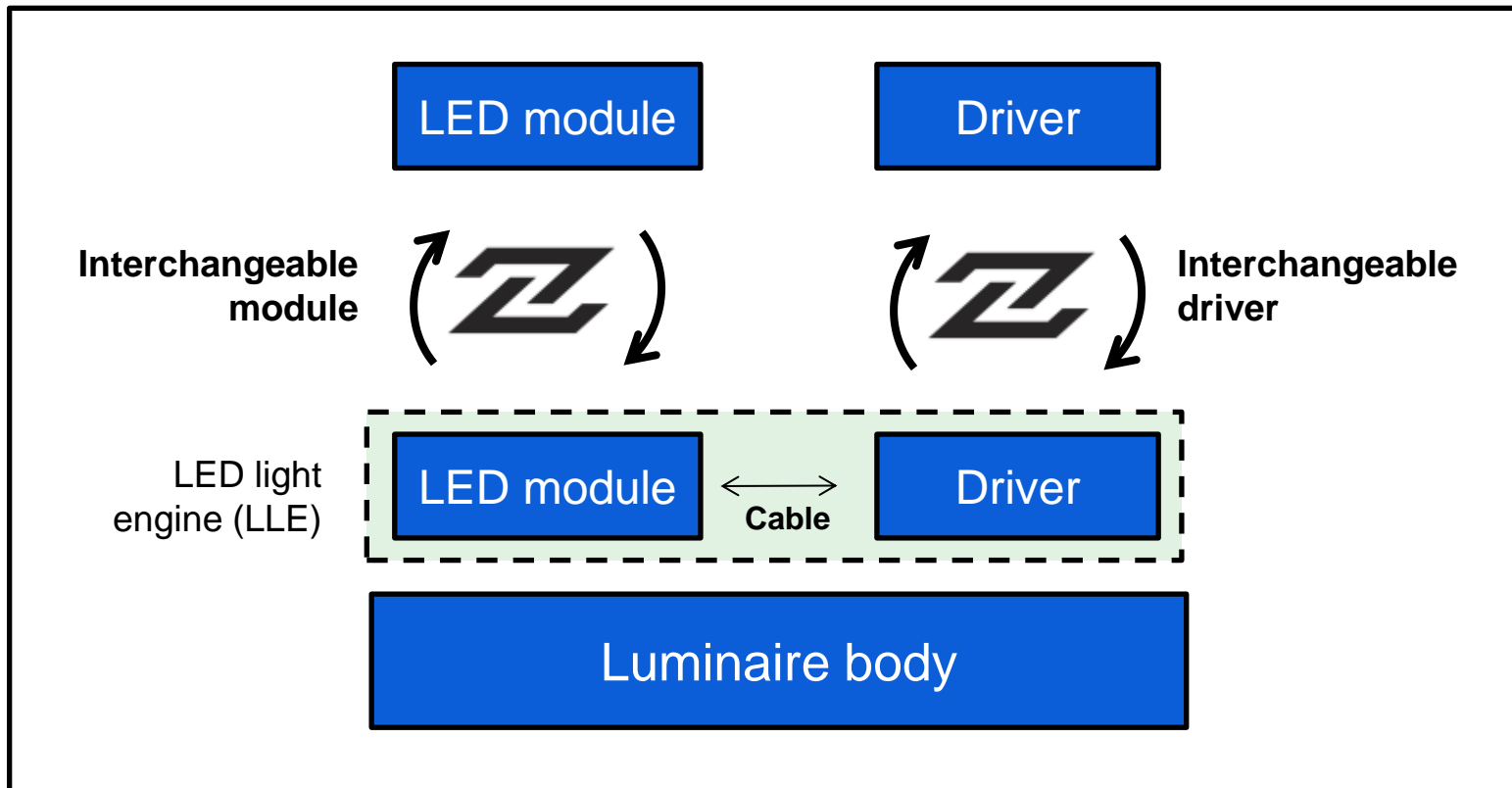
LLEs with separate drivers – current situation

- Only the entire LLE is interchangeable
 - May not be possible to change the module(s) without also changing the driver, or vice versa



Independent interchangeability

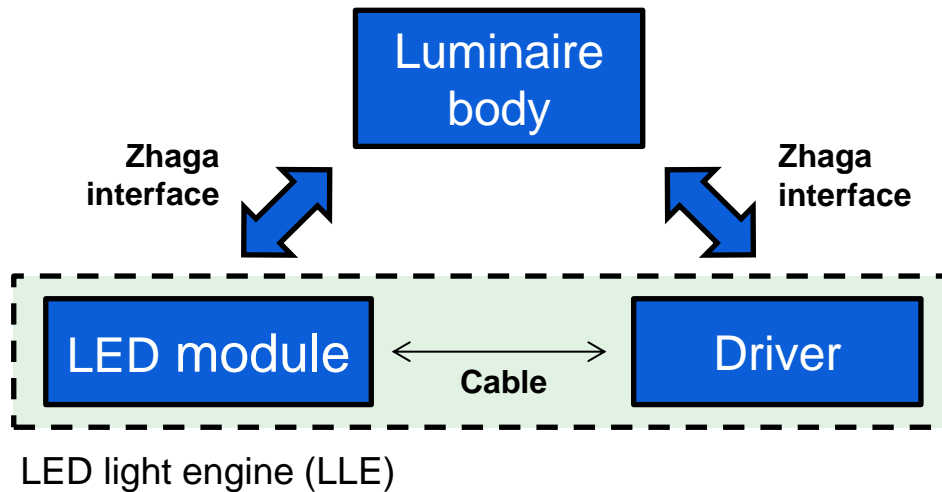
- Zhaga's new approach aims to enable independent interchangeability of LED modules and drivers



Zhaga recognizes need for change

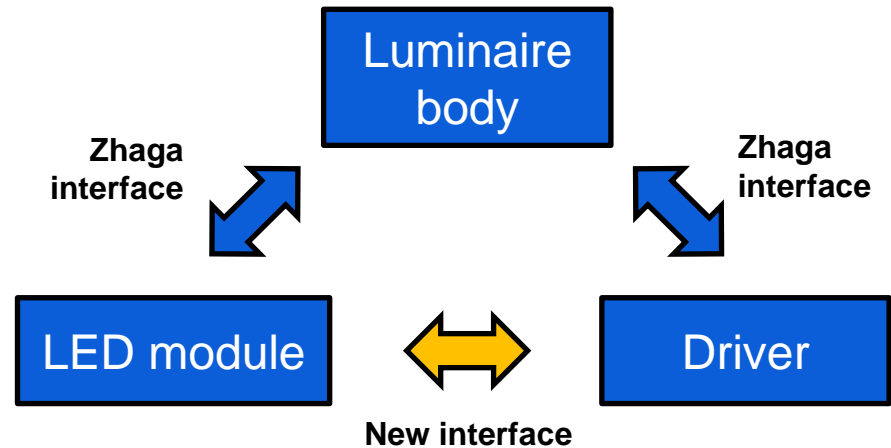
- Zhaga is responding to the market need for modules and drivers that are independently interchangeable.
- Future editions of Zhaga Books will, where appropriate, reference relevant specifications that define the module-driver electrical interface.
- In the four years since Zhaga was formed, technical solutions have emerged that make it possible to define module-driver interfaces for specific application segments without limiting the innovation in LED module and driver technology.

Enabling full interchangeability



Current situation:
Zhaga does NOT define the electrical interface between the LED module(s) and driver.
→ Only the entire LLE is interchangeable.

Future situation:
Defining the module-driver electrical interface will mean that modules and drivers are independently interchangeable.



www.zhagastandard.org