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PUBLICLY AVAILABLE SPECIFICATION

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Zhaga interface specification book 1 and book 7

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ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ZHAGA INTERFACE SPECIFICATION BOOK 1 AND BOOK 7

FOREWORD

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IEC PAS 63166 has been processed by subcommittee 34A: Lamps, of IEC technical committee 34: Lamps and related equipment.

This PAS is a reproduction of Zhaga Books 1 and 7 with no changes introduced.

The document layout, terms and definitions, etc. within this PAS therefore do not follow the normal IEC drafting rules that would be applied for an International Standard.

Subdivision 1 comprises Zhaga Book 7 – Rectangular LED Module with undefined LES.

Subdivision 2 comprises Zhaga Book 1 – Overview and common information, which is essential to the interpretation of Zhaga Book 7 (and future Zhaga books).

The future intention is for the content of this PAS to be incorporated within one or more International Standards and at this time any conflict with IEC Directives and drafting rules will be addressed.

The text of this PAS is based on the following document:	This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document
Draft PAS	**Report on voting**
34A/2048/PAS	34A/2054/RVDPAS

Following publication of this PAS, the technical committee or subcommittee concerned may transform it into an International Standard.

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IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

ZHAGA INTERFACE SPECIFICATION BOOK 1 AND BOOK 7

Subdivision 1

Zhaga Interface Specification Book 7
Rectangular LED Module with undefined LES

Summary (informative)

Background
The Zhaga Consortium is a global lighting-industry organization that aims to standardize LED light engines and associated components such as LED modules, holders and electronic control gear (LED drivers).

Zhaga has created a set of interface specifications, known as Books. Each Book defines an LED light engine and/or associated components by means of the mechanical, photometric, electrical, thermal, and control interfaces of the product to its environment. This makes such products interchangeable in the sense that it is easy to replace one product with another, even if they have been made by different manufacturers.

Contents
This book 7 defines several LED modules. Each LED module has a rectangular shape and the only restriction to the light emitting surface is that no light is emitted in the direction of the reference plane of the LED module.

This book must be read together with book 1, which is included as Subdivision 2 of this document.

Intended Use
The Book-7 LED module can be mounted in a luminaire, for example by means of screws. Book-7 LED modules are intended to be replaced by professionals only.

1 General

1.1 Introduction

The Zhaga Consortium is a global organization that aims to standardize LED Light Engines and associated components. A LED Light Engine is a light source for general lighting that is based on solid state technology, and typically consists of one or more LEDs combined with an Electronic Control Gear. Examples of associated components are LED Modules, Electronic Control Gears, and Holders. Zhaga has created a set of interface specifications, known as Books defining interfaces between LED Light Engines, associated components and Luminaires.
Book 1 is a special Book in the sense that it provides common information, which is relevant to all other Books in the series. In addition, Book 1 defines requirements and compliance tests, which are applicable across multiple Zhaga books. Such Books refer to those requirements and compliance tests as applicable.

1.2 Scope (informative)

This Book 7 defines LED Modules, which can be fixed in a Luminaire. This document defines:

- Ten categories of the rectangular shaped LED Modules.
- Luminaires that provide the appropriate environment for the Book-7 LED Module(s).

Book 7 LED Modules are intended to be installed and replaced by Luminaire manufacturers only.
Book 1 is included as Subdivision 2 of this document.

1.3 Conformance and References

1.3.1 Conformance

All provisions in the Zhaga interface Specification are mandatory, unless specifically indicated as recommended, optional or informative. Verbal expressions of provisions in the Zhaga Interface Specification follow the rules provided in Annex H of ISO/IEC Directives, Part 2:2011. For clarity, the word “shall” indicates a requirement that is to be followed strictly in order to conform to the Zhaga Interface Specification, and from which no deviation is permitted. The word “should” indicates that among several possibilities one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required, or that (in the negative form) a certain possibility or course of action is deprecated but not prohibited. The word “may” indicates a course of action permissible within the limits of the Zhaga Interface Specification. The word “can” indicates a possibility or capability, whether material, physical or causal.

1.3.2 References

For references that are not listed in this section, see [Book 1]. For undated references, the most recently published edition applies.

[Book 1]	Zhaga Interface Specification, Book 1: Overview and Common Information. Book 1 is included as Subdivision 2 of this document.
[ISO/IEC 15948]	Information technology – Computer graphics and image processing – Portable Network Graphics (PNG): Functional specification.
[IEC 60598-1]	Luminaires – Part 1: General requirements and tests
[LEDset-Inf]	LEDset1 Information Interface Specification, Edition 1.2, November, 2016 available from md-sig.org.
[LEDset-Pow]	LEDset Power Interface Specification, Edition 1.1, November, 2016 available from md-sig.org.