PD IEC/PAS 63166:2018

BSI Standards Publication

Zhaga interface specification book 1 and book 7

bsi.

National foreword

This Published Document is the UK implementation of IEC/PAS 63166:2018.

The UK participation in its preparation was entrusted to Technical Committee CPL/34/1, Electric lamps.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Published by BSI Standards Limited 2018

ISBN 978 0 580 52137 9

ICS 29.140.01; 29.140.99

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 May 2018.

Amendments/corrigenda issued since publication

Date	Text affected

IEC PAS 63166

Edition 1.0 2018-04

PUBLICLY AVAILABLE SPECIFICATION

colour inside

Zhaga interface specification book 1 and book 7

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.140.01; 29.140.99

ISBN 978-2-8322-5627-5

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

ZHAGA INTERFACE SPECIFICATION BOOK 1 AND BOOK 7

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

A PAS is a technical specification not fulfilling the requirements for a standard, but made available to the public.

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.

This PAS shall remain valid for an initial maximum period of 2 years starting from the publication date. The validity may be extended for a single period up to a maximum of 2 years, at the end of which it shall be published as another type of normative document, or shall be withdrawn.

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.

1.4 Definitions

This section defines terms that have a specific meaning in the context of this Book 7. Terms that have a specific meaning across all Zhaga Books are defined in [Book 1].

Book-7 LED Module	LED Module according to the specifications in this book.