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PUBLICLY AVAILABLE SPECIFICATION

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Zhaga interface specification Book 1 and Book 14

INTERNATIONAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ZHAGA INTERFACE SPECIFICATION BOOK 1 AND BOOK 14

FOREWORD

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A PAS is an intermediate specification made available to the public and needing a lower level of consensus than an International Standard to be approved by vote (simple majority).

IEC PAS 63329 has been processed by subcommittee 34A: Electric light sources, of IEC technical committee 34: Lighting.

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/2196/DPAS	34A/2206/RVDPAS

Following publication of this PAS, which is a pre-standard publication, 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 document 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.

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INTRODUCTION

This PAS is a reproduction of Zhaga Book 1 Edition 1.8 and Book 14 Edition 1.2 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 14 Edition 1.2 – Socketable Flat LED Module and LED Light Engine.

Subdivision 2 comprises Zhaga Book 1 Edition 1.8 – Overview and common information, which is essential to the interpretation of Zhaga Book 14 (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.

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Subdivision 1

Zhaga Interface Specification Book 14

Summary (informative)

Background

The Zhaga Consortium is a global lighting-industry organization that aims to standardize components of LED luminaires, including LED light engines, LED modules, LED arrays, holders, electronic control gear (LED drivers) and connectivity fit systems.

Zhaga has created a set of interface specifications, known as Books. Each Book defines one or more components of an LED luminaire by means of the mechanical, photometric, electrical, thermal, and control interfaces of the component 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 14 defines three socketable LED light engines (with integrated electronic control gears) and three socketable LED modules (without integrated electronic control gears). The intended application is in free air or in a Luminaire that does not introduce a significant temperature increase. Each LED module and LED light engine is identified by a designation.

The LED Modules and the LLEs feature contact caps which fit in corresponding contact holders of the luminaire. The contact caps and contact holders have keys matching specific electrical characteristics of the LED module or the LED light engine. Each key is identified by a designation.

This Book should be read together with Zhaga Book 1.

Intended Use

The LED modules and the LED light engines defined in this Book 14 are intended to be installed and replaced by professionals and non-professionals.

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1 General

1.1 Introduction

The Zhaga Consortium is a global organization that aims to standardize components of LED Luminaires. A LED Luminaire is a lighting fixture for general lighting that contains a light source based on solid-state technology. Such light sources, including LED Modules and LED Light Engines, typically consist of one or more LEDs combined with an Electronic Control Gear (LED driver). Other components of LED Luminaires include LED Arrays, Holders, and connectivity fit systems.

Zhaga has created a set of interface specifications, known as Books, which define the interfaces between a component and its environment. 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

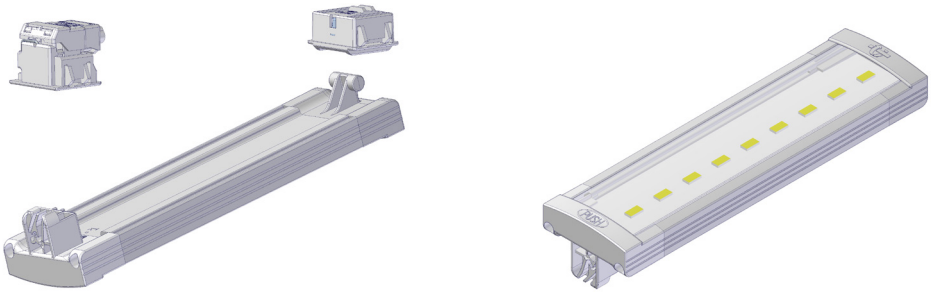

Figure 1-1 – 3D-drawings of the Book 14 LED Module or LED Light Engine (informative)

This Book 14 defines three socketable LED Light Engines (with integrated Electronic Control Gears) and three socketable LED Modules (without integrated Electronic Control Gears). These LED Modules and LLEs have a rectangular shape and are typically applied in general lighting applications. These products are intended to be installed and replaced by professionals and non-professionals.

Figure 1-1 shows informative 3D-drawings of such a LED Module or LLE. The intended application is in free air or in a Luminaire that does not introduce a significant temperature increase. Each LED Module and each LED Light Engine is identified by a designation.

The LED Modules and the LLEs feature contact Caps which fit in corresponding contact Holders of the Luminaire. The contact Caps and contact Holders have keys matching specific electrical characteristics of the LED Module or LED Light Engine. Each key is identified by a designation.

1.3 Conformance and references

1.3.1 Conformance

All provisions in the Zhaga interface Specifications are mandatory, unless specifically indicated as recommended, optional or informative. Verbal expressions of provisions in the Zhaga interface specifications follow the rules provided in Clause 7 of ISO/IEC Directives, Part 2:2018. For clarity, the word “shall” indicates a requirement that is to be followed strictly in order to conform to the Zhaga interface specifications, and from which no deviation is

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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.

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
[IEC 60598-1]	Luminaires – Part 1: General requirements and tests
[NEMA SSL 7A]	Phase Cut Dimming for Solid State Lighting: Basic Compatibility, NEMA SSL 7A-2013
[7004-187]	IEC 60061-1 standard sheet 7004-187
[7005-187]	IEC 60061-2 standard sheet 7005-187
[7005-187A]	IEC 60061-3 standard sheet 7006-187A
[7006-187B]	IEC 60061-3 standard sheet 7006-187B
[7006-187C]	IEC 60061-3 standard sheet 7006-187C
[7006-187D]	IEC 60061-3 standard sheet 7006-187D
[7006-187E]	IEC 60061-3 standard sheet 7006-187E
[7006-187F]	IEC 60061-3 standard sheet 7006-187F
[7006-187G]	IEC 60061-3 standard sheet 7006-187G
[7006-187I]	IEC 60061-3 standard sheet 7006-187I
[7006-187J]	IEC 60061-3 standard sheet 7006-187J
[7006-187K]	IEC 60061-3 standard sheet 7006-187K
[7006-187L]	IEC 60061-3 standard sheet 7006-187L